IFAMR

Special Issue

GLOBAL NETWORKS

GLOBAL PERSPECTIVES

GLOBAL TALENT

Discussions on the Development of Human Capital in Agribusiness

This project was funded through the generous support of our sponsors

Welcome to the IFAMR Special Issue "*Global Networks, Global Perspectives and Global Talent.*" We would like to thank our sponsors Alltech and Kincannon & Reed. Sponsorships allow the IFAMR to expand its reach and focus on important issues of the day that are relevant to our global readership. Editors, Mary Shelman and Aidan Connolly have done an amazing job of putting together a series of articles from executives, practitioners, and university scholars from around the world. Human capital managers and educators face significant challenges preparing and developing talent for a unique global industry. Talent management and development is an active and dynamic process. Businesses and universities need to constantly innovate and rethink their human capital programs, processes, and strategies. To this end, the IFAMR Special Issue was born to bring readers to the frontiers of practice in the area of agribusiness human capital development. We trust you will find it a valuable resource.

Peter Goldsmith
Executive Editor, International Food and Agribusiness Management Review (IFAMR)

International Food and Agribusiness Management Review

GLOBAL NETWORKS, GLOBAL PERSPECTIVES GLOBAL TALENT

Discussions on the Development of Human Capital in Agribusiness

International Food and Agribusiness Management Review

Editorial Staff

The IFAMR (ISSN #: 1559-2448) is published quarterly and is available at http://www.ifama.org
For copyright and publishing information, please contact: Kathryn White, Administrative Editor
IFAMA Business Office • P.O. Box 14145 • College Station, TX 77841-4145, USA
Tel: 1-979-845-2118 • Fax: 1-979-862-1487 • E-mail: ifamr@ifama.org • Web: http://www.ifama.org

TABLE OF CONTENTS

Editor's Introduction

CHAPTER 1
Human Capital in Agribusiness: Challenges and Opportunities

CHAPTER 2
Attracting, Developing and Maintaining Talent

Conference Presenters, IFAMA 2012 Annual World Forum, Shanghai, China

CHAPTER 3
Human Capital Development in a Global Industry

CHAPTER 4
Meeting the Needs of a Rapidly Changing World

CHAPTER 5
Innovation in Practice

International Food and Agribusiness Management Review
Volume 15 Special Issue A, 2012

The Human Capital Issue: Ensuring the Future of Food and Agribusiness

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

EDITOR'S INTRODUCTION

Mary Shelman[a] and Aidan J. Connolly[b]

[a]*Director, Agribusiness Program, Harvard Business School, Morgan T74*
Boston, Massachusetts, 02163, USA

[b]*Vice President Corporate Accounts, Alltech, Sarney, Summerhill Rd., Dunboyne, Co Meath, Ireland and*
Adjunct Associate Professor of Marketing, UCD Michael Smurfit Business School, Dublin, Ireland

As the world's oldest profession (despite rumors to the contrary!), agriculture has historically been a family-based and deeply local way of life, and the people in agribusiness industries are assumed to be traditional and resistant to evolution. Moreover, agribusinesses are generally defined in a manner that emphasizes their place in the food production chain: dairy farmer, feed manufacturer, integrated food company, etc. Yet contemporary agribusiness is sophisticated and dynamic, with change being driven by rapid advances in technology, communications and globalization.

As with most industries, the agribusiness supply chain is increasingly complex, increasingly connected and increasingly global. Changes in technology, demographics, economics and climate can lead to abrupt and dramatic changes in supply and demand. Consumers around the world are more informed – and more demanding. At the same time, the industry faces the extreme challenge of feeding a growing population while respecting the environment, while keeping food prices low.

Corresponding Editors: Tel: +1 617.495.1421
Email: M.Shelman: mshelman@hbs.edu
A. J. Connolly: aconnolly@alltech.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

At IFAMA, it is becoming increasingly clear that the "glue" (i.e., the invisible element that holds it all together) that will define the success of agribusiness organizations in this new environment is not physical resources or financial clout but rather human capital.

This human capital, or the people who work in all the different aspects of the food production chain, must be educated in both hard and soft skills. We must be adaptable and truly global in our perspective. We must be capable of communication with our traditional audiences as well as the broader range of stakeholders who increasingly shape our business. We need to reach out to these stakeholders, including consumers and influencers such as regulators and the press, through both traditional means and new media. And to succeed, this commitment to develop human capital must lead to continuous improvements at all levels of the organization, from senior leaders, to managers to the newest line employee.

IFAMA's objective is to support the international agribusiness complex as it navigates the human capital journey.

These essays, both submitted and invited, address the structural challenges of modern agribusiness and offer strategies for surviving the shifting sands of today's agricultural landscape. Agribusiness contends with issues that certainly face other industries, such as ill-informed, sometimes hostile media; succession challenges in family owned businesses; and the complexity of merging cultures to build a truly global business, but there are other issues that are particular to our industry. The articles chosen for this issue reach across the narrow sectoral divisions that characterize much of agribusiness writing, applying a broader business perspective to the issues we face. As agribusiness transforms from local and individual operations into global networks we need to develop the global perspectives and the global talent pool that will enable us to survive these challenges and make the most of these opportunities.

The objectives of this special issue, "*Global Networks, Global Perspectives and Global Talent,* are to raise awareness of the importance of human capital to a wide audience, share innovative ideas, and identify areas for further study. The Special Issue is organized into five sections. The first, H*uman Capital in Agribusiness: Challenges and Opportunities,* provides the perspectives of five industry leaders on why Human Capital is a critical issue for business, academic, and government leaders. Section two, *Attracting, Developing and Maintaining Talent,* includes essays on education, and corporate learning. The third section, *Human Capital in a Global Industry,* covers a range of world-spanning topics such as leveraging diversity and managing multi-stakeholder and cross-cultural interactions. Section four, *Responding to the Needs of a Complex and Dynamic World,* highlights the need for new skills and capabilities. The final section, *Innovation in Practice,* provides several real-world examples of organizations that are taking a different path.

Human Capital in Agribusiness Challenges and Opportunities

CHAPTER 1

CHAPTER 1

Human Capital in Agribusiness Challenges and Opportunities

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Farmers, Food and the Future
Take Action Now to Attract the Next Generation of Agricultural Leaders

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Hugh Grant

Chairman, President and CEO, Monsanto Company, 800 N. Lindbergh Blvd.
St. Louis, Missouri, 63167, USA

Abstract

Agriculture is at the heart of many of the most pressing issues – from fluctuating climates and the loss of topsoil to malnutrition, changing food preferences and renewable energy. These issues are magnified by surging populations and a changing economic landscape in the developing world, placing the responsibility of food production for 9 billion people by 2030 on the world's farmers. But despite agriculture's importance, the industry often gets short shrifted as a career path or destination. Meeting future demands will require developing future leaders who will champion agriculture. As the sophistication of agriculture grows, this requires investing in science, technology, engineering and math and then attracting the best and brightest to become the next generation of agricultural innovators. With only four decades to increase food production by almost two thirds, the global community needs to respond with a sense of urgency akin to that of the Green Revolution driven by the late Dr. Norman Borlaug.

Keywords: agriculture, future, production, attracting talent, careers

Corresponding author: Tel: +1 314.694.6397
Email: queries.media@monsanto.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

When my mentor and friend Dr. Norman Borlaug accepted the Nobel Peace Prize in 1970, he boldly stated, "If we are to capitalize fully on the past biological accomplishments and realize the prospective accomplishments … there must be far greater investments in research and education in the future than in the past."

This urgent need to advance the capacity of agriculture still rings true nearly half a century later. But I would argue the urgency and need extends well beyond the important areas of research and education in agriculture and reaches up and down the value chain. With growing populations, widespread hunger in parts of the developing world, changing climate, and little additional arable land, agriculture and the world's farmers are being pushed to do more with fewer resources than ever before. To successfully meet these rising demands today and tomorrow, we must attract, retain and develop talented people, or so-called human capital, at every level of the production chain.

From students and instructors, to lawmakers and philanthropists, to scientists and businesspeople, our efforts must break down barriers between the public and private sectors and, most importantly, relentlessly focus on helping farmers sustainably produce more with less. I believe if Borlaug were here with us today, he would urge us to stop talking so much about the problem and get on with finding solutions.

Agriculture's Role in Addressing Global Issues

Agriculture is at the heart of many of the most pressing global issues we currently face– from fluctuating climates and the loss of topsoil to malnutrition, changing food preferences and renewable energy debates. Exacerbated by a surging population, these issues place the weighty responsibility for more production squarely on the shoulders of the world's farmers.

Taking into account that it took 10,000 years to achieve the agricultural productivity that feeds today's population, by stark contrast today's farmers will have less than four decades to increase capacity by almost two thirds. Just as an example, it takes a company like ours roughly five to seven years to bring a new hybrid variety to market, and ten to twelve years to introduce a new biotechnology trait. It will take sustained, year-over-year improvement plus some new breakthroughs to achieve the progress needed to help farmers produce for a population of nine billion.

We need to innovate and grow in agriculture now. It is clear no single company, nonprofit or government can help farmers reach the necessary agricultural productivity goals. This level of success will require us all working together to invest in people and partner across sectors. For the next 40 years, we need to focus on reversing a trend. Instead of talent often leaving farms and agriculture for better jobs elsewhere, it is time to retain this talent and even attract more back. We need to draw from a wider support base in order to help farmers – regardless of where they are in the world – deliver more gains faster. And importantly, this support system reaches well beyond farmers. It also includes researchers who develop seeds, innovators who create and fine-tune infrastructure and equipment and policymakers who help enable market access to a safe and abundant food supply.

Shifting and Amplifying the Agricultural Narrative

Despite the critical need for leaders in agriculture and the high demands being placed on farmers, too often agriculture gets short shrifted as a career path. The broader public in the developed world does not always recognize the essential role agriculture industry initiatives play in broader economic growth and success. The fact of the matter is that worldwide, there are approximately 500 million small farms that are home to nearly 2 billion people, and many of these farmers face considerable difficulties growing a good crop, managing risk and connecting to markets.

This presents us with a duel challenge: How do we shift the global perception of agriculture? And, how do we do so in a way that attracts individuals who are capable of driving the agricultural value chain across both industrialized and developing countries?

In order to attract the best and the brightest to agriculture, we must do a better job of conveying what agriculture is, the career paths available, and the exciting possibilities for agriculture to truly transform and improve lives, just as Borlaug did decades ago. The message we must send is simple: the agriculture industry is focused on cutting-edge innovations that serve a higher purpose. By bolstering crops, increasing yields and developing a more sustainable food system, those in agricultural careers are working to keep food affordable and accessible, thereby combatting hunger and malnutrition worldwide.

I firmly believe that the key to our success lies in our ability to illustrate how agricultural careers provide the opportunity to improve lives. And we can start by showcasing how the agriculture industry works to address some of the world's most pressing issues – from food and water to climate change and energy.

Encouraging Future Leaders and Supporting Talent in the Field

In conjunction with shifting perceptions of the industry, we must also focus on developing future leaders who will champion agriculture. Remember, today's middle-schoolers will soon be responsible for solving the complex challenges of tomorrow.

While we cannot predict the specific challenges we will face in the future, history tells us that agriculture will be at the center of many pressing global discussions and solutions. Therefore, it is essential that we encourage and educate young people who are excited and passionate about the industry. In order to attract these youths and prepare them for a dynamic and evolving industry, I firmly believe we must focus our attention on Science, Technology, Engineering and Math (STEM) education. That is why Monsanto supports youths through scholarships, educational programs, professional development opportunities and funding for community events. By offering hands-on experiences early on and educating youth about how their unique passions and skill sets can contribute to agriculture, we can nurture future scientists, breeders and policy makers who can envision, enable and empower a global agricultural community dedicated to helping farmers succeed.

At the same time, we must continue to provide financial support and resources to innovators in the field today. The Beachell-Borlaug International Scholars Program is one example of how we do this at Monsanto. This program seeks to attract new plant breeders to rice and wheat, the two most widely planted crops in the world. The primary objective of this fellowship is to develop highly educated rice and wheat plant breeders who can serve as agricultural leaders. As a global society, we must collaborate to make opportunities like these readily available to the passionate individuals who will usher in the next agricultural innovations.

Working Towards our Goals with Borlaug's Sense of Urgency

Effectively encouraging youth and supporting innovators will require considerable resources and a shared global commitment. However, looking around at the dedicated individuals in agribusiness today, I am confident that we will be able to meet these challenges tomorrow. Our industry is comprised of resilient, entrepreneurial men and women who strive to bolster crops, increase productivity and improve lives. That human element is one of the reasons why Borlaug's Green Revolution had such profound impact: it placed new tools and opportunities into the hands of farmers and other leaders in the sector

In one interview, Borlaug recalled the advice he often gave to students–explaining that by setting high goals for yourself, "you'll be surprised what happens in your ability to do something for yourself, your family, the community, the state, the nation, and the world." Those of us in the agricultural sector should heed Borlaug's advice. The bar is set high. And by working towards our goals with a clear sense of urgency, we may just be surprised at our collective ability to bolster our industry and engender positive change.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Where are the Future Farmers to Grow Our Food?

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Farming and Agribusiness[1]

Hans Jöhr

Corporate Head of Agriculture, Nestlé SA, Avenue Nestle 55, CH-1800, Vevey, Switzerland

Abstract

Recent surveys on rural demographics in the US, Japan and the European Union reveal an ever aging farmer population. The average age of farmers in the US is now 58 years, and 67 years in Japan. More than one third of European farmers are older than 65–technically retired, whereas less than 5% of farmers in analyzed countries are younger than 35-years-old! All OECD countries show similar trends. Consequently, this question begs to be asked: who will grow our food?

Keywords: aging farmer population, future food needs, sustainability, food security, attractive professional career for farmers

Corresponding author: Email: H. Jöhr: hjoehr@gmail.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

Demographic projections for 2030 bring to the forefront an urgency of how we will feed 8.2 billion people – an ever-growing urban population in the context of resource scarcity – primarily water, while we also have to implement sustainable production practices and methods in agriculture, immediately, to cope with expected food demand.

Who Assumes this Extraordinary Challenge?

Recent surveys on rural demographics in the US, Japan and the European Union reveal an ever-aging farmer population. The average age of farmers in the US is now 58 years, and 67 years in Japan. More than one third of European farmers are older than 65 - technically retired, whereas less than 5% of farmers in analyzed countries are younger than 35-years-old! All OECD[2] countries show similar trends. Consequently, this question begs to be asked: who will grow our food?

Keeping young, talented people in rural communities once they have the choice and possibility to leave, seems to be a lost bet. This is a phenomenon that has continued for decades if not centuries. The current trend is similar in emerging countries – Brazil and India report a shortage of farm labor, even with a tangible increase in salaries. Likewise, many developing countries suffer the same singularity: a massive brain drain in rural areas. Yet, most of us still have food available every single day at a very cheap cost.

Agricultural production systems and methods have been refined over the decades through a blend of technologies, mechanization, genetics, knowledge and continuous training of farmers. However, obtaining the necessary skills, competencies and know-how to run commercial farming operations have changed tremendously in complexity and content as well as at a speed never experienced. To keep pace with such new and ever-changing logistical demands requires talented and intelligent minds. But do we now stand at a crossroad where the needs and requirements do not match the human resources available today? Or does agriculture need to become more attractive in order to allure and retain those with capable minds?

Farming is about business, not romance, and it must become an attractive life-choice profession for farmers, smallholders and larger commercial producers alike. The economic and social attractiveness of farming are implicitly the main pillars of such choices. Sustainable intensification of farming systems without polluting, wasting and destroying natural resources, may offer one answer to farming's future by providing an appealing income and social recognition. Nonetheless, new production systems on sustainable agriculture are much more knowledge intensive. Farmers need to learn how to handle additional technologies, management methods, risk avoidance plans, financial literacy and environment protection practices, to list just a few.

Achieving the objectives of increased food production and food accessibility, and at the same time taking care of natural resources, requires appropriate knowledge, local know-how, expertise and long-term experience.

Farmers in OECD and some emerging countries generally have access to formal practical and theoretical training; apprenticeship or higher agricultural education is provided by public institutions or private organizations and enterprises. But in most emerging and developing countries, hundreds of millions of smallholder farmers do not have training or education at all, or even dispose of basic necessary know how to run their farm. They work on their land by default, not by choice. Although a large percentage of affluent urban consumers rely on their production, e.g. coffee and cocoa and, consequently, on minimum skills to handle food safety and quality assurance aspects at farm level, they remain totally unaware of the realities in which smallholders operate.

Empowering smallholder farmers in order to increase productivity requires providing access to training, markets and financing in order to raise incomes to build prosperous farming communities. The smallholder

2 Organization for Economic Cooperation and Development is dedicated to promoting policies that improve the economic and social well-being of people around the world. www.oecd.org/

farmer's contribution to food security and social development is key. Alliances to help smallholders must be built on complimentarily between different production systems and sizes, rather than polarizing on large and small farmers only. This can be accomplished by providing the right incentives, ensuring a transfer of skills, and all-inclusive out-grower schemes. This is an indispensable and vital part of capacity building to grow our future food and beverage requirements in developing markets.

Many scholars argue in favor of increased research and development funding only for food security, as agriculture comprises less than 5% of the total spending on science, worldwide. One exception is China, where funding has more than doubled over the past decade. Nevertheless, just generating more technology and knowledge, without creating the capacity for understanding and applying and practically implementing knowledge and technologies at farm level is not a smart solution to guarantee additional food production.

The missing link and undeniable challenge of the future food system is a better connection from our academic and R&D ivory towers to the base. Farmers, both small and large need massive revitalization and land-based apprenticeships combined with on-the-job training opportunities and study programs provided by approved trainers. Basic education is the best investment and long-term solution to farming and poverty alleviation. We cannot donate farmers out of poverty, nor can we certify them out of misery without literacy.

A massive effort is required to build the awareness needed to *put basic training for farmers into the center of all rural development activities.* This is critical to strengthening the worldwide food system. This endeavor must be both a public and private task, whereas all public institutions are asked to revisit their focus on rural development, including development agencies, NGOs, aid organizations, and others.

The argument that better schools and practical training in rural areas will be lost anyway to urban migration is not a valid one. Prosperity in society has to be built in both, rural and urban communities. For decades, agriculture has supplied a workforce of talented individuals in all countries to build their national economies. Collective resources must to be reinvested to provide rural schooling and training opportunities wherever necessary. Out-migrating of well-skilled individuals from urban to rural communities is definitely, with few exceptions, not the trend.

Let us go back to the discussion on the economic and social attractiveness of farming.

- Would higher wages entice young future farmers to stay in the business?
- What consequences are imbedded in such an equation for consumers?
- Who should take the lead in innovative production system development; reshaping agricultural and rural development policy and elaborating the framework conditions to change higher labor productivity to justify investments and financial return in farming?
- Should educational institutions, NGOs and governmental aid organizations play a role in promoting farming as a choice for a prosperous professional life?

Regardless of achieving overall increases in agricultural efficiency and output, *reversing the trend of rural exodus* is a must in order to secure the food production needed to feed 8.2 billion people by 2030. If we fail this challenge, many countries may end up facing a situation similar to Japan. Japan expects another 40% of their farmers to quit agriculture in the next 10 years. Due to an aging Japanese society and a substantial drop in the number of full-time farmers, the Japanese government is now fostering a program targeting individuals, under age 45, to become farmers. How successful this undertaking may become is questionable, as small family-owned farms must still be operated and worked by their owners. Urgent policy reform in this sense must become a priority to make succession more feasible and local food production again viable.

Making a farming career attractive to young people is one of the most significant challenges that we are facing today. Succession in farming may not seem everywhere as dramatic as in Japan. However, across the world the same valid question remains: *Where are the future farmers to grow our food?*

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Winning the War for Talent

Global Networks, Global Perspectives, and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Gregory J. Duerksen

President, Kincannon & Reed, 40 Stoneridge Dr #101, Waynesboro, Virginia, 22980, USA

Abstract

The global talent shortage is broadening and deepening as organizations struggle to fill key roles in technical, commercial, and general management functions at all organizational levels. This essay discusses the reasons for the shortage while challenging conventional wisdom by asking if there truly is a talent shortage or if the issue is really just about price. A range of solutions are presented.

Keywords: talent, recruitment, human capital, executive development, leadership

Corresponding author: Tel: +1 703 623 3961
Email: G. J. Duerksen: gduerksen@krsearch.net

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Talent Defined

We define talent as:

- **Brainpower:** The ability to solve complex problems or invent new solutions. This could be either technical capability or strategic thinking skills.
- **Work ethic:** Disciplined, reliable, and a rigorous application of capabilities.
- **Leadership:** The capacity to inspire consensus and action to successfully accomplish large, complex and difficult tasks through other people.
- **Balanced ego to capability ratio:** What blend of intellect, skills, knowledge, experience, work ethic, sense of urgency, action orientation, and results focus does the candidate bring to the job? Is she or he strong in all areas? Does he or she have a weak spot or even an Achilles heel? The ego numerator must, first and foremost, be a positive number. A focus on customers and colleagues coupled with an intellectually honest confidence in one's own abilities yield a positive number on the ego to capability ratio. In contrast, if the individual focuses on himself or herself, the ratio becomes negative.

The Talent Shortage and its Causes

A series of factors have led to the increasing talent shortage:

- Companies have eliminated bench strength[2] and developmental posts.
- For those early in their career, *where* they live is dramatically more important than just a generation ago.
- In some countries, a decline in housing prices, the complexity of dual career couples and children yield relocation reluctance. This combination has become dramatically more potent since the 2008 financial and real estate meltdown – and across all industries.
- The developed world population is aging while the educational systems in emerging markets are not keeping up.
- Universities are not producing graduates with the skill sets companies actually need.

Little known or perceived less *interesting* industries or vocations have an even greater challenge, and certain segments of food and agriculture are particularly challenged.

But is there really a talent shortage? As noted in the article "The Search for Talent" (*Economist* 2006), "People often talk about shortages when they should really be discussing price." In our own lifetimes we have seen this, as evidenced by where a disproportionate number of top university students have flocked, attracted by the starting salaries and promises of future income growth. For example, in the 1990s computer technologies and all things internet were big attractions, and in the 2000s many top students were seduced by the world of finance.

Food and Agribusiness Situation

We recently surveyed the memberships of key food and agribusiness industry associations to determine their particular talent challenges. We consistently see that regulatory affairs leadership, research and development leadership, and strategic marketing leadership positions are the most difficult to fill with superior talent, closely followed by general management and sales positions.

Across all types of professions, finding the combination of strong leadership capabilities coupled with the right skill set were clearly the most important talent factors, while relocation was a strong personal and family challenge. For some segments, such as animal and crop nutrition, industry attractiveness was a major challenge. For others, such as animal health, it was not.

2 Bench strength refers to competence and the number of employees ready to fill vacant leadership and other positions: building an organization's bench strength through management training.

Within R&D, we see ample talent in the senior ranks, but a dwindling pool behind because too many of the best and brightest pursued other career paths. For regulatory affairs, the problem is that the roles have switched from being tactical to strategic, but organizations have failed to communicate this critical attribute to the talent pool. What makes senior marketing positions tough to fill is that very few people in the world truly understand marketing.

Candidate compensation expectations are a major challenge in some sectors and minimally are a factor of secondary importance for all we have surveyed. A cause and effect question needs to be asked: Are people with the needed skill sets simply not to be found at any price, or is the paucity of candidates with the appropriate skill sets an effect of insufficient compensation offerings? Many companies in their recruiting efforts communicate compensation ranges that are simply not enough to attract the skills and talents they need.

Solutions

We established earlier the value of top performers, so we logically want to build teams full of them. To do so, companies need to do four things:

- Develop a comprehensive talent acquisition and retention strategy
- Nurture and challenge employees
- Develop measures to incent and retain top talent
- Continuously look outside your company for new talent

The solutions are straightforward but require discipline and perseverance to implement.

Comprehensive Talent Acquisition and Retention Strategy

Companies need a comprehensive talent acquisition and retention strategy. They must start in universities and community colleges or even in high school and look to urban areas as much as rural areas. One of our clients in the grain sector notes that when they hire a talented city kid it only takes that person six months to get up to speed on agriculture and farming, and then they are at the same productivity level and advancement track as their farm-raised peers.

Companies must ask what will generate *interest* in their organization or industry. For university students and early career executives, it will be a combination of money, vision, challenge, and competition.

Notwithstanding, the fact that money is noted first on this list, and contrary to conventional wisdom, *money is not a decision-making factor*. Rather, it is a *knockout factor*. This means that candidates generally do not decide to accept a job offer based primarily on the money. It is the other way around. Long before an offer is put on the table, the anticipated compensation package must be attractive enough to start with for the organization to be even *considered* for evaluation. Thus, money becomes the knockout factor in the recruiting process. For example, if scientists and potential regulatory leaders perceive that the animal nutrition industry pays 30% less than their alternatives in, say, animal health or crop protection, the best candidates will not even consider animal nutrition. Once an organization or industry has passed the knockout level on money, it may engage prospective talent with vision, challenge, and competitive urges. These then become the true decision-making factors.

For example, if organizations treat regulatory posts as strategic roles and communicate that positioning and pay accordingly, they will be able to attract talent. Another idea is for industry groups to collaborate and approach universities that have both a strong college of agriculturally- and environmentally-oriented sciences and an excellent law school and ask them to develop Master of Science programs in regulatory affairs

so that this realm is viewed as an important education and career track.
Hiring managers for marketing should not seek creative communications talent, but rather look for thought processes that embrace four elements plus a unifying theme:

- A rigorous understanding of customer segments and needs, including unknown needs
- Knowledge of your competitors' product and service offerings to meet those needs
- The customer needs not met – otherwise known as "the white space" – that you can target
- Your company's product and service offering, *and communication thereof*, to meet those needs, fill in the white space, and beat the competition—profitably.

Organizations still have the relocation issue, and it is becoming a knockout factor. This has nothing to do with the industry in particular, but everything to do with society, in general. It is occurring across all industries in the developed world in particular, where we see both a continued migration from rural areas to the cities and a reluctance to move once there. We saw a sea change following the 2008 financial crisis. Going forward, we will need to pay dramatically more for talent to get it to move, relocate a plant or headquarters, or allow more flexible working arrangements. Some organizations are already considering extreme commuting and job sharing, such as occurs for oil platform workers.

Once you have top talent on board, you want *commitment* so that they stick with you and do not even consider opportunities elsewhere. Our experience shows consistently that professionals at all levels are concerned most with the combination of freedom, variety, and impact.

Nurture and Challenge

Wise and progressive companies will nurture and challenge their top people through developmental grounding in roles of progressive responsibility. Effective tools include:

- Assign a senior executive mentor to the new hire.
- Make talent development part of senior executive incentive compensation evaluation.
- Put people in jobs before they are fully ready. When coupled with the previous two items, this is not very risky and keeps your high-potential performers stretched, challenged and motivated.
- Rigorously move people up, sideways, or out. You cannot afford to keep mediocre performers on board, as they are de-motivating to the rest of your team.
- Give international assignments. Nothing stretches an individual or family like work and life in another country, culture, and language. This is a life-changing developmental opportunity and where you will find those who have general management capability.

Measures to Incent and Retain

Aggressive and flexible measures must be employed to incent and retain those who are key to the company's present and future.

- Offer advanced education *with hooks*. For example, you could fund ongoing education and give reasonable leaves to pursue it in exchange for a commitment to pay it back if you leave the company within a certain number of years. Many organizations already sponsor Ph.D. seekers.
- Offer short sabbaticals.
- Consider secondments. Options for a change of pace to another post will often be rewarded with loyalty.
- Offer non-standard work site or flexible hours. Today's technology allows this.
- Provide ownership pieces for the people you care about long term.
- Consider non-salary cash or equivalent. The psychological value outweighs the cost and does not wreck internal equity based salary comparisons. For example, a car allowance or children's education allowance or housing allowance or vacation allowance may be perceived as significantly more valuable than the actual cash outlay for the company.

Continuously Look Outside

- Companies will need to continually look to the outside – primarily to bring in fresh ideas, perspective, and eyes to the organization to help renew it.
- Bring in top talent whenever you can find it, even if you have no specific role. Obviously, fill roles lacking internal candidates.
- Regularly hire executives and professionals from the outside even when you have internal candidates. This tactic is much less obvious but is critically important to keep a company from becoming insular, inward-looking, and stale. Fresh perspective allows an organization to see things it currently ignores, question things it assumes, and recalibrates the internal talent standard.
- An alternative is to have people swap jobs within your organization. No pay raise – just trade jobs. Performance will improve simply from the value of fresh eyes.

Summary

The war for talent is imminently winnable. The keys to success are a long-term eye toward talent acquisition, development and retention. This takes senior management commitment, creativity, flexibility, and aggressively finding ways to incent performance and ensure your best people do not even *consider* an entreaty from a competitor or another industry.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

The People Question: Creating Global Advantage through Global Talent Initiatives

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

T.P. Lyons[a] and Aidan J. Connolly[ⓘb]

[a]*President, Alltech, 3031 Catnip Hill Pike, Nicholasville, Lexington, Kentucky, 40356, USA*

[b]*Vice President Corporate Accounts, Alltech, Sarney, Summerhill Rd, Dunboyne, Co Meath, Ireland*
Adjunct Associate Professor of Marketing, UCD Michael Smurfit Business School, Dublin, Ireland

Abstract

As agribusiness has evolved from a local, generalized activity into a global, specialized industry, fewer of the stakeholders, from producers to consumers, really understand the food production system. Education is the key to navigating the challenges of global agribusiness.

Keywords: agribusiness, human capital, global

ⓘCorresponding author: Tel: + 1. 859.494.3978
Email: A. J. Connolly: aconnolly@alltech.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

Once the most local industry, agribusiness is now firmly a global industry, and one of its most serious challenges is ignorance of the modern food production system. There is an urgent need for greater understanding amongst all stakeholders: from consumers and food producers, to regulators and scientists, to people who work in the industry. Agriculture has changed so much that consumers generally do not understand the realities of how their food is produced, especially as more people around the world move away from agriculture and farms are consolidated.

In addition to the abundance of new technology and a near constant stream of new research to keep up with, food producers also face increasing pressure from both consumers and regulators, at home and abroad. There is a constant media presence craving sensational stories and easy-to- digest sound bites. Regulators have to manage political expectations as well as changing practices and new technologies on ever-smaller budgets in an ever-larger geographic region. As the agribusiness industry grows and becomes more technical, more global and more complex, attracting outstanding new employees becomes evermore challenging.

Each of these stakeholder groups–Customers (both industry customers and end consumers), Influencers (scientists, regulators, politicians), and Employees–have different experiences of agriculture and bring different perspectives, objectives and levels of understanding. Yet they all represent valuable human capital. Developing human capital is sometimes seen as an internal concern, largely focused on recruitment and retention, and to a lesser extent, training and development. This paper presents a different approach: one that places education at the center and expands the concept of human capital beyond employees to stakeholders. By emphasizing education, and taking the long view, Alltech believes it has found a way to positively influence the industry, while creating a competitive advantage.

1. **Customers & Consumers**–Companies purchasing Alltech solutions and using them to produce feed and food, and consumers of that feed and food.
2. **Employees**–A diverse global team of 2,800 people
3. **Influencers**–Companies and authorities such as politicians, regulators, journalists, and scientists who can change or shape the way animals destined for food consumption are being fed, raised and processed.

Lifelong Educational Engagement

Agribusiness is an increasingly complex and technical field, requiring not just a high initial level of education, but substantive continuing education. Although people outside the Agribusiness industry may not see it as part of the 'knowledge economy,' the reality is different: innovation in both products and processes is fast-paced and often dramatic. Keeping up with these changes is demanding for people in the field. For consumers and regulators, it is even harder.

A core value at Alltech is education. It is the foundation for personal and professional growth and development. The company takes the long view, using education to help Employees grow professionally, to help Influencers better understand the complexities of Agribusiness, and to build an understanding of the industry in Customers and Consumers. All of these initiatives reflect the agricultural tradition of 'learning by doing' through the contemporary best practices of 'experiential' learning and 'multi-modal' learning. Further, the initiatives work to bring these disparate stakeholders closer together: many of these initiatives involve more than one constituency, in dynamic and integrating activities. These links will become apparent in the following sections, which outline some of the education-oriented initiatives that Alltech uses to develop the 'Human Capital' of its stakeholders.

Stakeholder: Employees

Employees are the baseline for Alltech: they create and produce the products, they are the primary contact with Influencers, Customers and Consumers, and the more they know, the more knowledge they can share. At every career stage, from new graduate to senior management, Alltech uses education initiatives to help employees be their professional best, and in turn, they become Alltech's best educators for the stakeholders in the industry. With operations in more than 130 countries, internal education initiatives are also an important part of building the shared vocabulary, shared sense of mission and shared corporate culture that enable a globally dispersed, culturally diverse organization to operate effectively.

One of the newest initiatives is the year-long *Alltech Graduate Program.* Designed to attract graduates who wish to work in a dynamic global context (notably including those who had not been considering going into the agribusiness sector), applicants must already be fluent in two (or more) languages. Through experiential learning, participants gain practical management skills and lay the foundations to a career that will be shaped by their own ambitions and skills. After early training sessions at the Alltech facility in Ireland, participants are posted to Alltech offices around the world. The expectation is that the strongest participants will be offered permanent jobs at the end of the program. These graduates will have had a global orientation from the very beginning of their careers and will be well positioned for the challenges facing Alltech and agribusiness.

Newly hired employees also learn quickly that education is an important part of Alltech's corporate culture. The *Talent Development Pathway* (TDP) begins with an induction program tailored to the different departments and corporate initiatives. A series of modules, with a timeline for completion, ensures that each new employee becomes familiar not just with their specific role, but how that role fits within the company, its products and the 'Alltech way'. The Lifecycle Diagram, below, outlines the process for salespeople. An important element to the success of the TDP is the marker points along the way that are specific enough to let both employees and managers know where they are but with ranges that allow for individualization. Also, in parallel with the individual TDP, there are continuous career development modules that reinforce both key skill areas and teamwork. Based on merit and performance, employees become eligible for advanced development programs, including the 'Mini-MBA' program. Originally designed to develop the management skills of talented employees in a more focused way than subsidizing participation in generic MBA programs, an invitation to participate in the Mini-MBA has become highly coveted by staff as recognition of achievement and potential for advancement. It is also valued by senior executives as an identifier of tal-

ent and as a retention incentive. Continuing refresher courses and invitations to analyze emerging issues for the company and/or industry are offered to mini-MBA graduates, extending the learning and benefits. The result is a program that offers the most motivated and talented employees, while providing an incentive to remain with the company, knowing that they will continue to grow and develop professionally and be rewarded for their commitment and contribution to the success of the organization.

Alltech Training Lifecycle Diagram: Sales Example

Stakeholders: Influencers

Influencers in Agribusiness include such disparate yet highly linked groups as politicians, regulators, journalists, and scientists. These groups interact and influence each other in many ways (e.g., politicians often seek to influence the regulators), but equally, they are often at cross-purposes (as every scientist who has seen a complex piece of research reduced to a headline knows). Moreover, direct efforts to educate can be seen as dishonorable (for example, bringing politicians to see how a facility works can be seen as a junket; creating explanatory language for a regulator can be seen as trying to tilt the field to your advantage). Yet, in a complex and changing field, policies and rules made without understanding can damage the industry. Similarly, headlines can misinterpret research results to the point of leading to misplaced policies. Alltech has found that creating forums in which Influencer stakeholders and Customer stakeholders can come together and learn together is a potent way to share knowledge and create understanding.

Alltech has hosted an international symposium, a forum for sharing information and discussing industry issues for 28 years. Customers listen to leading scientists from around the world present the latest research. They see scientists, politicians and regulators participate in vigorous debates on issues such as sustainability, technology and industry trends. Everyone has the opportunity to ask each other questions, to see other aspects of the industry, and to learn in a neutral arena. Participants meet in a variety of settings, as well,

within specialities and across disciplines, in small groups and large gatherings, formally and informally. In 2012, 2,966 attendees from 72 countries and 46 US states participated in the symposium, with simultaneous translation in five languages.

Stakeholders: Consumers and Customers

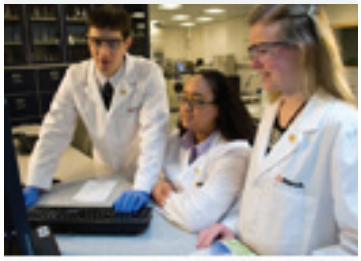
The people who will become agribusiness employees, customers, and influencers all start out as consumers, so education initiatives that help inform consumers today also help to develop the stakeholders of tomorrow.

Consumer understanding of agribusiness tends to come from what is learned at home, which is often out of date, or whatever is in the media, which is often fragmented or incomplete. Customers in the agribusiness community are typically familiar with current and emerging practices and issues in their specific sector, but the pace of change makes it difficult to keep up, much less develop an awareness of changes in the larger community. Both customers and consumers are important stakeholders for agribusiness organizations, yet they tend to have isolated pockets of knowledge and not a good view of the larger picture. Alltech has developed educational initiatives designed to reach and inform consumers and customers across ages and around the world. These programs include working with grammar schools, universities and professionals.

Agriculture for the Next Generation

Alltech Kidzone was created to engage and inspire students (ages 4-17) by demonstrating the role of agriculture in modern life through an online learning model (www.Alltech.com/Kidzone). Developed originally in Ireland with Agri-Aware, Kidzone provides online and classroom based interactive games designed to inform children about how food is produced and the role of farming in protecting our natural environment.

SCHOOL



UNIVERSITY

Transition from Academia to Practice

Alltech's Bioscience Centers (USA, Ireland, China) partner with local universities to tackle agricultural challenges. This collaborative research environment bridges academia and industry, enabling ambitious young scientists to apply their talents in the real world. Graduate students attend classes and work with their professor while participating in Alltech in core research projects with access to senior researchers and state-of-the-art equipment. They receive their Ph.D. or Master's Degree from an accredited national university with a global overlay and relevant experience.

Alltech Young Scientist is an international competition for science students at the university and post-graduate level. Students are asked to submit a scientific paper on a topic such as veterinary science, animal nutrition, feeding technology or agricultural management. A panel of judges reviews each paper and finalists travel to Kentucky for formal presentations. Undergraduate and graduate winners receive a scholarship of $5,000 and $10,000, respectively, as well as a trophy, during Alltech's International Symposium.

The Margin of Excellence Fellowship Program provides post-graduate students in Kentucky with a substantial stipend and includes bonuses for published work, funding for visiting other laboratories and a retention bonus if the recipients stay in Kentucky for three years post-graduation.

Developing Strong Ag Journalists is essential as agribusiness becomes more technically complex and interconnected globally. The Alltech-IFAJ recognizes young agricultural journalists and supports their professional development. Open to journalists in more than 30 countries, recipients receive a €1,000 ($1,324 USD) scholarship to support their participation at an IFAJ Congress. They also contribute a 500-word story or three-minute broadcast about the Congress to IFAJ News or the Federation's website, www.ifaj.org. More than 60 journalists have received the award since the program's inception.

Each of these educational initiatives have both traditional and experiential learning aspects, and are part of developing the 'human capital' needed for all of the stakeholders – *Employees, Influencers, Customers and Consumers* – to play an active, informed role in the process of growing and processing the food we all eat. They are 'global' in their essence; they operate across national, cultural and language boundaries, and they are bringing global talent together, developing global networks and providing global perspectives.

Most importantly, these programs work. The range of programs outlined here are indicative of how important it is to reach across traditional boundaries and specialized silos. By focusing on education and reaching out to stakeholders from producers to consumers, Alltech is addressing the serious issue of limited, incomplete and outdated understanding of the global food system. For all the changing technology and evolving consumer expectations, it is still people that are at the heart of agribusiness.

Attracting, Developing and Maintaining Talent

CHAPTER 2

CHAPTER 2

Attracting, Developing and Maintaining Talent

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Agribusiness: A Great Career Opportunity for Talented People

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Vikram Puri

Chief Executive Officer, Mahindra ShubhLabh Services Ltd.
Mahindra & Mahindra (Tractor Division), Gate No.2, Akurli Road, Kandivili (E), Mumbai - 400 10. India

Abstract

An Agribusiness boom is underway in India, and it needs big talent to drive its growth. Growth in agricultural productivity will build incomes and assets, and although somewhat cyclical, at the macro level, agriculture in India will inherently be recession proof over the long term. The greatest achievement for India will come from sustained self-sufficiency in food.

Food consumption is leading the boom in agriculture. India is expected to overtake China as the world's largest nation. With the world's youngest population, food and Agri sector is set to triple by 2020 from US $328 to US $895 Billion in just six years from now. Huge opportunities in Agribusiness are attracting investments in primary production as well as on the output side in food processing and distribution. Organized retail is growing at 35% CAGR and so are many input industries, all of whom are demanding more capable people to manage growth. This is resulting in a shortage of trained agribusiness talent. Recognizing the opportunities that will continue to grow in the future, leading corporates are reinventing their induction, retention and leadership plans for expanding their Agribusiness talent pool in India. The article provides insights and opportunities that are attracting talent to agribusiness.

Keywords: agriculture, new horizons

Corresponding author: Tel: +91 9867265902
Email: V. Puri: puri.vikram@mahindra.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

Talent follows opportunity and opportunity has different connotations to different people. At a young age, career decisions are often driven by one's interest and passion. Others look for organizations where they can learn and grow, whereas a few just see a long road ahead that does not seem to have a destination! Whatever career choices are made, are usually determined by education, the environment and one's values, beliefs and aspirations.

When I completed my M.Sc. in Agriculture in 1982, the prime objectives that drove career choice in India was job security and social status. The first choice, therefore, was a Government job – preferably via competitive examinations of the Union Public Services Commission. Thereafter came the Public Sector Banks where job security was a given. Private sector (except MNC's) was least preferred as their salaries were low; jobs had an element of insecurity about them and insignificant social status. Multinationals were preferred as they paid well and also had strong HR practices. Input industries were at the bottom of the heap for obvious reasons. There were hardly any multinationals outside of the agro chemicals sector, and other input industries were usually local companies that lacked stability with the exception of the Fertilizer and the Farm mechanization sector.

Training, talent retention, coaching, mentoring and other HR initiatives to nurture, train and develop human capital were not the norm of the day.

Policy Influencers in Agriculture

Back in the 60's and 70's, agriculture in India was a "way of life" for a myriad number of farmers. Technology in agriculture was primitive, and agrarian India was poor with low productivity and widespread unemployment. The focus of the Government was on food security, and hence, over time, a lot of business grew out of Government's initiatives on self-sufficiency in cereal based grain production (i.e., Wheat and Rice) and the PDS system which delivered subsidized food grain to the rural and urban poor. The PDS program has since emerged as the largest intervention of its kind in the world and now sits on upwards of 54 million tons of food grain stocks with another procurement season of at least 25 million MT food grains in 2012, to support the underprivileged in India.

Food Security in India

India has a huge problem with food security. With 1.2 billon people expected to expand to 1.85 billion by 2050, the migration of rural India to the cities is urbanizing an additional 1.8 million hectares of agricultural land every year. Despite growing labor shortages, dismally low agricultural productivity arising from small sized Indian farms that limit mechanization efficiencies; the Indian economic juggernaut still somehow continues to grow and baffle with its impressive 7% year on year GDP growth. Hence, rising per capita incomes and growing domestic consumerism define the changes that are driving the Indian economy today.

Winds of Change

India is a young country with a median age of 26 years, which is also pushing the envelope in changing dietary habits from cereals to proteins, processed foods and beverages. Over the last seven to eight years, this phenomenon is influencing change in policy to modernize and diversify agriculture relatively rapidly, and we are already beginning to see positive action with forward looking policies such as partial decontrol of fertilizer, progressive removal of agri marketing bottlenecks, relaxations in the Essential Commodities Act, introduction of forward trading in agri commodities, enhancement of agriculture credit and a frenzied thrust on micro irrigation, watershed management, horticultural development, food processing and agri infrastructure.

To give a perspective of this growth, Organized Retail and Modern Trade is presently growing at 35-40% CAGR. It is further estimated that the Food and Agri Sector is set to triple in the next six years from the US$ 328 billion today to $895 billion. This will be led by consumption arising out of income growth, expanding urbanization and a new breed of consumers, which, by 2020, expect to comprise 75% of the country's population (then at about at 1.45 billion people) with 60% of primary wage earners seeking a branded shopping experience.

New Opportunities in Agribusiness

This growth will invariably cause major structural shifts in the management of agribusiness enterprises and also will throw up a million opportunities beginning with the agglomeration of land, most likely via lease arrangements with the intent of improving production efficiencies – resulting in expansion of the farm mechanization business, micro irrigation, reorganization of supply chains, investments in food processing, cold chains and agri infrastructure, to name a few. Appropriate change in government policy is already headed in that direction, and one can be sure that more such supportive policies will follow. The corporate sector in India has begun to experience and respond to changes, and one now finds a growing number of interesting career opportunities in agriculture as corporates drive the talent acquisition and retention component. There are a growing number of new companies in the Billion Dollar plus club in the area of processed foods, beverages, nutrition and the plantation sector. Inputs and farm mechanization have several such companies. Mergers and acquisitions, IB and PE activities have emerged, signaling interest in this sector and appetite for investment. In the last ten years, PE has invested $8 billion into Agriculture and the sector is poised to see a further $50 billion invested by 2020. So perhaps a career in this domain deserves closer attention, particularly since compensation too has been expanding apace and for individuals with the right skill sets, is now at levels that deserve closer attention.

Capability and Skills Required

While there is no doubt that with growing incomes, consumption will drive massive growth, particularly when a nation the size of India is on the move. The point is: where are the people with the requisite skills, knowledge and capability that are required in driving this growth? Opportunities will exist at each step of the value chain. So what are the resourcing issues that businesses and institutions will face in the management of growth described above?

Complex Business Environment

As mentioned earlier, so far, agriculture was generally seen as a livelihood. People with competence in technology or the capability to deal with a range of issues across the value chain was limited. Agriculture is an industry that has its own and unique uncertainties, making it an area with high complexity. Various dynamic variables influence agriculture outcomes. Vagaries of weather, incidence of diseases and pests, price movements, shortages, oversupply impact due to changing global trade flows, interest and oil rates and perhaps just about anything can impact supply.

Each product value chain has its own dynamics and nuances, It is therefore necessary that food and agri professionals learn to handle uncertainty effectively and that they factor these issues into their planning and execution to allow them the flexibility to deal with such surprises and non-visible risks.

Today's talent places big value to emotional well-being. Loyalty and commitment to organizations is on the decline and work/life balance is emerging as a prime concern.

What is required, therefore, is to address the talent issue at several levels and create an atmosphere that places a premium on those who have the talent and the competence to straddle the product chain while handling uncertainties and still drive growth. Most Agribusinesses need to focus on the long term since reaching out to the customer, communication and creation of farm and rural networks is physically demanding and time consuming. Moreover, agriculture is seasonal and corrections to contracts, their administration and execution can only happen once annually, hence the need to "get it right the first time," to grow and build at a pace that allows midstream remodeling of contracts, processes required for farmer engagement and consequent building of results.

Long business cycles, therefore, necessitate the importance of building retention and rewards to key resources over the long term.

Training of individuals on quality of inputs, methods of generating resources, structuring contracts, etc. are of critical importance. Marketing, Finance and Human Resources are the mainstream of any business enterprise, and cross-functional exposure is imperative to develop an understanding that facilitates adjustments to maximize returns and minimize risks.

Models of procurement based on price, quality, availability and seasonal variation should find prominence in training and education. In bringing product to market, the need for value addition, storage, and delivery should form a strong part of the learning. Training should cover government policy, tariff and nontariff barriers and operational tax structures. Given our institutional voids, a thorough understanding of how rural India operates and thinks is, to my mind, of seminal importance for a successful Agri professional. Focus on customer behavior both uneducated and educated at the same time requires knowledge of what is feasible in time and circumstance.

Building the Agri Talent Pipeline at Mahindra

Mahindra has been a market leader in India in the farm mechanization space for the last 29 years. It is now the global leader, as well, in the number of tractors sold worldwide. The employment profile has overwhelmingly been tilted in favor of those with an engineering background. In the last few years, however, Mahindra has made a conscious decision to strengthen its roots into agriculture with a stronger farmer engagement as well as progress into the vast agriculture domain at both input and farm output levels. This necessitates a product chain approach, and it all begins with building a high potential ("Hi Pots") Agri talent pipeline. The first initiatives are, therefore, the hiring of talent with a pure Agricultural education and some with a secondary management degree and then putting them on par with graduate engineers in terms of pay and perquisites. Thereafter, these "Hi Pots" are placed on live training assignments in our various agribusiness projects and are strongly supported with cutting edge technical and business training programs where they can learn, innovate and grow. Assessments via development centers across what we call the Mahindra Leadership Competencies are aimed at understanding potential strengths and determining best fit. Increased participation in Leadership development interventions, e-learning through Harvard Manage Mentor and U21 Global courses, higher education offerings at premium B-schools and inroads into the Executive Coaching space are some of the beginnings here. Career planning and retention incentives are then built into expanding and nurturing this high potential Agri talent pool. I am pleased to report that the efforts are beginning to bear fruit.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Doing More with Less in a Rapidly Changing Discipline– Smaller Agribusiness Faculties Teaching More Students

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Joshua D. Detre[Φa] and Michael A. Gunderson[b]

[a]*Assistant Professor, Department of Agricultural Economics and Agribusiness, Louisiana State University Agricultural Center, 234 Agricultural Administration Building, Baton Rouge, Louisiana, 70803-5604, USA*

[b]*Assistant Professor, Department of Food and Resource Economics University of Florida, 1121 MCCB, P.O. Box 110240 IFAS, Gainesville, Florida, 32611-0240, USA*

Abstract

The number of bachelor's degrees awarded in food and agribusiness management continues to climb, while the size of faculty that has traditionally taught in these programs declines. As a result, there is an opportunity for the International Food and Agribusiness Management Association (IFAMA) to cultivate good teaching among its academic members. This paper documents the trends and suggests six actions that IFAMA could take to create value for its academic members actively engaged in teaching: (1) facilitate surveys of professors and industry on agribusiness curriculums, (2) collaborate with like-minded organizations, (3) develop and maintain a database of industry speakers, (4) assist in the development of webinars related to teaching, (5) organize a formal teaching mentoring program, and (6) honor members for teaching achievements.

Keywords: Human Capital, students

[Φ]Corresponding author: Tel: + 1. 225.578.2367
Email: J.D. Detre: jdetre@agcenter.lsu.edu
M.A. Gunderson: mag79@ufl.edu

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

According to the US Department of Education, student enrollment at United States universities set record levels in the fall of 2010, and this trend is expected to continue through the fall of 2019. Trends in college enrollment internationally generally follows this same trend (UNESCO Institute for Statistics), with enrollments growing rapidly in developing nations like China and India. Higher educational attainment has led to higher lifetime earnings among US college graduates relative to their non-college graduate peers (Julian and Kominski 2011). The enrollment increases are due at least in part to the rapid growth of online degree programs offered by colleges such as the University of Phoenix.

Similarly, Colleges of Agriculture have also noted growing enrollments in the US More specifically, there has been a rapid growth in degrees awarded in agribusiness management. At the same time, there has been a decline in faculty numbers in departments historically known as "agricultural economics" departments (for a detailed discussion of the evolving names for the "agricultural economics cluster" see Perry 2010) (Perry 2010; Coleman 2007). Since the publication of Perry's article in 2010, an additional two departments of agricultural economics have been merged and/or eliminated at US universities (Clemson University and University of Nevada at Reno).

Trends in Student Enrollment and Faculty Size in Agricultural Economics and Agricultural Business Management Departments

The data used here are from the US Department of Education's Integrated Postsecondary Education System (IPEDS) and the Food and Agricultural Education Information System (FAEIS). The statistics provide clear trends in enrollment and faculty sizes. The number of bachelor degrees awarded in agribusiness management has grown 15% from 1986 to 2010 (Figure 1).

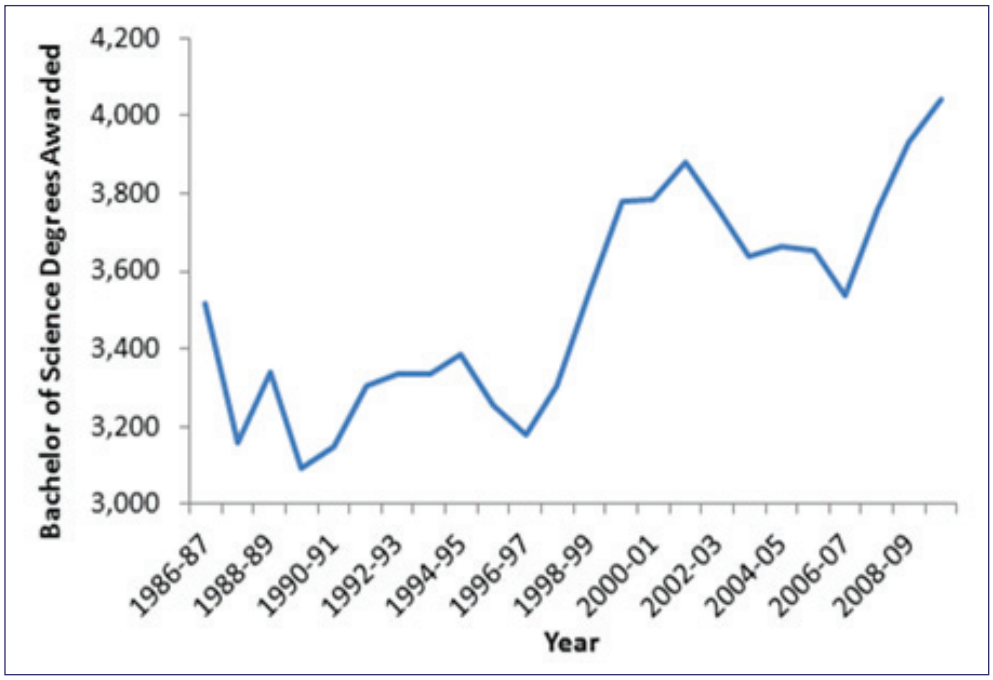


Figure 1. Number of Bachelor of Science Degrees in Agribusiness Management Awarded in the US.
Source: US Department of Education Integrated Postsecondary Education System (IPEDS)

The increasing demand for baccalaureate degrees in agribusiness management appears warranted. The Georgetown University Center on Education and the Workforce completed a study that indicated the un employment rate among those with a degree in agricultural economics was about 1.3% in the U.S (Carnevale et al. 2011). This ranks it among the 10 lowest unemployment rates among undergraduate majors and lowest among un-

dergraduate majors in the areas of agriculture and natural resources. In addition, the median earnings of those with a degree in agricultural economics were $60,000. The evidence suggests these are valuable degrees in the job market (Carnevale et al. 2011).

On the other hand, the number of faculty teaching in agribusiness management and related programs has declined substantially (2004-2010). Data obtained from FAEIS shows that for the programs in the Academic Area of Agricultural Economics, Agricultural Business and Management that have provided data on faculty numbers (48 departments), 26 have had a reduction in faculty size. Over the period (2004-2010), the faculty size of a department, on average, has decreased by 2.93 members. This equates to a 21% reduction in departmental faculty size from the peak. Figure 2, provides a visual depiction of these reductions. The drastic reductions in faculty size coupled with the increasing enrollment in our undergraduate program and demand for students with agribusiness management degrees has placed faculty in these programs in unfamiliar territory.

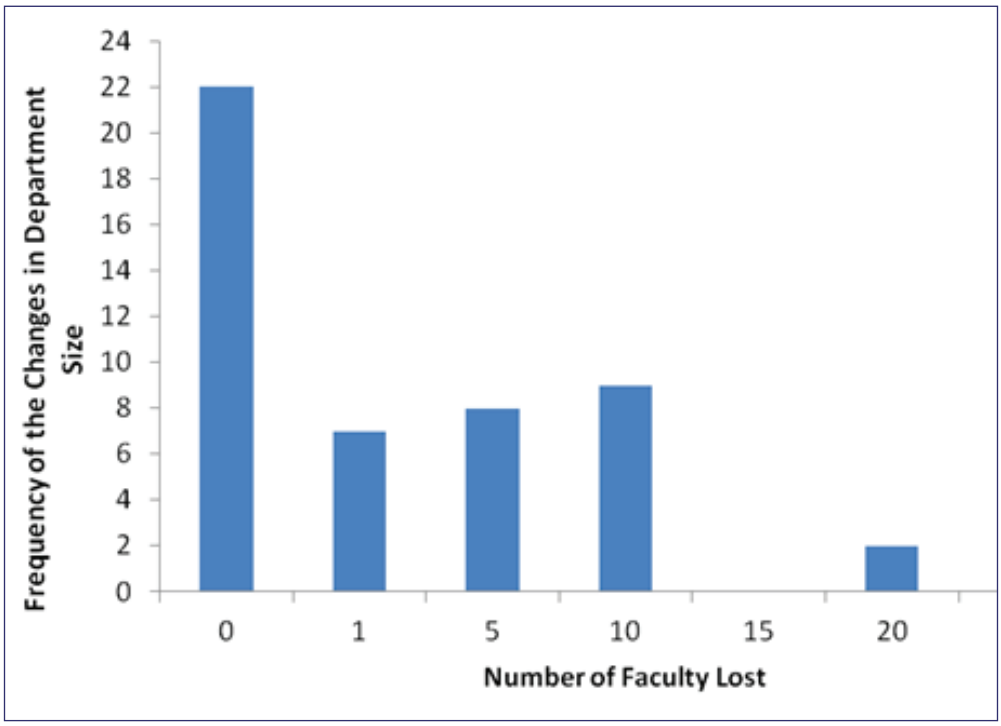


Figure 2. Frequency of the Changes in the Decline of Faculty Size in Agricultural Economics and Agribusiness Department
Source: Food and Agricultural Education Information System (FAEIS).

Opportunities and Challenges

Increasing student-to-faculty ratios will create challenges to the old methods of teaching. It will also force faculty to identify opportunities to use technology and improve the quality of teaching. Not only do employers generally prefer students with management and economic skills, they also want them to have well-developed "soft skills" such as the ability to solve problems and to communicate effectively (both oral and written) (Robinson, 2006; Gunderson et al. 2011). The preferences for these types of students place additional pressure on faculty, as faculty will likely find it challenging to incorporate such skills into their courses and, more importantly, across their curriculum. Faculty will need to use technology to improve mastery of material, create unique experiences that simulate business decision-making situations, and improve the communication skills of graduates. In the subsequent sections, we discuss these opportunities and challenges along with recommend courses of action for IFAMA in helping to address these issues. Table 1 contains a summary of these recommendations.

Table 1. Recommended Courses of Action for IFAMA to Address Opportunities and Challenges Facing Agribusiness Teaching Faculty

Recreating and Redefining Curriculum Offerings	
1	Facilitate surveys of professors and industry on agribusiness curriculum (needs vs. what we teach)
2	Collaborate with AAEA's Teaching, Learning, and Communication Section on Student
3	Develop and maintain a database of industry speakers willing to speak to agribusiness classes
Assisting Faculty in Using Technology and Implementing New Teaching Methods	
1	Assist in the development of webinars related to teaching technologies and methods
2	Organization of a formal teaching mentoring program

Recreating and Redefining Curriculum Offerings

The combination of increased student enrollment with a decrease in faculty size means there are likely to be fewer class offerings and that those classes offered will have a larger enrollment size. Consequently, it is essential that those classes taught provide students with the greatest opportunity to succeed. For example, Carnevale et al. (2011) finds that the top three occupations for agricultural economics majors are management, sales, and finance at 36, 21, and 11 percent, respectively; the top three industries for employment are finance (21 percent), agriculture (11 percent), and retail trade and public administration (both with 8 percent). The aforementioned results indicate that our profession, as a whole, should seek to meet with representatives of these concerned industries to find out what are the weakness and strengths of our programs.

Recommended Course of Action for International Food and Agribusiness Management Association (IFAMA) in Helping Departments Recreate and Redefine Curriculum Offerings

A quick examination of the literature related to agricultural business and economics reveals little research has been conducted on how curriculum has evolved over time and/or how industry is engaged to provide insight into curriculum development. Research related to these topics would help to inform departments on how to utilize industry in curriculum development and ensure that the students are learning skills that are demanded by the sectors that employ them. Consequently, IFAMA could issue a call for academic members willing to serve on a multi-institution team that will develop and administer two surveys. The first survey would be sent to professors and the second to industry. Both surveys would address agribusiness curriculum. The results of both the industry and faculty survey should be presented at the annual meeting and published in the *Special Conference Edition of the International Food and Agribusiness Management Review (IFAMR)*. This will provide maximum exposure of the results, and help to ensure that we are utilizing our limited resources effectively. While it is not necessary that these surveys be conducted on an annual basis, we would expect that they would need to be administered once every five to ten years.

IFAMA should also seek to collaborate with The Teaching, Learning, and Communications section of the Agricultural and Applied Economics Association (AAEA), which has undertaken a process of writing Student Learning Outcomes that might be shared by agribusiness undergraduate programs nationwide. IFAMA could assist in the program by internationalizing the sample. As part of the process, AAEA members have met with industry representatives to improve academia's understanding of the skills new employees need to have for success. IFAMA could help organize similar type meetings across the globe with relevant stakeholders.

IFAMA, through its industry contacts and based upon the results of the surveys, should seek to develop an industry guest lecture series. We envision a database housed on the IFAMA website that has a catalog of industry representatives willing to speak to agribusiness classes. The database would contain various biographical data including, but not limited to: industry, area(s) of expertise, location, preferred interaction method (on-campus presentation or video conference). Ideally, IFAMA would handle requests to ensure that requests are made in an equitable manner and to prevent anyone individual from being bombarded with requests for guest lecturing.

Using Technology, Implementing New Teaching Methods, and Training New Faculty to Meet These Needs

Faculty should use technology and new teaching methods to improve education outcomes. Faculty, however, should be cognizant of whether the technology and methods they are employing in the classroom are effective. For example, simply using PowerPoint slides to convey material is not maximizing the use of technology. Rather, faculty should incorporate technology and teaching methods to engage learners in the classroom. Whereas presentation slides allow students to be passive learners, technology such as student response systems (clickers), in-class computer simulations, and smart phone applications, and service-learning projects force students to become engaged and active learners, a task that is made more difficult as class size increases.

While technology and new teaching methods are tools that help generate successful results in the classroom, they are just part of the puzzle. The second part of the puzzle, and perhaps the most beneficial to a junior faculty, is access to a teaching mentor. Senior faculty members who teach have a wealth of tacit and institutional knowledge that a junior faculty member can draw upon. Access to a faculty mentor helps junior faculty members avoid pitfalls in the classroom they would otherwise encounter if they did not have a mentor.

Recommended Course of Action for IFAMA in Assisting Faculty in Using Technology and Implementing New Teaching Methods

The Association should encourage its members to develop webinars would focus on a particular technology and/or on what teaching methodologies provide the best results in large classrooms. The webinars should be kept relatively short, less than one hour, and would be accessible to faculty across the globe. This could be as simple as the Association asking members to create a webinar around a new technology they have recently adopted. In addition to the webinars, IFAMA could consider adding an annual workshop or organized discussion section that would focus on a new teaching technology, style, method, etc. as part of the Annual Symposium and Forum. For example, Harvard Business School offers a workshop on the case study method. Perhaps IFAMA could work to bring that workshop one day before/after the Forum and Symposium for interested members.

IFAMA might consider the possibility of organizing a formal teaching mentor program among the membership. More senior faculty could be paired with junior faculty to help with the design and review course syllabi, course assessments, and lecture materials. Faculty might denote these course materials as peer reviewed.

If we want agricultural business and economics programs to value undergraduate agribusiness education and faculty members to develop, it is important that IFAMA, an association dedicated to agribusiness, honor those that excel in the classroom. Consequently, we suggest that IFAMA have a set of awards: outstanding teacher at the instructor/assistant professor level, outstanding teacher at the associate professor/full professor level, and outstanding teaching mentor. These awards would demonstrate the Association's and the profession's commitment to outstanding teaching of agribusiness courses. Much like the Best Paper Awards at the Forum, these can be valuable recognition for faculty at all stages of their careers. In addition, the winners of these awards should be given the opportunity to write an essay that pertains to teaching and/or mentoring for the *Special Conference Edition of the IFAMR*.

How Do We Survive?

If the long-term goal for agricultural business and economics programs is to continue to produce students who are capable of meeting the needs of those firms that operate in the agricultural sector, they must be willing to commit the necessary resources and time. First, departments must be receptive to the needs of those firms hiring our students. That is not to say that a complete overhaul of the curriculum is necessary, only that we make sure that our curriculum is evolving with our customers. Related to the previous issue, is the ability to call upon industry, as a funding source for endowed professor positions in agribusiness, especially if these positions are utilized to meet unmet curriculum needs. Second, department/unit heads, through the relationships they have cultivated with industry, can call upon industry leaders to convey and promote the importance and merits of having a strong funded and fully staffed agricultural business and economics programs to those administrators responsible for the allocation of teaching positions. Finally, unit/department heads must provide training and mentorship on best practice methods for being an effective teacher. It is important to note that this training in best practices does not have to be limited to senior faculty in a department; it could very easily come from faculty outside of the department and/or junior faculty who can provide training on a teaching technology. If the above is accomplished, it will lead to improving not only the quality of teaching in departments but also the quality of our students, which ultimately makes agricultural business and economics departments more valuable to universities and colleges.

References

Colman, D. 2007. The Rise and Decline (?) of Agricultural Economics. Paper presented at the European Association of Agricultural Economists in its series 104th Seminar, Budapest. September. No. 8526.

Carnevale, A. P., J. Strohl, and M. Melton. 2011. What's it Worth the Economic Value of College Majors. Georgetown University Center on Education and the Workforce, Available at: http://cew.georgetown.edu/whatsitworth (accessed December 2, 2011).

Gunderson, M. A., J. D. Detre, B. C. Briggeman, and C. A. Wilson. 2011. Ag Lending: The Next Generation. *Ag Finance Review* 71(3): 280-294.

Julian, T. and R. Kominski. 2011. Education and Synthetic Work-Life Earnings Estimates. United States Department of the Census, Report ACS-14. Available at: http://www.census.gov/hhes/socdemo/education/ (accessed December 2, 2011).

Perry, Gregory M. 2010. What is the Future of Agricultural Economics Departments and the Agricultural and Applied Economics Association? *Applied Economic Perspectives and Policy* 32(1): 117–134.

Robinson, J.S. 2006. Graduates' and Employers' Perceptions of Entry-level Employability Skills Needed by Agriculture, Food and Natural Resources Graduates. PhD diss., Faculty of the Graduate School University of Missouri-Columbia-Columbia. Available at: https:// mospace.umsystem.edu/xmlui/handle/10355/4328 (accessed December 2, 2011).

International Food and Agribusiness Management Review
Volume 15 Special Issue A

A Dynamic and Flexible Undergraduate Curriculum: Preparing Agribusiness Students for a Continually Changing Agricultural Sector

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Sean P. Hurley[a] and Xiaowei Cai[ⓘb]

[a]*Associate Professor, Department of Agribusiness, California Polytechnic State University*
1 Grand Ave., San Luis Obispo, California, 93407, USA

[b]*Assistant Professor, Department of Agribusiness, California Polytechnic State University*
1 Grand Ave., San Luis Obispo, California, 93407, USA

Abstract

Individuals entering the Agribusiness industry need to have the flexibility to adapt to a rapidly changing global environment, and so does an Agribusiness curriculum. This essay provides an overview of a major curriculum overhaul that has transformed the Department of Agribusiness at the California Polytechnic State University. A rigid concentration structure has been reformed to a more flexible and dynamic no-concentration structure to develop successful future leaders in an ever-evolving industry. This essay explains the need for a more flexible undergraduate agribusiness curriculum and identifies its potential benefits and drawbacks.

Keywords: Agribusiness Undergraduate Curriculum, Dynamic, Flexibility, Structure

ⓘCorresponding author: Tel: + 1. 805.756.5011
Email: X. Cai: cai@calpoly.edu
S.P.Hurley:shurley@calpoly.edu

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

Today's agricultural sector is a dynamic and rapidly evolving industry. Global competition is requiring agribusinesses to move with much more agility and flexibility than was needed in the past. This is especially true in California where the state produces agricultural commodities worth over $37.5 billion and exports approximately $14.7 billion to more than 150 countries in 2010 (CDFA 2010; AIC 2010). Individuals entering this sector need to have the flexibility to adapt to a fast changing global environment. Their knowledge base and skill sets need to be current and they should graduate with the ability to develop future necessary skills.

Universities have developed curriculums to train individuals for the agribusiness industry. In comparison to the agricultural sector, a typical university tends to move much slower in the decision-making process. Many times the curriculum process can take years to make small changes, while large changes can take decades. The more rigid a curriculum is, the less likely it can meet the needs of an industry that is rapidly changing.

This essay is meant to provide an overview of a major curriculum overhaul that has transformed the Agribusiness Department (AGB) at the California Polytechnic State University (Cal Poly) from a rigid concentration structure to a more flexible and dynamic structure allowing students more choice in class selection. The main themes presented are: a) the key issues with AGB's previous curriculum, b) a high level comparison in terms of flexibility of the old and the new curriculums, c) the perceived benefits and drawbacks of the new curriculum, and d) evidence of benefits since the implementation of the new curriculum and the key future assessment metrics.

Issues with Previous Curriculum

Cal Poly AGB has 22 full-time equivalent faculty members, where 14 are tenured or tenure-track faculty, educating approximately 620 students in the major. It offers a minor that serves an estimated 250 students, while providing a heavy service component to the rest of the college.

Prior to changing its curriculum, AGB had a very rigid concentration structure offering concentrations in the areas of Agricultural Marketing, Agricultural Finance, Agribusiness Management, Agricultural Policy, and International Agribusiness Management. A sixth concentration allowed the student to work with an advisor to develop her own concentration. While providing greater flexibility, it was rarely chosen and difficult to implement. In addition to concentration courses, students were required to take 28 quarter credits in agricultural science, 40 credits in the major, 48 credits in general education, and 25 credits in support. Students were allocated only 11 free elective credits.

The faculty identified three key issues with the past curriculum. First, students had very little choice in the classes they took. This caused a "check-off the requirement" mentality rather than an acquisition of useful skills. Second, the department had to provide the course work for all the concentrations consistently across the year regardless of the demand leading to inefficiencies in course offerings. Third, concentrations locked the department into serving particular industries whether they were growing or declining.

In May 2008, the curriculum committee convened to discuss these three key issues. After reviewing how other universities were providing their curriculum, information was given to the faculty and the AGB industry advisory council in Fall 2008. An analysis was then conducted on the demand and efficiency of course offerings from the concentration structure. Feedback from these meetings and the demand analysis were synthesized allowing for three options to be developed for discussion. The first option was to maintain the status quo. Option two was to reduce the number of concentrations to a more manageable level, while doing some minor adjustments to these surviving concentrations. The third option was to completely abandon

the concentration structure and develop a more flexible and dynamic curriculum. In May 2009, a strong majority voted for the third. The new curriculum went into effect for the 2011 to 2013 catalog cycle.

There were two main catalysts that facilitated the curriculum reform. First, the AGB industry advisory council was requesting a more specific skill set from the students that the concentration model was not providing. Second, the faculty underwent a philosophical change in that the curriculum should be more dynamic and flexible to mirror the global agricultural business environment.

An Overview of the Old Curriculum and New Curriculum

The curriculum in AGB can be broken-up into four main areas – major courses, support courses, general education courses, and electives. These four areas can be classified based on the level of flexibility the students have. The first level is the completely fixed category, where students are required to take a certain course and have no alternatives. The second level is the semi-flexible category. Courses in this category allow students the ability to select a subset of courses from a broad range of prescribed courses in agricultural science, business, or agricultural business. The completely flexible category makes up the third classification, where students can choose any course the university offers. Figure 1 shows the difference between AGB's previous curriculum and the new curriculum categorized by the students' ability to choose courses. As demonstrated in Figure 1, the new curriculum has much more flexibility over the old structure. Twenty credits from the completely fixed category have been shifted to the semi-flexible and completely flexible categories. Specifically, the completely flexible category gained 8 units, while the semi-flexible gained 12.

To provide more flexibility, it was decided that the core course offerings needed to be updated. The core was strengthened by adding another course in accounting and a course in computer data analysis to the existing courses in communication and leadership, accounting, microeconomics, finance, marketing, policy, human resource management and cultural diversity, research methodology, and senior project/thesis. The skill sets built in the core have been shown highly desired by the stakeholders nowadays (Boland and Akridge 2006; Downey 2004).

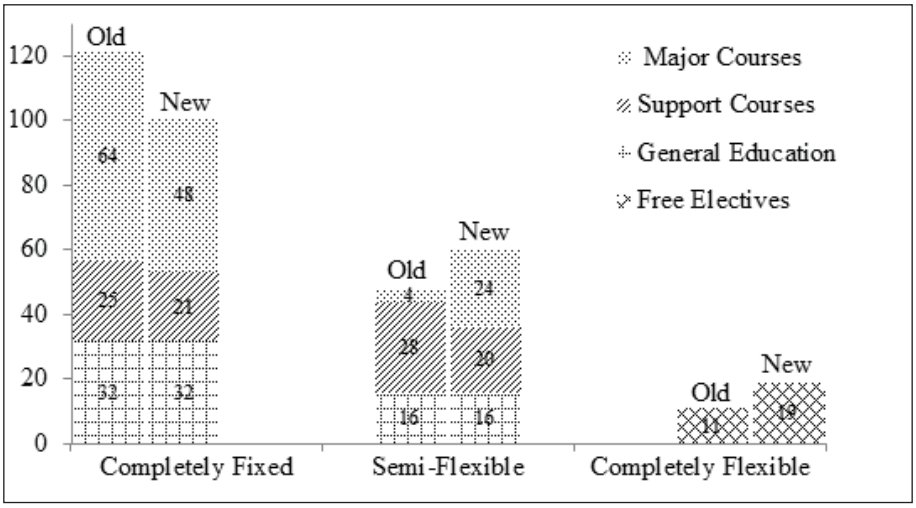


Figure 1. Comparison of the old and new Agribusiness curriculum.

Perceived Benefits and Potential Drawbacks

Relative to the old concentration-based curriculum, AGB's new structure has multiple benefits including:

- It can motivate students to establish their sense of responsibility and identify future career and interest direction.
- It provides more flexibility in selecting courses that would better prepare students for their future careers.
- Faculty members are liberated to design new courses that reflect the changing nature of the industry
- Departmental resources are more efficiently allocated.
- Concentrations in the old curriculum can still be achieved under the new curriculum.
- Collaboration with industry partners can occur in designing recommendations for students who are seeking employment in a particular industry.

Universities are not producing graduates with the skill sets companies actually need. While flexibility has advantages, there are potential drawbacks. Students' increased choices may cause them to be overwhelmed with the options. Another drawback is that some students might not have a clear vision about their career path and prefer a more rigid structure. It is believed that both of these can be handled with proper student advising and emphasis maps (i.e., documents outlining a series of recommended courses for various interest areas). A third potential drawback is the lack of a stamped concentration "label" in AGB's graduates to present to the industry. While this puts a greater burden on companies that are hiring to decipher whether an AGB graduate is a good fit for them, it allows the student to niche herself based on her course selection and more importantly her reasoning for taking particular courses.

Current Feedback and Future Assessment

- About 30% of the seniors who have the option of graduating under the new or old curriculum have opted to switch to the new curriculum. Students have show strong interest in the new flexible curriculum.
- In the past year, six new courses have been developed by multiple faculty members as free electives. By contrast, only three new courses were developed and offered in the prior 10 years.
- The AGB department is working with the California agricultural finance industry in developing new courses, internship programs, extension workshops, and applied research projects. In the past 6 months, this program alone has developed three new courses, one upcoming State-wide conference on risk management and two on-going research projects based on the industry needs.
- The low-demand courses are no longer offered without affecting students' graduation. The average number of annual classroom teaching workload for a full time tenured and tenure-track faculty reduced from 7-8 courses last year to 6 courses this year. It is expected this number will keep decreasing to 5.5 courses next year, according to the department chair.

The longer-run benefits and costs shall be assessed based on the following key instruments: an annual survey to the industry, an annual survey to our recent graduates, and students' graduation rate will be monitored and analyzed.

Conclusion

Although a concentration-based curriculum structure worked well in the past for the department, its rigidity did not allow for the flexibility needed to develop successful future leaders in a rapidly evolving industry. The department has undergone a dramatic curriculum reform recently by removing the concentrations. The AGB department is aimed at cultivating students' responsibility and critical thinking capability, providing more freedom for the students in course selection and for faculty in new course development, allocating de-

partmental resources in a more efficient manner, and working more closely with the industry. All these can be achieved without losing the educational essence and quality. The potential drawbacks related to the new curriculum structure can be properly handled through more academic and career advising. Furthermore, the potential drawback of students not being able to show a concentration label to the industry when they graduate can be offset by the invaluable information derived from the students' personal thoughts put into the course selection process. Although the new curriculum has been implemented for only six months, it has already received positive feedback from the students, faculty, industry and administration. A continued assessment plan has been developed to evaluate its longer-term effect.

References

Agricultural Issues Center, UC-Davis. AIC 2010. *2010 California Agricultural Export Data. Retrieved from* http://aic.ucdavis.edu/publications/exportstable2012.pdf

Boland, Michael A. and Jay T. Akridge 2006. Food and Agribusiness Management Education: Future Directions. *National Food and Agribusiness Management Education Commission Report*, November.

California Department of Food and Agriculture. 2010. *California Agricultural Statistics.* Retrieved from http://www.nass.usda.gov/Statistics_by_State/California/Publications/California_Ag_Statistics/Reports/2010cas-all.pdf

Downey, David W. 2004. Primary Themes from Interview Responses. *National Food and Agribusiness Management Education Commission Industry Steering Committee Report*, July.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

The Doctoral Program of the French Ministry of Agriculture: An Institutional and Individual Win–Win[1]

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[2]

Jean-Joseph Cadilhon[3]

Agro-Economist, Governance and Marketing Chains, French Ministry of Agriculture, Centre for Studies and Strategic Foresight, 12, rue Rol-Tanguy, TSA 70007, 93555 Montreuil-sous-bois, France

Abstract

The French Ministry of Agriculture implements a doctoral program for executives from its specialized administrative corps to develop lasting linkages between food policy makers and academia. Every year a limited number of positions are open to civil servants who wish to complement their technical and managerial education by three years of doctoral research. After undertaking PhD studies on a specific subject, these executives are better able to tackle the complex multi-stakeholder systems that characterize agrifood and environmental issues. They also develop an analytical framework and a better understanding of research methods and networks. This program helps to build institutional bridges between research and policy-making networks, allowing research to respond to genuine policy problems on the one hand, and policy makers to orient research more effectively while making better use of research methods and networks on the other.

Keywords: graduate education, public administration, agribusiness, agricultural and food policy

Corresponding author: Tel: + 33 149 55 8504
Email: J. J. Cadilhon: Jo.Cadilhon@agriculture.gouv.fr

1 This essay has been cleared for circulation, yet does not represent the views of the French Ministry of Agricuture. The author is a former recipient of the program described in this essay.

2 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

3 The author would like to thank he following colleagues for their contribution in illustrating and improving this essay: Caroline Desselas, Benjamin Genton, Marie-Luce Ghib and Dominique Planchenault from the Ministry of Agriculture; Murielle Ghestem and Delphine Leguerrier from the Ministry of Environment; Cyril Kao from AgroParisTech, Christine Ton Nu from the French Representation to FAO; Emilie Vandecandelaere from FAO, Sara Fernandez from EHESS and Billy Amzal from LA-SER. The author is also grateful to other contributors who preferred to stay anonymous.

FCPR Program Builds Linkages between French Agrifood Policy Makers and Academia

For the past 30 years, the FCPR program (French acronym of *Formation complémentaire par la recherche* or complementary education through research) of the French Ministry of Agriculture has aimed to build institutional bridges between policy makers and academia by training a pool of technical experts out of the specialized administrative corps of the civil service through PhD research. To date, the Ministry has gained some 200 PhD graduates through this program. Considering a growing gap between policy makers and researchers, the issue for the administration was to acquire the human resources capable of orienting research for effective policy making while increasing the international recognition of its experts.

Some institutional background is key to understand this situation. In the French civil service, different tasks have traditionally been given to different types of civil servants recruited after examination of their skills to perform a given task. Within the Ministry of Agriculture, one can basically identify two different human resource profiles in the executive positions that decide policy and conceptualize programs: the civil administrators whose function it is to manage the civil service and the specialized administrative corps who are proficient in either statistics, economics, nutrition, forestry, veterinary and agricultural sciences, engineering or rural development. Many of these civil servants have gone through one of the elite post-graduate schools (*grandes écoles*) that train future government executives.

However, this system does not fit well with post-graduate curricula in other countries. Therefore, its excellence and its graduates are not well recognized abroad. Through the so-called "Bologna Process," French *grandes écoles* are all reformatting their curriculum into a process that is comparable with that of post-graduate educational institutions in other countries. Yet, a PhD still is an undisputed signal of an outstanding individual in many international fora. It is often a requirement for recruitment in international organizations where the French administration is interested in placing more of its experts. The FCPR program enables agrifood policy makers to undertake doctoral research.

An Institutional and Individual Win–Win

Every year around 10 executive-level specialized officers are selected to start an FCPR program. The selection criteria include the topical nature of the candidate's research project to respond to a public policy problem of the Ministry, the motivations of the candidate to start and complete a PhD program, the coherence of the research project with the research unit or laboratory and with the university supervisor chosen by the candidate, and whether the project already has the backing of policy making units within the Ministry. Candidates to the FCPR program are usually young executives from a specialized administrative corps. Many are in their final year of post-graduate school. Others have worked a few years in government positions, allowing them to formulate a specific and topical research question.

Along its 30 years of existence, the FCPR program has set up and perfected an institutional system allowing the joint elaboration by policy-making services and its young executives of customized professional career paths within the Ministry, which incorporate doctoral research. Because the resulting research projects cover an *ad hoc* topic responding to a specific policy issue on a very technical subject, sometimes using unorthodox methods, one recognized strength of the FCPR program is its capacity to foster research that is "original" and often impossible in the context of regular research institutions.

Another objective of the FCPR program is to retain a pool of technical experts within the specialized administrative corps of the Ministry. These experts are in the front line to share their expertise when it is needed to inform policy decisions. They are solicited to deliver critical assessments on the work of their research peers and to help in orienting research for policy making. Their networks of former research colleagues are useful to identify national and international expertise on issues that are topical for the work of the Ministry.

However, whether the new PhD graduate makes use of the expertise acquired during the FCPR is also a matter of personal choice: some former FCPR grantees willingly seek "normal" executive positions without putting forward their new expertise. Nonetheless, they will have been accustomed to research methods and will be able to build bridges between bureaucratic and academic cultures, which are not always comfortable with one another. Their social and professional capital will have been enhanced by their research network and their legitimacy within these networks strengthened thanks to their PhD. As for the administrative units that enroll former FCPR grantees, they gain in human resources diversity while enriching viewpoints for better-informed policy making.

Feedback on Program from Former FCPR Grantees

To illustrate the essay, a brief online questionnaire was sent by email to 15 former FCPR grantees who had undertaken their PhD in the past 15 years and had had some international professional experience. After one email reminder 11 questionnaires were completed. Although the sample size is not statistically significant, the responses and comments provide useful insights into the FCPR program and how it could be improved.

A great majority of respondents agreed that the FCPR program did, indeed, make a valid contribution to tackling the policy issues of the Ministry; only one respondent disagreed. Three respondents enlarged the relevance issue to cover French academia and research. One respondent commented: "*Although I did not continue working on my FCPR subject after my PhD, it has been pursued by the French National Institute for Agricultural Research with impacts on food and nutrition policies of the Ministry of Agriculture.*" Likewise, all survey respondents but one thought they contributed to developing a better knowledge of "research" methods by policy decision makers and the administration thanks to their FCPR.

However, there were mixed results on the usefulness of the FCPR for the respondents' career within the Ministry or abroad. If a majority of survey respondents agreed with the statement "*I have been able to use the technical or scientific expertise I had acquired during my FCPR in my work as a civil servant,*" two nonetheless considered the question irrelevant. In particular, three respondents who had just finished their FCPR and were about to, or had just started work in the civil service recently, were not yet sure. Two respondents clarified further: "*It is the scientific know-how and its methods that have been most useful for me in my civil service position, rather than my technical expertise.*" This point is important: many hopeful FCPR candidates are keen to develop a very specific technical expertise during their PhD, which they hope will be useful to their employer later on. However, the viewpoint of the administration is larger: it is useful to have PhD graduates within the civil service in order to make use of their analytical and research-based mindset, which are essential to set up relevant and robust policies.

Furthermore, although the questionnaire had been sent to people who had or were working on international issues, three respondents did not agree with, or thought irrelevant, the statement "*My FCPR experience has had a positive impact on my international career.*" One respondent commented: "*If having a PhD has a positive impact on international employment, it is not a determining factor in the position I currently hold.*"

This comment illustrates well the duality of positions held abroad by French civil servants. Only a minority of officers from the specialized administrative corps manage to get recruited independently within international organizations; their technical expertise and their PhD are, indeed, determining factors in their overseas recruitment. However, the majority of French civil servants who end up overseas are still paid fully, or in part, by the French government through seconded positions as technical experts or to act as French representative or administrator. A PhD is then more important for the individual to gain recognition from international peers, rather than in obtaining the position in the first place.

Possible Improvements to the FCPR Program

The survey also asked for ideas on how to improve the program.

First, administrators in charge of the program could make more explicit its four overall goals to its candidates and partner administrations. Namely: creating bridges between administration and research, building human resources with analytical and research mind-sets, building human resources with precise technical expertise, improving the international recognition of French technical expertise. This would allow candidates to make better plans for their research project and reintegration within the civil service.

Second, better collaboration between academia, the public and private sectors could be encouraged to help young executives generate new research proposals, to decide which ones obtain an FCPR grant, and to supervise the doctoral research. The current process could gain from including more various stakeholders, including the private sector, to sit within a steering committee of the FCPR program and to monitor the research of individual grantees, thus improving the longer-term relevance of their research to wider issues faced by the agrifood sector. Indeed, a subject that might not seem to have any immediate application to those issues might nonetheless be worth investing into to kick-start academic research on the topic.

Third, strengthening the follow-up of the reintegration process of FCPR grantees within the administration would be beneficial: "*allowing the grantee to choose a position that will use his or her specific capabilities and expertise*" and "*increasing the awareness of senior administrators on the relevance for their unit of recruiting somebody with a research background.*"

Finally, partnerships with international research centers and universities abroad could be encouraged so as to improve the international recognition of the program and of its graduates. Some of the ideas proposed to foster international collaboration around the FCPR program include:

1. Encourage more FCPR candidates to choose a university abroad.
2. Encourage grantees to take a semester within an overseas research lab to start off their doctoral research.
3. Set up an 'international doctorate' initiative on the basis of the current 'European doctorate' to encourage doctoral students to work with academics from other countries.

To conclude, food and agribusiness public policies are increasingly becoming sustainable development policies. The French Ministry of Environment now also uses the FCPR program concept to commission research of interest and train its own young executives. As a result, both Ministries of Agriculture and Environment are collaborating to modify the current program to suit their needs better. The pool of young FCPR candidates being the same for research positions supervised by either ministry, it is particularly important that the human resources policy of the Ministry of Agriculture evolve so as to keep fostering research in its topical domains and to retain the resulting expertise and know-how. This reflexion on the FCPR program is particularly relevant in a general French context of evolution of the different administrative corps and the growing distance between policy makers on the one hand and research institutes and the private sector on the other. Improving the FCPR program could help bridge these gaps by encouraging the professional mobility of senior executives between these three economic worlds.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Human Capital Development for the Management of F&A in India

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

B.S. Sudarshan Rao

Managing Partner, Food & Agribusiness Management Consulting, 48, 2nd Cross, 9th Main, NTI Layout, Vidyaranyapura, Bangalore, India, 560097

Abstract

This essay examines the components necessary for developing a trained workforce for managerial and entrepreneurial roles in Food and Agribusiness (F&A) in India. It explores the inadequacies of current approaches and outlines some of the critical skills and attitudes needed by F&A professionals in order to become more effective while offering suggestions on how to fill the gap.

Keywords: Agribusiness Management Education, Business Judgment, Community Asset Approach, Experiential Learning

Corresponding author: Tel: + 91. 974.007.2542
Email:B.S. Sudarshan Rao: bssrao@agribusinessadvise.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

"Let me be clear: We are not providing an MIT education on the Web. We are providing our core materials that are the infrastructure that undergirds an MIT education. Real education requires interaction, the interaction that is part of American teaching."

Charles M. Vest, President MIT, launching the MIT OpenCourseWare initiative, April 4, 2001

What is the Issue?

I have had the benefit of viewing and engaging in Indian agriculture as a business executive, teacher, consultant, small entrepreneur, and small farmer. I earned an MBA in Food and Agribusiness from UK and have lived, studied or worked in Japan, Australia, Singapore, the USA and India. These factors have led me to the conclusion that the Indian agricultural scene makes some very special demands on F&A management.

The prevailing approach in India is a two-year post-graduate program leading to a MBA in Agribusiness (AgMBA). The programs are mostly given by state agriculture universities. The training consists almost entirely of academic learning followed by a short, superficial, exposure to Industry. The Indian Council of Agriculture Research (ICAR) prescribes the AgMBA program content, hours and duration. The academic content is substantially borrowed from US Business Schools. The syllabus, unmindful of President Vest's pithy caveat, emphasizes information and allows little time for analysis and interaction. The ICAR syllabus, as such, is not critiqued here.

Most of the AgMBA programs in place today follow a four-year undergraduate course in agricultural sciences, following an ICAR-prescribed syllabus, leading to B.Sc(Ag). The B.Sc(Ag) program has no business orientation. The syllabus for AgMBA allows little flexibility in either content or delivery. The syllabus places heavy emphasis on classroom teaching. The AgMBA syllabus does not draw upon what was learnt during the B.Sc(Ag) course. The syllabus and textbooks are those used in US schools without regard to our different agricultural and agribusiness realities. In other words, the AgMBA sits on B.Sc(Ag) like oil on water, without challenging the student to connect the two.

The AgMBA program cannot claim a vibrant connection with Industry, either. Guest teachers drawn from Industry teach some subjects, but their involvement with the class is limited and is equally caught up in the same pressure to complete the syllabus. Students complete a special project component of the program, usually in the fourth semester. If students were more exposed to Industry, trained to identify and think through business problems, the special project in its choice of focus and execution could be a good, first brush with the 'real world.' That, however, is not the case.

Two factors in the education system K-12 impede the acquisition of good reading skills. The first factor is that much of the classroom instruction occurs through lectures and notes. The second is a widely held view that education in the sciences does not require proficiency in English, yet it is the prescribed medium of instruction. The students spoken of in this essay are not an exception. Students in an AgMBA class I taught protested to the Dean, complaining against my insistence on their reading the textbook written in English.

Two important elements in understanding and solving business issues are the capacity to see an issue from various angles and the capacity for judgment meaning decision making. Our education system, also our culture to an extent, operates on the 'teacher-taught' model, where every question has one correct answer. Spiritual tradition is grounded in a faith that true learning occurs only with the guidance of a teacher, "Guru," whose teaching is received uncritically. These influences probably explain why our students (and our teachers) find it difficult to debate issues in class, disagree with the teacher, or look for alternative solutions. It follows that if every business problem has only one correct solution, there is no need to exercise judgment!

I am struck by the gap between what society needs and what the system is delivering by way of managerial human capital. The reader should note the abrupt switch to 'Society' in place of Industry in the previous sentence. The demands on F&A management are not merely those arising from Industry; they include many rooted in the social contexts in which F&A operates. This essay examines the kind of skills and attitudes that are required for effective F&A management in India.

Effective F&A Management in India

F&A has its roots in rural India. This setting is characterized by poverty, illiteracy, high degrees of politicization, social tensions, and absence of institutional mechanisms for peaceful, reasoned, resolution of conflict and other sources of instability.

Land holdings are small – a hectare on average or about 2.5 acres. One example might suffice to show the implicit challenge here. I managed a contract farming project for agri-produce which involved about 8,000 farmers, 8,000 contracts covering about 6,000 hectares or about 15,000 acres. Arranging an assured supply of produce for the processing industry requires contracting with numerous farmers who do not comprise a homogeneous, or even contiguous, community. A key ingredient in the project's success was our ability to earn the farmers' respect and trust.

Much of the land is rain-fed. On the whole, farmers and their families have little capacity to pursue food and financial security. In to this unstable setting have entered a number of F&A issues of our time, namely: organic cultivation, poly-culture versus monoculture, GM seeds, globalization, climate change, foreign ownership of retail trade, and so on. Each is a source of new fear —from job insecurity to neo-colonialism. These volatile foundational elements of the rural setting obtain little attention in current B.Sc(Ag) and AgMBA courses. For all F&A professionals, a capacity to understand the rural dynamics and moderate its effects on one's business is a must.

The principal constituents of F&A management manpower are graduates of B.Sc(Ag) and AgMBA courses. For them, we need three supplementary Programs: *Business Manager Competency, Entrepreneurship Competency,* and *Engage the Rural Setting Competency*. In addition, non-B.Sc(Ag) graduates entering AgMBA courses require an intellectual and experiential *Introduction to Agriculture Program*.

In the design and delivery of these programs, due regard will have to be had to the inadequacies in the education system and the resultant learning weaknesses noted earlier.

The next constituents are general MBAs with or without some Industry experience. As a part of their induction, they need the benefit of *Introduction to Agriculture* and *Engage the Rural Setting.*

Changing focus for a moment, it is necessary to look at the needs of F&A MNCs coming into India. They are significant influencers of the growth and prosperity of the F&A sector as a whole. Being MNCs or foreign companies, they also tend to attract suspicion or even hostility. Relative to their rural setting it may be better and a worthy goal to seek to be anchored in the community in which it operates and be accepted as an asset to the community, i.e., adopt a *Community Asset Approach.* An understanding of the dynamics of the rural setting can and should inform entry and location decisions.

Even MNCs currently operating in India can benefit from a systematic understanding of their setting and adopt the *Community Asset Approach*. Corporate Social Responsibility initiatives can be a good vehicle; unfortunately, many CSR projects come through as charity and are not grounded in a correct assessment of what the community really needs.

How Do We Address the Issue?

Keeping the foregoing considerations in mind, I am developing the design and content of each of the following programs.

- Business Manager Competency
- Entrepreneurship Competency
- Introduction to Agriculture
- Engage the Rural Setting
- Community Asset Approach

All Programs will be mostly activity driven. Strengthening reading skills, reasoned discussion, role play of functional viewpoints, decision making and collaborative work habits are some of the elements.

Business Manager Competency (BMC) is designed to build the capacity to think, judge, and act as businesspeople. It trains candidates to identify business problems, recognize the underlying issues and apply different functional perspective Sales, Production, Finance, HR etc., and finally help the CEO decide. It encourages looking for and recognizing ethical and conflict-of-interest issues, latent and patent, and eventually developing one's own 'Sniff Test.'

Entrepreneurship Competency traverses the BMC ground. It goes on to apply BMC skills to develop a fundable enterprise proposal.

Introduction to Agriculture is an intellectual and experiential program. It describes the agriculture scene, opportunities and challenges, policies and the major debates. There will be extended visits to farms and industrial units for a comprehensive view of a functioning F&A Unit.

Engage the Rural Setting examines, in detail, how the rural setting is organized and governed and proceeds to examine the tensions relevant to our business, their actors, sources, and possible resolutions. It encourages understanding and development of a capacity to anticipate dangers to one's business and ways of moderating adverse influences.

Community Asset Approach draws partially on the *Engage the Rural Setting Content* and proceeds to understand how a company can come to be accepted as a valuable member by the community in which it operates.

How to Rollout Remedial Programs

It would be ideal if universities would formally adopt these programs and integrate them into the curriculum. It is not likely, however, that the current centralized and rigid system will make adequate room for the content and techniques involved here. For the foreseeable future, a private delivery vehicle is the most efficient and quickest off-the-ground option. Delivery to transiting management professionals and MNCs, incoming and existing, will, in any case, have to be through private company-level arrangements.

Conclusion

In India, AgMBA programs constitute the sole route to creating F&A managerial human capital. These programs fall short in preparing graduates to think, judge, and act like businesspeople. The economic, social and political dynamics of rural settings demand additional skills for the graduate and, therefore, the need for additional training.

These types of programs will benefit India and also Asia and Africa who draw on Indian managerial talent. The programs outlined here are capable of being suitably revised and delivered in other countries where agriculture operates in a complex setting.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Achieving Corporate Learning Excellence

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Martijn F. L. Rademakers

Managing Director, Center for Strategy & Leadership and Executive Fellow, Rotterdam School of Management, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam 3062 PA, The Netherlands

Abstract

Fast and smart learning is required for companies to stay attuned and secure competitive strength in the marketplace. In addition, companies mastering corporate learning excellence are highly attractive to talents wanting to gain, build, and share their knowledge and experience to help solve strategic questions. Leaders in the global food and agribusiness industry should seize the opportunity of using corporate learning as a strategic weapon. Companies need it, Talents expect it.

Keywords: Strategy, corporate universities, exceptional learning

Corresponding author: Tel: +31.0.10-2179120
Email: M. F. L. Rademakers: m.rademakers@c4sl.eu

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

Companies in the food and agribusiness need to organize both faster and smarter organizational learning to stay aligned with a business environment that becomes more complex by the day. Forces driving complexity are gaining strength. For instance, technology-driven developments accelerate at an unprecedented pace. Hundreds of millions of people now have access to an abundance of information, connections, software, and computing power that only large companies could afford just a couple of years ago. As a result, talented people need companies to create a living less and less (Hinssen 2010), while, in contrast, companies need them more than ever to create value. This holds particularly true for companies in the global food and agribusiness, which are searching for answers to complex problems posed by a growing scarcity of critical resources such as food, energy and water.

Securing access to talented people, now and in the future, is more important than ever to companies in many industries and countries around the world. Food and agribusiness companies, however, often are at a disadvantage in the battle for talent compared to firms from seemingly more appealing industries such as high-tech, cosmetics, and fashion. Hence, for good reasons, leaders of food and agribusiness companies see two key questions emerging on their strategic agendas. Firstly, given the rising complexity of our business environment, how can we bring the adaptive capabilities of our company to the next level? Secondly, given the battle for talent, how can we be attractive to the people we need to make our company excel in the long run? These two questions are closely related to each other. Companies that fail to seize the opportunity to simultaneously enhance their adaptive capabilities and attract talent risk losing their competitive strength.

The Rise of Corporate Learning

Ongoing adaptation to a dynamic and complex business environment requires organizational learning, whilst learning opportunities for individuals are important to attract, develop and retain talent. As a result, corporate learning is increasingly seen as the key to unlock answers to strategic challenges. Corporate learning involves creating, acquiring and deploying capabilities (know-how, skills and attitude) aimed to renew, implement and optimize strategy. In other words, the art of strategy is related to the act of learning. Companies excelling in corporate learning have an edge over their competitors through superior adaptive capabilities and being attractive to top talent in the labor market. The best examples come from outside the food and agribusiness and include industry leaders such as Google and Apple from the USA and IKEA from Europe. These companies attract even more talent than they can ever absorb. In tune, companies around the world are stepping up their investments in corporate learning. As a result, having a corporate university/ academy (an organizational unit to drive corporate learning at a strategic level – not a re-labeled training department) is becoming the norm to excel, rather than the exception.

Despite the worst economic downturn since decades, the investments in corporate learning are growing – also in the international food and agribusiness. Not only large, publicly listed companies in the global food industry such as Nestlé, Coca-Cola, Heineken, McDonald's, Unilever, ConAgra Foods, Burger King, 7Eleven, and Ahold now have their own corporate university. Corporate universities are also becoming widespread among governmental and nonprofit organizations (such as ministries, municipalities and water management companies). Increasing numbers of privately held and family-owned companies in the food and agribusiness also have institutionalized corporate learning by establishing their own corporate university, including McCain (Canada), IKEA Foods (Sweden), Schwan (USA) and Yoshinoya (Japan). Many others are planning to establish one.

Learning Faster and Smarter

The concept of corporate learning is rooted in the body of knowledge on learning organizations, combining strategic management and human resource development. In the 1990s, the idea of the learning organization

was embraced by many CEOs and HRD professionals worldwide. The underlying reasoning is that '*the ability to learn faster than your competitors may be the only sustainable competitive advantage.*'[2] That reasoning is still valid. However, speed only is no longer sufficient for companies in the food and agribusiness. Apart from learning faster, learning smarter has become a key success factor as well. In other words, fast learning deliberately attuned to strategic renewal, transformation and optimization is required to keep companies suited to their dynamic environments. It is in this area that corporate universities have emerged to drive corporate learning. They are established on top management request and with a clear strategic vision in mind.

Learning: as Usual, Exceptional, or Transformational?

For companies to stay attuned to their environment, they need to innovate, implement and optimize strategy. These three different strategy modes call for different corporate learning types: learning-as-usual, exceptional learning, and transformational learning.

Optimization of a current strategy calls for learning-as-usual, such as professional development (Meyer 2012) and skills training to get the best from the (current) organization. Corporate universities attuned to optimization strategies tend to stress relatively stable course curriculums and catalogues. Business schools and universities are often involved as suppliers of professional development. In addition, at most companies, learning-as-usual involves company-specific knowledge transfer, ranging from technology (Toyota), scripts (Disney) to company culture (Apple).

In contrast, strategies geared to find and create new business and organizational models (i.e., strategy innovation) benefit from 'exceptional learning' (Meyer 2012). Corporate universities focusing on exceptional learning drive programs aimed at crossing organizational and disciplinary boundaries. More often than not, professionals from outside the company are involved to break down barriers such as routines and silo thinking. Companies such as the international dairy company FrieslandCampina, for instance, seek to make exceptional learning work by opening up to the outside world through forms of crowd sourcing.

The third and last corporate learning type is 'transformational learning.' New strategies must first be implemented. This requires 'transformational learning' (Senge 1990; Floyd and Lane 2000). New strategy implementation often includes the complexity of changing the organization structure, culture, competencies, and leadership styles. The globally operating oil company, Shell, for instance, established a corporate university to achieve just that. Realizing that transformational learning is a very different ball game than learning-as-usual, companies tend to turn to established business schools to develop tailored in-company programs.

For companies to take full advantage of corporate learning, it is of great importance to establish the right mix of learning-as-usual, exceptional learning, and transformational learning to make their strategy work.

Achieving Corporate Learning Excellence

Companies in the food and agribusiness need to seize the opportunity to get more from cross-fertilizing strategy and learning. Fast and smart learning is required for a company to secure competitive strength in the marketplace and to be attractive to talented people. The general picture, however, is that other industries are well ahead of the food and agribusiness sector when it comes to corporate learning excellence. This puts the food and agribusiness sector as a whole at a disadvantage in the battle for talent required to cope with the strategic challenges ahead. Leaders in the food and agribusiness industry around the world should seize the opportunity to use corporate learning excellence as a strategic weapon. It is the path towards being favored by talented people wanting to gain, build, and share their valuable knowledge and experience to solve strategic questions. The food and agribusiness industry is far too important and faces too many challenges to leave corporate learning excellence to other industries.

2 Arie de Geus (Head of Planning at Royal Dutch Shell in the 1990s) in *The Fifth Discipline* by Peter Senge (1990).

References

Floyd, S.W., and Peter J. Lane. 2000. Strategizing throughout the Organization: Managing Role Conflict in Strategic Renewal Source. *The Academy of Management Review* (25)1:154-177.

Hinssen, P. 2010. *The New Normal*: *Explore the limits of the digital world*. Gent: Mach Media.

Meyer, R. 2012. Strategy as a continuous learning process. In: Rademakers, M.F.L. (ed.). *Corporate Universities: Drivers of the learning organization*. Deventer: Kluwer (in Dutch, forthcoming in English).

Senge, P. 1990. *The Fifth Discipline*: *The art & practice of the learning organization.* New York: Doubleday.

Human Capital Development in a Global Industry

CHAPTER 3

CHAPTER 3

Human Capital Development in a Global Industry

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Powerful Diversity: Fueling Excellence through Ethnically Diverse Teams

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Ernesto Brovelli

Senior Manager, Horticulture, Processing & Ingredients, The Coca Cola Company and Faculty, University of Florida
P. O. Box 1734, Atlanta, Georgia, 30301, USA

Abstract

As organizations seek to become culturally and ethnically diverse, they need to put in place measures to authentically leverage this diversity. Having a diverse workforce, without a clear path for 'productive integration' is devoid of value. The food industry is currently facing emerging challenges and opportunities, and effectively managing a diverse staff can be a win-win for the organization as well as the employee base.

Keywords: Diversity, integration, sustainability, human capital

Corresponding author: Tel: +1 407.884.1056
Email: E. Brovelli: ebrovelli@coca-cola.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

"Every view of the world that becomes extinct, every culture that disappears, diminishes a possibility of life."

Octavio Paz

Much has been written about how the employee base of an organization is its most valuable asset. Attracting and retaining talent is, without a doubt, embedded into the discourse of most employers today. At the same time, workforce diversity also appears to be a highly desirable trait, one by which organizations are measured and tracked.

As organizations become more global, having an ethnically diverse staff is much more a reality than an aspiration. With the geographic expansion experienced by these companies, hiring local talent has become mainstream. Furthermore, in geographically complex supply chains, the intricate relationships between actors are bound to represent a few nations, if not continents. Not only is the corporate world witnessing these changes, but leading educational institutions are opening up campuses beyond their home countries. At the same time, they are in search of students willing and able to stretch the geographic boundaries of their educational paths.

In this globalized environment, ethnic diversity is bound to occur in most organizations. The issue at stake, however, is how to truly maximize the value of an ethnically diverse force and, at the same time, foster opportunities for integration and advancement.

Come and Teach Me

What does an ethnically-diverse staff bring to an organization? This question cannot be answered without recognizing the meaning of human capital, which refers to the skills, knowledge, and experience held by an individual or population.

Where we were born and grew up greatly influences our 'assets' in reference to the meaningful contributions we make as human capital. It goes beyond the extent of this paper to lay out the elements that influence and shape the culture of societies; it suffices to say, for instance, that access *(or lack of)* to certain resources during the formative years, will greatly mold cultural patterns in a way that can be positive to human capital.

Human capital is much more than one's ability to merely 'do things or carry out activities;' it is about how we do them, when we do them, why we do them, with whom we do them—and many other considerations that transcend the job at hand.

Realizing the value of an ethnically-diverse workforce will precisely focus on these considerations. It is clear that organizations seek to drive excellence in performance. Excellence in performance, however, is not the output of our work only, but the novelty and workmanship of our work, the time and resources that went into producing our work, the networks that were created as a result of our work, and the by-products of our work, etc. When ethnically-diverse staff are effectively integrated into an organization, their assets are leveraged so that excellence in performance can be achieved in a *truly holistic way.* In reality, we are maximizing the value of individual strengths ranging all the way from scientific or technical contributions, alternative social circles, and often unrecognized, a different way of solving problems.

Understanding and appreciating ethnic differences in the workplace and leveraging these for everyone's benefit is not totally devoid of difficulties. Obvious obstacles to integration will stem from difficulties in assimilating. With more emphasis placed on interpersonal communications within organizations, it is clear that language and even behavioral differences can affect a genuine, productive interaction among players. Something as simple as gestures or word choices can be misconstrued, and therefore, empathic listening becomes critical.

Also, as organizations become more ethnically diverse, tension within teams may surface. When the roots of dissent are properly understood, however, we will gain clarity on the various positions so that we can more effectively deal with an issue.

Integration does *not* imply setting aside differences in skills, knowledge, and experience, but quite the opposite. It implies recognizing that differences are likely to occur and it is to everyone's benefit to leverage them. There will be teachers who will become learners, and learners who will become teachers. Full-fledged integration will have everyone doing what they do best.

Where Do We Start?

There is no repository of practices that address this issue at work. I would like to offer some examples of where I think the employer and the employee can achieve a win-win situation.

Attract Diverse Talent

Argentina is a country of immigrants and diversity is embedded in the work force, to different degrees depending on the sector. Leadership in the agribusiness sector could actually benefit from greater national diversity. While I was serving as a consultant for a produce exporter during the early 1990s, it was recognized that although Argentina's human capital was very capable of leading agricultural operations dealing with extensive crops or cattle, experience in the postharvest management of horticultural crops for export markets was limited. Chile, on the other hand, had a great talent pool in this area. The company I was working for expanded its search for talent to Argentina's neighboring country and attracted a very qualified individual who was a significant contributor in this start-up operation.

Be responsive to career pathing: Career plans, by which employees cite their evolving skills and career aspirations, are an accepted practice in most companies today. However, failure to reassess these plans as employees develop history within an organization may lead to static plans where neither the employee nor the employer benefit. Since for many foreign born individuals, it is often more challenging to make their voices heard when working abroad, career plans can constitute an effective way of communicating between the employer and the employee. There are many examples of beneficial career overhauls resulting from a careful examination of an employee's career path. Being attuned to career pathing, allowed an employer to discover hidden talent in a senior process engineer, who grew up and studied in China, but had extensive business experience in the US, to become a successful business liaison between the headquarters and their China business unit.

Create an inspiring culture: Hiring diversity to merely meet a quota is not the best use of a diverse workforce. As teams become diverse and all successful players are recognized for their varied contributions, we are creating a replicable model for the organization; one that confronts employees with the many demands of the changing global landscape, but at the same time highlights and recognizes success broadly.

What Does This Mean For The Food Industry?

No movements have been more infectious within the food industry than the concept of health and wellness, along with the concept of sustainability. Let us ground our discussion and see how an ethnically-diverse staff can provide a transformational value to both health and wellness as well as to the sustainability proposition.

The concept of health and wellness in the food industry is rooted in the notion that what we eat can contribute to our general well-being. That is the premise behind nutraceuticals, a term coined to represent the nutritional as well as therapeutic aspects of foods. While the term is new, the concept is not. Ancient cultures in China, India, the Middle East and the Americas (to name a few) have relied on herbal preparations for centuries for the treatment and prevention of diseases. Understanding the traditional use of plants for vari-

ous applications is so important that the scientific discipline of ethnobotany focuses its efforts on explaining the relationship between cultures and the utilization of plants. It is not surprising, then, that many leading companies that specialize in the business of nutraceuticals (dietary supplements, functional foods or drinks, etc.) tap into an ethnically-diverse employee base which can command control of the complex landscape of bioprospecting, development, formulation, marketing, etc.

The concept of sustainability is another development that has taken the food industry by storm. Sustainability has a broad reach within the food industry ranging from livelihood enhancement to environmental preservation. Programs in water and climate stewardship as well as in waste reduction are commonly linked to corporate performance. The care and respect for nature, so deeply engrained in the concept of sustainability, is yet another value that we can rescue from many civilizations across the globe. The connection between individuals and nature professed by many cultures such as Native Americans is widely recognized.

Another dimension of the sustainability proposition is that of maximizing efficiencies. Interestingly, without much recognition, many societies around the world have carried on for centuries based on prolonging the life of production inputs or equipment and finding innovative applications for unused elements or leftover parts. In most developing countries, "doing more with less" has long been a currency in everyday living. The workplace that draws on these cultural stances is set to benefit from wisdom that was forged over generations.

Clearly, there are distinct benefits for those organizations that nurture a truly multicultural environment. When this idea is embraced at all levels, everyone is set to win.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Developing Human Capital for Agri-Food Firms' Multi-Stakeholder Interactions

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Domenico Dentoni[Φa], Vincent Blok[b], Thomas Lans[c], Renate Wesselink[d]

[a,b]*Assistant Professor, Management Studies Group, School of Social Sciences, Wageningen University*
Hollandseweg 1, 607 7KN, Wageningen, The Netherlands

[c, d]*Assistant Professor, Education and Competence Studies, School of Social Sciences, Wageningen University*
Hollandseweg 1, 607 7KN, Wageningen, The Netherlands

Abstract

This essay discusses 1) the current agri-food firms' need of interacting with multiple stakeholders to undertake sustainable strategies effectively, 2) the relationship between human capital and firm capabilities to effectively interact with multiple stakeholders and 3) a list of competencies characterizing the human capital that would meet the need of agri-food firms and which can be learned – at least to some extent – through higher education and on-the-job training.

Keywords: sustainability, human capital, stakeholder management, competencies, capabilities.

[Φ]Corresponding author: Tel: + 31 (0)317 483623
Email: D. Dentoni: domenico.dentoni@wur.nl

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Multi-Stakeholder Interactions for Sustainability Strategies

To create value, compete and survive in current global agri-food systems, firms are pressured to effectively interact with multiple stakeholders that are both within and outside their supply chain. (Lazzarini et al. 2001, Freeman et al. 2010). Through purposive interactions with actors outside the supply chain – governments, knowledge institutions and societal organizations – firms seek a balance between their short-term financial performance goals and longer-term social and environmental objectives (GOLDEN 2011). Through these stakeholders, firms gain access to information, develop knowledge and establish reputation (Selsky and Parker 2005).

Evidence of the importance of multi-stakeholder interactions on sustainability undertaken by agri-food firms of different size and regions is synthesized as follows:

- Between 2001 and 2011, 21 out of the 50 largest agribusiness firms have joined or created 47 multi-stakeholder sustainability partnerships with NGOs, governments, international organizations, and other representatives of the civil society (Dentoni and Peterson 2011). These partnerships provide firms with formal structures to interact and learn from stakeholders, as well as to negotiate and set standards, actions and the future agenda (Glasbergen 2007). Most of these partnerships influence the core business activities of agri-food firms, such as their supply of raw material and the process of product transformation.

- In the same period, a growing number of firms worldwide voluntarily disclosed information about their sustainability strategies in multi-stakeholder settings. In 2000, only 200 firms signed the UN Global Compact, while 2,000 in 2005 and 6,000 in 2010 (UNGC 2010). Firms reporting to the Global Reporting Initiative (GRI) grew with an average of 35%/year since 2005 up to 1,800 companies in 2010 (GRI 2011). Out of the 1,800 signing firms, 300 are active in the agri-food sector, 64% are based in OECD countries (mainly from Europe, accounting 45% of the total) and 200 are small and medium enterprises.

- In the latest three to five years, applied researchers and consultants with firms both in the food and non-food sector recommended to manage multi-stakeholder interactions as part of their core strategy (De Wit and Meyer 2009). This role of multi-stakeholder interactions was also recently highlighted by managers of large agri-food firms and representatives of global NGOs (IFAMA 2011).

Firm Capabilities for Multi-Stakeholder Interactions

Results from meetings with managers of 15 out of the fifty largest agri-food corporations worldwide in 2011 and a collection of related press releases and sustainability reports are synthesized as follows. In order to interact effectively with multiple stakeholders, firms need the capability of 1) identifying and sensing their stakeholders, 2) dialoguing with them, 3) learning from them and 4) making organizational changes as a result of this process (Ferrell et al. 2010). Identifying stakeholders allows understanding which actors are legitimate representatives of social and environmental concerns, which actors have power vis-à-vis the firm, and how they exercise this power (Mitchell et al. 1997). Sensing stakeholders allows understanding their system of values, beliefs, attitudes and behaviour to attempt to turn their actions in favour of the firm (Dentoni and Peterson 2011). Dialoguing with stakeholders and integrating their knowledge within the firm boundaries allows preparing effective strategic responses (Ayuso et al. 2006, Hult 2011). Organizational change based on multi-stakeholder interaction allows following words with committed actions (Zollo and Verona 2011).

Some of the largest agri-food firms have developed these capabilities in the latest decade given their initial financial resources and early start in interacting with multiple stakeholders. The remaining firms still have

not set the acquisition of these capabilities as learning objectives for their organization. Human capital – especially, but not exclusively, at managerial level – is a key driver of firm capability development and effective multi-stakeholder interactions.

Individual Competencies Leading to Firm Capabilities

In order to answer the question of firm capability development from the perspective of individual managerial competence development, a process of logical competence modeling (Rothwell and Lindholm 1999) was conducted. It involved: 1) a literature review on competencies for sustainable development and innovation and 2) four focus group discussions with lecturers from 'green' higher education institutes (HEI's) in the Netherlands. HEI's include universities of applied sciences in the agri-food domain (Wals et al. 2011). Besides traditional programs like agronomy and animal husbandry, HEI's education also includes rural innovation, food technology and environmental management. Individual managerial competences are complex sets of knowledge, skills and attitudes (Nijhof et al. 2006). The result of this process was a list of seven key competencies linked to three challenges faced by agri-food firms when attempting to develop the mentioned firm capabilities:

Challenge 1: Dealing with Wickedness

Employees at all levels in the organization may not sense the "wickedness" of sustainability. Sustainability is a wicked problem as it cannot be structured and solved in any traditional way as it does not have a closed-form definition; it deals with complex systems in which cause and effect relationships are either unknown or highly uncertain and has multiple stakeholders with strongly-held, diverse, and conflicting values related to the problem (Batie 2008, Peterson 2011). When they do not sense wickedness, employees may have weak motivations and scarce incentives to interact with multiple stakeholders. To understand the wickedness of sustainability, firm managers need to disentangle a complex net of interdependencies among stakeholders and of cause-effect relationships based on their sustainability policies (Arndt 2006). This requires systems-thinking and foresighted thinking competencies. Moreover, as a wicked problem sustainability is a normative concept, it does not describe the world as it is, but the way it should be based on the convergence of different stakeholders' perspectives. Therefore, tackling this challenge requires *systems-thinking, foresighted thinking* (de Haan 2006, Wiek 2011) and *normative competence* (Grundwald 2004, Gibson 2006).

Challenge 2: Dealing with Heterogeneity

Classical boundaries between disciplines, jobs or functions within organizations become permeable or even dissolve in multi-stakeholder settings (Peterson and Mager 2011). New knowledge is co-created with employees and teams who traditionally were not part of the classical R&D system (Wals et al. 2011). At present, individuals within agri-food firms are educated in a disciplinary way (Wesselink et al. 2007, Peterson 2011) and therefore not used to deal with individuals and groups with heterogeneous disciplinary backgrounds, cultures and values (Latesteijn and Andeweg 2011). Therefore, tackling this challenge requires the competence of *embracing diversity and interdisciplinarity* (Wilson et al. 2006, Ellis 2008) and *interpersonal competence* (de Haan 2006, Wiek 2011).

Challenge 3: Dealing with Value Creation without Capturing

In the end, sustainability initiatives aim to create value for a wide diversity of stakeholders embedded in new business models, concrete products, processes or services. The value created for stakeholders is by definition not captured by managers in terms of financial, tangible outcomes (Latesteijn and Andeweg 2011). This requires *action competence* (Ellis 2008, Mogensen et al. 2010) and *strategic management* (de Haan 2006; Wiek 2011).

The seven competencies identified to deal with these challenges are synthesized in Table 1. Proposed links between challenges and competencies are not meant to be mutually exclusive. That is, overlap does exist. It is recommended that the agri-food firms have a combination of these employees' competencies, but not necessarily all employees need to have the entire set of competencies (Fernandez-Araoz et al. 2011).

Individual Competencies: How to Develop Them

Once the competencies necessary to manage multi-stakeholder interactions are identified, the managerial question that follows is: could these employees' competencies be developed by training or procured by hiring? Some of these competencies are perceived by both employees and students as more "learnable" than others (Table 1). Perceptions of learnability are crucial, since it is established that they actually drive the outcome of competence development (Maurer et al. 2003). Overall, the development of competencies has to take place in authentic situations. For students, this means working on and managing problems from practice and receiving guidance from professionals in solving these problems. For employees, it is important to receive feedback and reflect on experiences they have had in practice in order to learn together from solving and dealing with these problems.

Various interventions are available for managers to organize feedback and reflection on multi-stakeholder interactions within firms and supply chains (Bertels et al. 2010). These include: scanning external information (Doppelt 2008), benchmarking (Blackburn 2007), learning from failure (Hagen 2008), implementation of formal feedback and reflection systems (Dunphy et al. 2003), development of metrics which enable monitoring and evaluation of sustainability performance (Holton et al. 2010), internal knowledge sharing across functional areas and business units (Reverdy 2006), external knowledge sharing and collaboration with competitors andstakeholders (Clarke and Roome 1999, Buysse and Verbeke 2003). By implementing these kinds of interventions, managers are able to organize moments of reflection and collective learning within the company in general, as well as to develop the individual competencies.

Overall, evidence from this study and past literature poses an interesting final proposition. The process of development of competencies for managing interactions with multiple stakeholders starts *within* the organization. That is, the more managers recognize the importance and are able of organizing moments of feedback within the boundary of the firm, the more employees' competences and firm's capabilities for multi-stakeholder interactions develop. Future scholarship engaged with agri-food firms would bring a substantial contribution by testing this hypothesis.

Table 1. Challenges and Competencies for Multi-Stakeholder Interaction

Challenges	Competencies	Description	Perceived Learnability
Dealing with Wickedness	Systems-Thinking	Identifying and analyzing all relevant (sub) systems across different domains (people, planet, profit), including their boundaries. Understand and reflect upon the interdependency of these (sub) systems.	Most learnable, as based on knowledge and skills: models and theories supporting this competence exist
	Foresighted Thinking	Collectively analyzing, evaluating, and crafting 'pictures' of the future where impact of local or short term decisions on environmental, social and economic issues is appreciated on global scale and on the longer term.	Most learnable
	Normative	Assessing and improving the (un-) sustainability of social-ecological systems based on values and principles.	Learnable to some extent, as based on self-concept of employees and individuals
Dealing with Heterogeneity	Embracing Diversity and Interdisciplinary	Structuring relations, spotting issues and recognizing legitimacy of other viewpoints in business decision making processes about environmental, social and economic issues. Involve all stakeholders, maximizing exchange of ideas and learning across different groups inside and outside the organization and across different disciplines.	
	Interpersonal		Learnable to some extent
Dealing with Value Creation without Capturing	Action	Actively involving in responsible actions to improve the sustainability of social-ecological systems.	Learnable to some extent
	Strategic Management	Collectively designing projects and implementing interventions, transitions, and strategies towards sustainable development practices.	Most learnable

References

Arndt, H. 2006. Enhancing System Thinking in Education Using System Dynamics. *Simulation* 82 (11):795–806.

Ayuso, S., M.A. Rodriguez, and J.E. Ricart 2006. Using stakeholder dialogue as a source for new ideas: A dynamic capability underlying sustainable innovation. *Corporate Governance* 6 (4): 475 – 490.

Batie, S. 2008. Wicked Problems and Applied Economics. *American Journal of Agricultural Economics* 90 (5): 1176–1191.

Bertels, S, L. Papania and D. Papania. 2010. *Embedding Sustainability in Organizational Culture. A Systematic Review of the Body of Knowledge* (Network for Business Sustainability).

Blackburn, R., and B. Rosen. 1993. Total quality and human resources management: Lessons learned from Baldrige Award-winning companies. *Academy of Management Executive* 7(3): 49-66.

Buysse, K. and A. Verbeke. 2003. Proactive environmental strategies: A stakeholder management perspective. *Strategic Management Journal* 24(5): 453-470.

Clarke, S., and N. Roome. 1999. Sustainable Business: Learning-action networks as organizational assets. *Business Strategy and the Environment* 8: 296-310.

De Haan, G. 2006. The BLK ' 21' Programme in Germany: a ' Gestaltungskompetenz' based model for education for sustainable development. *Environmental Education Research* 12 (1):19-32.

Dentoni, D. and H.C. Peterson. 2011. Multi-Stakeholder Sustainability Alliances: A Signaling Theory Approach. *International Food and Agribusiness Management Review* 14 (5):83-108.

Doppelt, B. 2008. *The Power of Sustainable Thinking* (London: Earthscan Publications Ltd).

Dunphy, D., A. Griffiths and S. Benn. 2003. *Organizational Change for Corporate Sustainability* (London: Routledge).

Ellis, G. and Weekes, T. (2008). Making sustainability 'real': using group-enquiry to promote education for sustainable development. *Environmental Education Research* 14 (4): 482-500.

Fernandez-Araoz, C., B. Groysberg, and N. Nohria. 2011. How to Hang On to Your High Potentials: Emerging Best Practices in Managing Your Company's Future Leaders. *Harvard Business Review*, October:76-83.

Ferrell, O.C., T.L. Gonzalez-Padron, G.M.T. Hult and I. Maignan. 2010. From Market Orientation to Stakeholder Orientation. *Journal of Public Policy & Marketing* 29 (1): 93-96.

Freeman, R.E. 2010. *Strategic Management: A Stakeholder Approach.* Pitman, Boston, MA.

Gibson, C.B. and J. Birkenshaw. 2004. The Antecedents, Consequences, and Mediating Role of Organisational Ambidexterity. *Academy of Management Journal* 47 (2): 209-226.

Glasbergen, P. 2007. Setting the Scene: The Partnership Paradigm in the Making. In *Partnerships, Governance and Sustainable Development,* edited by A.P.J. Mol, 288–299. Cheltenham, UK: Edward Elgar.

Global Reporting Initiative. 2010. GRI Sustainability Reporting Statistics. http://www.globalreporting.org/ReportServices/GRIReportsList/ (Accessed December 1st, 2011).

GOLDEN for Sustainability. 2011. The GOLDEN Program for Sustainability. www.goldenforsustainability.org (Accessed December 1st, 2011).

Grunwald, A. 2004. Strategic knowledge for sustainable development: the need for reflexivity and learning at the interface between science and society. *International Journal Foresight Innovation Policy* 1(1–2): 150–167.

Hagen, O. 2008. Seduced by their proactive image? On using auto communication to enhance CSR. *Corporate Reputation Review* 11(2):130-144.

Holton, I., J. Glass and A.D.F. Price. 2010. Managing for sustainability: Findings from four company case studies in the UK precast concrete industry. *Journal of Cleaner Production* 18(2): 152-160.

Hult, G.T.M. 2011. Market-focused sustainability: market orientation plus! *Journal of the Academy of Marketing Science* 39 (1): 1-6.

IFAMA. 2011. Public and private discussion with agribusiness managers and non-governmental representatives. *International Food and Agribusiness Management Association* meetings in Frankfurt, Germany, 23rd-25th June 2011.

Lazzarini, S.C., F.R. Chaddad, and M. Cook. 2001. Integrating Supply Chain and Network Analysis: The Study of Netchains. *Journal on Chain and Network Science* 1 (1): 7-22.

Maurer, T.J., K.A. Wrenn, H.R. Pierce, S.A. Tross and W.C. Collins. 2003. Beliefs about 'improvability' of career-relevant skills: relevance to job/task analysis, competency modeling, and learning orientation. *Journal of Organizational Behavior* 24 (1): 107-131.

Mogensen, F. and K. Schnack. 2010. The action competence approach and the ' new' discourses of education for sustainable development, competence and quality criteria. *Environmental education research* 16 (1): 59-74.

Nijhof, A., T. de Bruijn, O. Fisscher, J. Jonker, E. Karssing and M. Schoemaker. 2006. Learning to be responsible: developing competencies for organization-wide CSR. In *The Challenge of Organizing and Implementing CSR,* edited by J. Jonker and M. de Witte, 148-172. London, UK: Palgrave Publishers.

Peterson, H.C. and S.E. Magen. 2011. From motivating assumptions to a practical innovation model. In *The TransForum Model: Transforming agro innovation toward sustainable development,* edited by H. Van Latesteijn and K. Andeweg, 97-129. Dordrecht, NL: Springer.

Reverdy, T. 2006. Translation process and organizational change: ISO 14001 implementation. *International Studies of Management and Organization* 36(2): 9-30.

Rothwell, W.J. and J.E. Lindholm. 1999. Competency identification, modeling and assessment in the USA. *International Journal of Training and Development* 3: 90–105.

Selsky, J.W. and B. Parker. 2005. Cross-Sector Partnerships to Address Social Issues: Challenges to Theory and Practice. *Journal of Management* 31: 849-873.

Swanson, R.A. and E.F. Holton. 2001. *Foundations of human resource development*. San Francisco, CA: Berrett-Koehler Publishers.

UN Global Compact 2010. *UNGC Annual Review*. New York, NY: United Nations Global Compact Office.

Van Latesteijn, H. C. and K. Andeweg. 2011. The need for a new agro innovation system. In *The TransForum Model: Transforming agro innovation toward sustainable development*, edited by H. Van Latesteijn and K. Andeweg, 1-19. Dordrecht, NL: Springer.

Wals, A.E.J., T. Lans, and H. Kupper. 2011. Blurring the boundaries between vocational education, business and research in the agri-food domain. *Journal of Vocational Education and Training* 64 (1): 3-23.

Wesselink, R., H.J.A. Biemans, M. Mulder and E.R. van der Elsen. 2007. Competence-based VET as seen by Dutch researchers. *European Journal of Vocational Training* 40 (1): 38-51.

Wiek, A., L. Withycombe and C.L. Redman. 2011. Key competencies in sustainability: a refer-

International Food and Agribusiness Management Review
Volume 15 Special Issue A

An Agribusiness H.R. Issue: Succeeding at Succession in the Family Business

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Frank Bradley[Ⓘa], Paul Hill[b] and Aidan J. Connolly[c]

[a]*Emeritus Professor, Michael Smurfit Graduate Business School, University College Dublin, Blackrock, Co Dublin, Ireland*

[c]*Chairman, West Liberty Foods, L.L.C., P.O. Box 318, West Liberty, Iowa, 52776, USA*

[c]*Vice President, Alltech, 3031 Catnip Hill Pike, Nicholasville, Lexington, Kentucky, 40356, USA*

Abstract

The issue of succession in family owned agribusinesses may be a contentious matter, but it need not be if carefully considered well in advance of the need to seek a new leader. Nevertheless, succession is particularly disruptive since the founder-owner has been central to shaping and developing the company. At the early stages it is crucial that companies improve succession by strengthening the company's leadership development and focus on those people, internal and external, who might one day take on the role of CEO. Potential new leaders must be good for the company's existing customers, for the company itself and for the management team. A leadership development program which considers succession as a central element at all levels in the company can be a major part of the company's value proposition, one that competitors cannot understand, let alone imitate.

Keywords: family agribusiness, disruption of succession, managing talent for leadership

Ⓘ Corresponding author: Tel: +00 353 17168949
Email: frank.bradley@ucd.ie

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

Succession is a highly disruptive event in the life of any organization, but can be particularly so when it involves a retiring founder-head of a family business, however much in agreement (s)he may be with the departure. In this article we examine the issue of succession in family agribusinesses, where agribusiness is the convenient labeling obtained by grouping agriculture and family business to include the range of activities and disciplines encompassed by modern food and fibre production. Many agribusinesses, large or small, are frequently family owned and passed down from generation to generation. A complication arises in regard to succession in family agribusinesses not found elsewhere. Traditionally the family agribusiness was viewed like the farm before it, as a lifestyle to be preserved for tradition's sake, or as a birthright where succession was reserved for the first born son moving on to any male heir. Nowadays, daughters are, also considered to be one of the most underutilized resources in family agribusinesses. In family businesses, generally, women account for a growing percentage of all family business leaders but whether this trend has extended to family agribusiness is doubtful. Modern family agribusinesses, however, have begun to encourage female successors and nurture them by assimilation into the family agribusiness, mentoring them and sharing important tacit knowledge and having positive role models within the business.

The issue of succession in family agribusiness is important, as there are family members, one or more, and families, one or more, who have a significant ownership interest in and significant commitments toward the overall well-being of the agribusiness. Family agribusinesses may have owners who are not family members, and these firms may be managed by individuals who are not family members. Family members are, however, usually the senior leaders and managers of the firm. Many agribusinesses that have grown into large public companies were once family businesses.

Two principal factors affect the development of family agribusinesses and succession: a) the size of the family relative to the size of the business and b) the suitability of candidates, whether family or non-family, to lead the business in terms of technical and managerial ability and commitment. Successfully balancing the differing interests of family members and/or the interests of one or more family members on the one hand and the interests of the business on the other require imagination, special competencies, character and commitment on the part of the leader and, most of all, the ability to communicate and command respect.

Families confronted with these circumstances face three challenges. First, since the founder-owner has been central to the company's operations and has shaped its strategic values and goals and dominated its behavior, succession may be disruptive to strategic direction. The departure, expected or unexpected, of a founder-owner means that the person who has been the manager, marketing, customer-relationship, and technological driver of the organization is suddenly removed. Agribusinesses, the smaller ones in particular, are characterized by the lack of formalized organizational structures and operating processes which results in the absence of a leadership structure with insufficient senior managers to provide continuity. Agribusinesses with this profile are heavily dependent on the founder-chief executive, so departure can be particularly dangerous for the survival of the company.

Second, founder-owners have a much closer emotional relationship with the venture they started and so the psychological attachment and resource commitment is stronger. Founder-owners often see their ventures as extensions of themselves, to such an extent that company image and individual ego merge; it becomes difficult to speak of one without the other. This bonding of founder-owners with their creations can adversely affect attitudes toward succession.

The third challenge is a paradox. Success for the family agribusiness frequently brings a change of command whereas in larger companies failure forces change. Success in reaching critical milestones in the family agribusiness makes it much harder to convince the founder that a change is needed, thus increasing the chances that the succession event will be disruptive. The pressure for change is exacerbated when new milestones are required for the continued good health and growth of the company. It may be that the

incumbent leader may not to have the skills and competencies required to successfully introduce new technologies and/or new products or to develop new markets. Observe the paradox – failure in large companies causes rapid and frequent changes in CEOs, whereas success reduces dramatically the chances of replacement. The opposite is true in family owned businesses. Hence, the founder-owner can be forgiven for exclaiming 'but I have been very successful, why do you want me to go?'

At some stage, however, for both operational and strategic reasons and perhaps acknowledging the founder's personal desire to retire (s)he will reluctantly seek a successor. The danger is that such reluctance among founder-owners may further complicate the process as they insist on replacements with such exaggerated ideal qualities that merely reinforces the resistance to any such change and thereby postpones his/her departure believing that only (s)he is capable of bringing the family agribusiness forward. Hence, timing of succession and established procedures are critical considerations.

Succeeding at Succession

The most important thing companies can do to improve succession is to strengthen their leadership development and focus on those very rare people in their ranks who might one day become a CEO. Companies must identify high-potential candidates early in their careers, and global companies must look for talent in all the countries where they operate. However done, there are four key requirements for a successful passing on of the leadership of the family owned business:

1. Candidates for leadership should have progressed through positions of responsibility in the business. They get to know the business, so succession becomes seamless.
2. Where necessary, the company will have to create jobs and projects to test candidates.
3. It is essential for the health of the company that elevating unprepared internal candidates is avoided
4. Flexible structures should be created within the company to allow good candidates to be identified.

The very best preparation for a new chief executive is progression through positions with responsibility for steadily larger and more complex profit & loss (P&L) centers. A candidate might start by managing a single product, then a customer segment, then a country, then several product lines, then a business unit, and then a division. Whatever the progression, P&L responsibility at every level is of central importance. Candidates for leadership must thrive on taking personal ownership of important decisions in the company and must be given enough scope to succeed or fail.

Companies not set up to provide such opportunities should create jobs, large projects or small internal organizations within their company, that exercise P&L muscle. Otherwise, they risk elevating an internal candidate who is not prepared. Companies with inflexible functional structures will probably be forced to seek P&L tested leaders from outside and place them in very high positions in the company. To reduce this risk, they should bring in such executives three or four years before the expected succession to allow them to take over in an orderly manner.

The Three 'Fits' Imperative

Company leaders, family owned businesses included, should be as well defined as puzzle pieces; their strengths and experiences must match the shape of their company's needs. That is, they simply must fit the culture of the company to meet the *three fits imperative:*

Boards achieve fit by specifying, in terms as precise as possible, three or four aspects of talent, know-how, and experience that are non-negotiable.

1. They must be good for the company's existing customers
2. They must be good for the company itself
3. They must be good for the management team

Benchmarking internal candidates against outsiders and making sure that board members consider all possibilities, even if they prefer an insider, can be well worthwhile. Extensive and detailed discussions among the board members are, however, always necessary to identify hidden agendas and ensure they are removed. This process, helped by well-directed professionals, helps refine requirements to reach a consensus.

Board members must carry out due diligence on outside candidates and do it well. They should ask first about the candidate's natural talents. If those gifts – admirable as they may be – do not match the position's specific profile, which are determined by team requirements in addition to the other more obvious factors, such as a change in company direction, that candidate is not worth pursuing.

Lessons to be Learned

Managerial succession is often so neglected and badly managed by founder-owners that team talent is lost. The process outlined above may help. A candidate for a CEO vacancy should have the capacity to:

- Maximize team talent in the company
- Preferably proven in previous positions
- The candidate must fit the culture

Many organizations mistakenly believe that an insider is more likely to be aligned to the culture but an outsider often resurrects team talent after the failure of insiders. It is essential to plan leadership succession to avoid experiencing a steady attrition of talent or retaining people with outdated skills.

Fundamental to succession management is the underlying philosophy that states that the best talent in the firm must be managed for the greater good of the firm. This talent management should be part of the brand. The chief executive is responsible for the overall strategy of the team and the primary guardian of the company brand values and is also responsible for ensuring that everyone:

- Knows what it means to be part of the organization - understands the brand
- Knows the company's ultimate goal
- Knows how the chief executive intends to pursue that goal (the strategy)
- Knows the process/procedure the chief executive intends to employ (the tactics) among other things
- Knows what constitutes acceptable behavior and performance

Planning for succession in any firm is a process for identifying and developing internal people with the potential to fill key leadership positions in the firm. By planning for succession, the family agribusiness firm increases the availability of experienced and capable people that are prepared to assume leadership positions as they appear. A leadership development program that deals with leadership succession at all levels in the organization can be a major part of a company's value proposition – one that competitors cannot understand, much less copy – the true essence of a good brand! Talent management, particularly when it comes to leadership and its succession, is an essential ingredient in building the brand.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Inpatriates and Expatriates: Sources of Strategic Human Capital for Multinational Food and Beverage Firms

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Goudarz Azar

Ph.D. Student, Department of Economics, Swedish University of Agricultural Sciences (SLU), Johan Brauners väg 3, P.O. Box 7013, Uppsala, 75007, Sweden

Abstract

The accelerating pace of globalization makes the strategic role of human resource management increasingly important for global companies. MNEs as key drivers in the process of globalization are becoming much more differentiated networks. This enables them to source the optimal combination of inputs from the global market. Inpatriates and expatriates are MNE's strategic sources of human capital, through which knowledge is developed, carried, and exchanged within the MNE's network. This essay discusses the ways in which inpatriates and expatriates can provide competitive advantage for MNEs in the food and beverage industry, and how these MNEs should mange these strategic resources in a competitive global market.

Keywords: Food and beverage MNEs, human capital, inpatriates, expatriates, global talent management

Corresponding author: Tel: + 4618- 672- 605
Email: G. Azar: goudarz.azar@slu.se

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

The accelerating pace of globalization makes the strategic role of human resource management (HRM) increasingly important for global companies (Farndale et al. 2010){Farndale, 2010 #553;Fang, 2010 #552}. A process driven by economic forces and opportunities, globalization leads to the reorganization of production, changes in international trading patterns, and the integration of financial markets (Sideri 1997). Multinational enterprises (MNEs), key drivers in the process of globalization, are becoming much more like differentiated networks as they strive to obtain the optimum combination of inputs from the variety of opportunities available in the global market. This in turn fuels the trend toward outsourcing and offshoring of activities[2] (Buckley and Ghauri 2004; Buckley 2009).

Firms need talented leadership to operate successfully on a global scale (Farndale et al. 2010). Inpatriate managers (inpatriates) are host-country personnel in MNEs' foreign subsidiaries whose knowledge of the local market, business practices, and cultural preferences make them a significant source of international management talent for MNEs. Expatriate managers (expatriates), on the other hand, are home-country personnel who hold key positions in MNEs' foreign subsidiaries (Harzing 2001), mainly to establish control in the foreign market (Farndale et al. 2010). This essay discusses the ways in which inpatriates and expatriates, as strategic human capital, can provide competitive advantage for MNEs in the food and beverage industry, and how these MNEs should manage these strategic resources in a competitive global market.

Opportunities in Emerging Markets

Research and Development (R&D) and its main product, innovation, are a recognized source of sustainable competitive advantage, and hence profitability and growth (Alfranca et al. 2002). The food and beverage industry is generally recognized as a low-tech industry in which the share of R&D expenditure is among the lowest in the manufacturing sector (von Tunzelmann and Acha 2005; Rama 2008). However, evidence indicates that manufacturers and retailers recognize the importance of food innovation, and consumers' behaviors reveal an increasing demand for new products that offer real benefits in terms of convenience, quality, and variety (Pinstrup-Andersen 2002; Galizzi and Venturini 2008). This creates opportunities for firms to introduce new products and processes that meet consumers' increasing demand for higher quality products (Ghazalian and Furtan 2007).

Innovation adoption is often a costly process (Kotabe 1990) that includes the generation, development, and implementation of new products or services, new process technologies, or new organizational structures (Damanpour 1996). Recent research shows that MNEs in the food and beverage industry tend to offshore their R&D units in specialized subsidiaries (Filippaios et al. 2009). A patent analysis[3] indicates that from 1969 to 1994, 30% of the innovations of the world's largest food and beverage MNEs were produced offshore (Alfranca et al. 2002). One reason for offshoring R&D may be the lower costs of adoption of innovation in offshore countries (Kafouros et al. 2008). Sourcing R&D inputs from the cheapest markets around the globe and offshoring R&D facilities where land, capital, and scientific talent are cheap (e.g. India[4]) may reduce costs associated with R&D activities (Kafouros et al. 2008).

R&D Subsidiary Embeddedness

Subsidiaries are an important part of the MNE's network. There are mutual adaptations between the parent MNE and the subsidiary in the development of products and processes between the subsidiary and their local trading partners (Yamin and Forsgren 2006). Despite the process of globalization and trends toward

2 Outsourcing refers to models of "buying" rather than "making," while offshoring can involve either "buying" or "making," (or both) abroad (Buckley 2009).

3 They analyzed a sample of 16,698 patents granted in the United States to 103 food and beverage firms selected from the world's largest food and beverage MNEs (Alfranca et al. 2002).

4 The salary of a well-educated researcher in India is one-tenth of the corresponding salary of a researcher in Sweden (Kafouros et al. 2008).

homogenization of diets, food consumption remains culturally bound (Filippaios et al. 2009). Therefore, knowledge about consumers' tastes and preferences in the local market is a source of competitive advantage for MNEs in the food industries. Through relationships with external networks, R&D subsidiary embeddedness in a host country generates valuable knowledge that could be a strategically relevant resource for the adoption of innovations particularly in that country (Barney 1991; Yamin and Forsgren 2006). Competing in the global marketplace, however, requires the strategic human capital of managers who are diverse and multicultural, and inpatriates are a valuable resource (Harvey and Miceli 1999).

Inpatriates as Source of Knowledge

Knowledge is a critical strategic resource that creates a firm's competitive advantage (Kogut and Zander 1992). Knowledge is developed, carried, and exchanged through the firm's human capital (Amit and Schoemaker 1993). Inpatriates are increasingly recognized as a valuable source of international human capital in MNEs (Farndale et al. 2010). Their knowledge of the local market, business practices, and cultural preferences has made inpatriates strategic sources of human capital for foreign subsidiaries. Inpatriates interact directly with local employees. They are familiar with local laws, rules, and practices. The role of inpatriates is especially relevant when knowledge about the host country is important to the manager's specific function. The greater the cultural distance between the home country and the host country, the greater the value of inpatriates expertise. Growing market opportunities in developing economies (e.g. China, India, Brazil) lead to MNEs offshoring their activities in these countries, but MNEs often face great social, cultural, and institutional gaps in these countries that can make market entry and management of local business activities difficult. Thus, their depth of knowledge about the local market makes inpatriates better candidates than expatriates for managing these operations (Harzing 2001; Reiche 2006).

Expatriates as Facilitators of Knowledge Transfer

Knowledge as a strategic resource is difficult to diffuse through an MNE's network (Fang et al. 2010). Key managerial positions and rich knowledge about the home market allow expatriates to become knowledge-transfer facilitators who improve a foreign subsidiary's ability to acquire and absorb organizational knowledge from the parent-firm and hence enhance its performance (Harzing 2001; Fang et al. 2010).

Despite their crucial role in facilitating transfer of knowledge to offshore subsidiaries, because of the costs related to moving and relocation, education for their children, visits to the home country, etc., expatriates are an expensive source of human capital for MNEs. Therefore, it has been suggested that expatriates should be employed when an MNE is large and conducting intensive R&D, when there is a high level of political risk in the host country, when the level of education in the host country in low, or when the subsidiary is young and a green field operation (Harzing 2001).

Past research (Harzing 2001) has found few expatriates and a large proportion of inpatriates among the foreign subsidiaries of food and beverage MNEs. The integration of foods and culture requires familiarity with local markets and consumers' tastes and preferences (Azar 2011). Therefore, although expatriates can contribute valuable corporate knowledge, inpatriates in these subsidiaries are better placed to provide food and beverage MNEs with strategic local knowledge (Harzing 2001).

Global Talent Management

Human capital challenges are among the most pressing global challenges that MNEs are facing today (Tarique and Schuler 2010). Intensified global competition to produce high quality products at low costs, wage differentials across nations, aging populations in many developed economies, increasing demand for skilled human capital, and shortage of competent and motivated employees are global talent challenges that MNEs need to manage effectively (Schuler et al. 2011).

Managing global talent challenges requires the systematic use of HRM activities and policies to attract, retain, and develop key human resources at the international level, i.e. global talent management (GTM) (Tarique and Schuler 2010).

GTM initiatives may include:

- Attracting talented human capital away from existing employers, by making the target companies more attractive, e.g. by developing HR reputation, attracting individuals with interest in international work, and using a talent pool strategy
- Retaining talented human capital, e.g. by creating a good work environment, rewarding managers for improving talent retention, and assessing the efficacy of current recruiting sources
- Performance assessments designed to retain and motivate talented staff
- Compensating high-performing employees (Schuler et al. 2011)

Successful implementation of GTM, however, requires a deep-seated commitment from senior executives, as well as matching the firm's strategy and talent resources with appropriate and achievable policies and practices (Ready and Conger 2007; Schuler et al. 2011). Moreover, GTM practices should be synchronized with the company's needs to grow or expand into new markets. Integrating the functionality and vitality of GTM enables a firm to develop and retain key employees and fill positions quickly to meet evolving business needs. Functionality refers to the application of tools and systems that allow the firm to put the right people with the right skills in the right place at the right time. Vitality, on the other hand, refers to the attitudes of the people responsible for those processes, and is a product of the executives' commitment to the details of GTM and their accountability for identifying and developing the firm's current and future leaders (Ready and Conger 2007).

GTM in Food and Beverage MNEs

Previous research has found that implementing GTM positively influences both inpatriates' and expatriates' commitment, loyalty, and performance in food and beverage MNEs (van der Heijden et al. 2009). Accordingly, the extent to which the in/expatriates believe that the parent organization values their efforts and cares about their well-being affects their perception of their career prospects within the home organization, as well as their performance. Two prominent companies that have implemented GTM and turned it to their strategic advantage are Coca Cola and Tyson Foods.

An example of GTM at The Coca Cola Company (which has a global workforce of approximately 92,800 (CocaCola 2010)) is assigning management trainees from developing countries (e.g. China) to centers around the world. This allows the company to create a diverse talent pool it can then align with both local and global needs (Beechler and Woodward 2009). Among the ways the company works to motivate employees are "engagement surveys," which are then used to identify key themes in the information and comments provided by employees, and by ensuring the high levels of involvement and visibility of the leadership through organizing group discussions and interactions with senior managers. Investing in people and initiatives has not only increased employees' commitment to Coca Cola, but also resulted in strategic advantages (McGovern 2011).

Tyson Foods, a family-controlled company based in Springdale, Arkansas, is one of the world's largest food processors and marketers. After ad hoc approaches to leadership development failed, the company formed a senior executive task force that involved leaders from across the organization in trying to strike a balance between supply and demand for talent in the company. By exposing future leaders to the full range of the company's operations (new business units, regions, etc.), Tyson Foods helps them to develop working relationships throughout the organization and develop the skills to execute the corporate strategy. The company adopts formal performance-management review policies through which it assesses the qualifications (competencies, values, and skills) necessary for

key positions. A close collaboration between the senior leaders and HR helps to ensure the accuracy of the process and in turn, contributes to the long-term success of the company (Cohn et al. 2005).

Conclusion

The notion of the "global factory" imagines MNEs becoming much more differentiated networks, which will enable them to source the optimal combination of inputs from the global market (Buckley and Ghauri 2004). Inpatriates and expatriates are an MNE's strategic sources of human capital, through which knowledge as a strategic resource is developed, carried, and exchanged within the MNE's network. An imbalance in the supply and demand for skilled human capital in the global market, the aging population in many developed economies, and a shortage of competent and motivated human capital have made inpatriates and expatriates scarce resources for MNEs. It will require strong commitment from senior managers to develop the innovative HRM activities and policies needed to attract, retain, and develop these strategic resources at the global level.

References

Alfranca, Oscar, Ruth Rama, and Nicholas von Tunzelmann. 2002. A Patent Analysis of Global Food and Beverage Firms: The Persistence of Innovation. *Agribusiness* 18(3):349-368.

Amit, R., and P.J.H. Schoemaker. 1993. Strategic Assets and Organizational Rent. *Strategic Management Journal* 14:33-33.

Azar, Goudarz. 2011. Food Culture Distance: An Antecedent to Export Marketing Strategy Adaptation - An Empirical Examination of Swedish and Finnish Food Processing Companies. *International Food and Agribusiness Management Review* 14(3):17-44.

Barney, Jay. 1991. Firm Resource and Sustained Competitive Advantage. *Journal of Management* 17(1):99-120.

Beechler, Schon., and Ian. C. Woodward. 2009. The Global "War for Talent". *Journal of International Management* 15(3):273-285.

Buckley, Peter J. 2009. The Impact of the Global Factory on Economic Development. *Journal of World Business* 44:131-143.

Buckley, Peter J., and Pervez N. Ghauri. 2004. Globalisation, Economic Geography and the Strategy of Multinational Enterprises. *Journal of International Business Studies* 35:81-98.

CocaCola. 2010. Annual Report.

Cohn, Jeffrey. M., Rakesh Khurana, and Laura Reeves. 2005. Growing Talent as if Your Business Depended on It. *Harvard Business Review* 83(10):62-70+155.

Damanpour, Fariborz. 1996. Organizational Complexity and Innovation: Developing and Testing Multiple Contingency Models. *Management Science* 42(5):693-716.

Fang, Yulin, Guo-Liang Frank Jiang, Shige Makino, and Paul W. Beamish. 2010. Multinational Firm Knowledge, Use of Expatriates, and Foreign Subsidiary Performance. *Journal of Management Studies* 47(1):27-54.

Farndale, Elaine, Hugh Scullion, and Paul Sparrow. 2010. The Role of the Corporate HR Function in Global Talent Management. *Journal of World Business* 45(2):161-168.

Filippaios, Fragkiskos, Marina Papanastassiou, Robert Pearce, and Ruth Rama. 2009. New forms of organisation and R&D internationalisation among the world's 100 largest food and beverages multinationals. *Research Policy* 38(6):1032-1043.

Galizzi, Giovanni, and Luciano Venturini. 2008. Nature and Determinants of Product Innovation in a Competitive Environment of Changing Vertical Relationships. In *Handbook of Innovation in the Food and Drink Industry*, edited by R. Rama. New York: Haworth Press.

Ghazalian, Pascal L., and W. Hartley Furtan. 2007. The Effect of Innovation on Agricultural and Agri-food Export in OECD Countries. *Journal of Agricultural and Resource Economics* 32(3):448-461.

Harvey, Michael G., and Nicholas Miceli. 1999. Exploring Inpatriate Manager Issues: An Exploratory Empirical Study. *International Journal of Intercultural Relations* 23(3):339-371.

Harzing, Anne-Wil. 2001. Who's in Charge? An Empirical Study of Executive Staffing Practices in Foreign Subsidiaries. *Human Resource Management* 40(2):139-158.

Kafouros, M. I., P. J. Buckley, J. A. Sharp, and C. Q. Wang. 2008. The Role of Internationalization in Explaining Innovation Performance. *Technovation* 28(1-2):63-74.

Kogut, Bruce, and Udo Zander. 1992. Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology. *Organization Science* 3(3):383-397.

Kotabe, Masaaki. 1990. The Relationship between Offshore Sourcing and Innovativeness of US Multinational Firms: An Empirical Investigation. *Journal of International Business Studies* 21(4):623-638.

McGovern, Maeve. 2011. Interview with Robin Gee, Head of Employee Engagement for Coca-Cola Refreshments. *Development and Learning in Organisations* 25(3):34-35.

Pinstrup-Andersen, Per. 2002. Food and Agricultural Policy for a Globalizing World: Preparing for the Future. *American Journal of Agricultural Economics* 84(5):1201-1214.

Rama, Ruth. 2008. *Handbook of Innovation in the Food and Drink Industry*. New York: Haworth Press.

Ready, Douglas. A., and Jay. A. Conger. 2007. Make Your Company a Talent Factory. *Harvard Business Review* 85(6):68-77+141.

Reiche, B. Sebastian. 2006. The Inpatriate Experience in Multinational Corporations: An Exploratory Case Study in Germany. *The International Journal of Human Resource Management* 17(9):1572-1590.

Schuler, Randall. S., Susan. E. Jackson, and Ibraiz. Tarique. 2011. Global Talent Management and Global Talent Challenges: Strategic Opportunities for IHRM. *Journal of World Business* 46(4):506-516.

Sideri, Sandro. 1997. Globalisation and Regional Integration. *European Journal of Development Research* 9(1):38-81.

Tarique, Ibraiz., and Randall. S. Schuler. 2010. Global Talent Management: Literature Review, Integrative Framework, and Suggestions for Further Research. *Journal of World Business* 45(2):122-133.

van der Heijden, Johannes. A. V., Marloes. L. van Engen, and Jaap Paauwe. 2009. Expatriate Career support: Predicting Expatriate Turnover and Performance. *International Journal of Human Resource Management* 20(4):831-845.

von Tunzelmann, Nick, and Virginia Acha. 2005. Innovation in "Low-Tech" Industries. In *The Oxford Handbook of Innovation*, edited by J. Fagerberg, D. C. Mowery and R. R. Nelson. Oxford: Oxford University Press.

Yamin, Mohammad, and Mats Forsgren. 2006. Hymer's Analysis of the Multinational Organization: Power Retention and the Demise of the Federative MNE. *International Business Review* 15:166-179.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Cultural Dimensions of Human Capital Development

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Dennis M. Conley

Professor, Department of Agricultural Economics, University of Nebraska,
308 Filley Hall, Lincoln, Nebraska, 68586-0922, USA

Abstract

Communication and information technology is making the world more flat by connecting people far and wide. The expanded reach exposes the user to the rugged terrain of human capital and associated cultures. Hofstede's research (1980, 2001) gives a framework for understanding cultural dimensions of countries and organizations. Examples are provided illustrating the challenges facing managers that work internationally.

Keywords: cultural dimensions, human capital, power distance, uncertainty avoidance, acculturation

Corresponding author: Tel: +1 402.472.2034
Email: D. M. Conley: dconley@unl.edu

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

In his bestselling book, *The World Is Flat*, Thomas Friedman (2006) narrates descriptive accounts of the changes taking place in people's lives driven by advances in communications and information technology, and how that technology is connecting people far and wide as never before. The book gives definition and scope to the popular term "global village." Anyone observing people who work in agribusinesses from the producer to the senior executive, regardless of country, see ever-present evidence of the technology: cell phones, iPads, laptops, the Internet, Skype, texting, Facebook and 24/7 connections via email to colleagues, customers, and family. The technology facilitates the conduct of agribusiness and in a very visible, tangible way, raises the productivity of human capital. While the technology is flattening the world by expanding a person's global reach and increasing the frequency of interaction, there are still mountains and valleys across the human capital terrain of the world. If anything, the expanded global reach more readily exposes the technology user to the rugged terrain of human capital. On the one hand the world is becoming more flat, and on the other, it looks more rugged. Why is this and what can be done regarding the development of human capital for the global agribusiness community?

The rugged terrain of human capital, unlike tangible communications technology, comes from the intangible characteristics intrinsic to a person and the society in which that person lives. For the person these include emotions, egos, confidence, determination, motivation and values. Conditioning those intrinsic characteristics of a person are the cultural dimensions – norms, values and beliefs of the society in which a person grows up and lives. Many times they are unwritten but nevertheless clearly understood and applied. Society's cultural dimensions are embedded in a unit as small as two people, continuing on up to a family, a town, city, state and nation.

Cultural Dimensions of Countries

A framework for understanding the cultural dimensions in our global village comes from research by Geert Hofstede (1980, 2001). Working as a management trainer and manager of personnel research, Hofstede applied employee opinion surveys to over 70 national subsidiaries of IBM across Europe and the Middle East. He found that national cultural differences were due to a shared set of socialization skills specific to people growing up in the same country. Hofstede defined five dimensions of national culture and of the five, two stand out when applied to the development of human capital. They are:

1. Power Distance Index (PDI) measures the extent to which the less powerful members of organizations and institutions (like the family or students in school) accept and expect that power is distributed unequally.

2. Uncertainty Avoidance Index (UAI) measures of society's tolerance for uncertainty and ambiguity. It indicates to what extent culture conditions its members to feel either comfortable or uncomfortable in unknown, unstructured or surprising situations.

When doing business with an organization in a country, there are two questions about how it will be conducted. Who has the power to decide what? What rules or procedures will be followed? The answers come from the cultural dimensions of Power Distance and Uncertainty Avoidance. The following figure shows the relative rankings of selected countries for two of the dimensions.

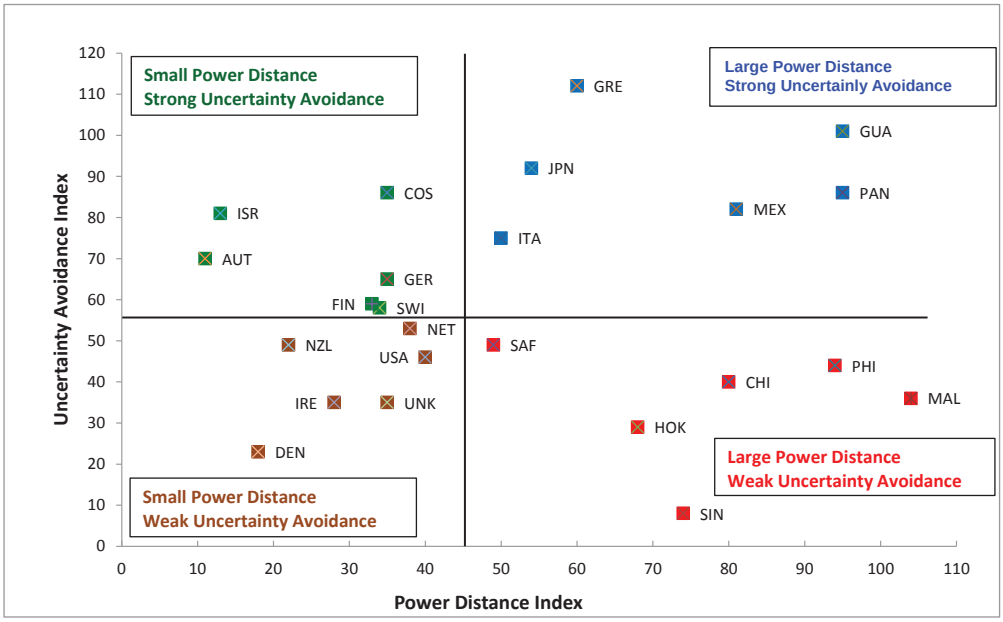


Figure 1. Power Distance Index
Source. Data for the figure comes from Hofstede (2001).

Cultural Dimensions of Organizations

In addition to the cultural dimensions of a country, Hofstede (2001, 373-421) expanded his research to include cultural dimensions of organizations such as companies. He found that while national cultures differed primarily in their values, organizational cultures differed mainly in their practices. A major part of the differences are explained by six independent dimensions of perceived practices reflecting an organization's culture. They are:

- Process-oriented versus results-oriented
- Employee-oriented versus job-centered
- Parochial versus professional
- Open system versus closed system
- Loose control versus tight control
- Pragmatic versus normative

While discussions about communications technology along with national and organizational cultures are interesting from an academic perspective, what are the problems that can arise when addressing the development of human capital, especially for the global agribusiness community?

Acculturation

When a person takes a job assignment that geographically moves them from his or her home country – the place where they developed a mental state of mind for both national and organizational cultures – there arises the possibility of cultural shock and expatriate failure. In making the move, the acculturation process is composed of four periods. The first is euphoria where the excitement of travel and being in a new country dominate. The second is cultural shock where real life starts in the new environment. The third is acculturation where the employee has learned to function in the new living and work environment, has adopted some of the local practices, developed some self-confidence, and integrated into a new social network. The fourth is the stable state of mind where the employee concludes that the living and work environment are either: (a) worse than compared to home, (b) as good as at home and cultural adaption has been achieved, or (c) better than at home and the employee has "gone native." Cultural shock and the corresponding physical and social symptoms may become so problematic that an expatriate's assignment has to be terminated early.

Midwesterners in an Asian Ministry of Agriculture

As an anecdotal example, my first job experience involved a two year assignment in a large Asian country working in the Ministry of Agriculture. Five fellow employees and their families all came from a Midwestern US background. The living arrangements were very good with each family having their own house, a maid, a variety of food and other consumables, a car and driver to and from work. We were well paid and expenses were much less than in the US. Opportunities to see and tour different parts of Asia and its cultures were readily available. For our new work environment, we received no background on the country's culture, as defined by Hofstede, and even more critically, no framework for coping with the organizational culture in the Ministry. Early on, there were regular comments of discontent among a third of the group, both with the work situation and the difficulties family members were having in their new home. In this real-life example, expatriate failure was manifested as one-third of the group returned to the US before the end of their two year assignment. Consistent with the four periods of the acculturation process, I concluded that of the expatriates I met and talked to, roughly one-third strongly disliked living and working abroad, one-third found it acceptable, and one-third liked their foreign situation. (As a side note, my family and I ended up in the accepting category).

Professor as an Advisor and Teacher

While serving as the Head of a Department of Agricultural Economics in the US, one of our full professors took a two-year assignment as an economic advisor to the government and Chamber of Commerce for a country in the Middle East. The professor came from a home country and society that had a similar ethnic background and the same language as the host country. Upon arrival at the first day of work someone showed him the available offices located with the rest of the staff. The professor, being a modest person, saw some good choices and thought he was being treated very well. Almost immediately, the Director General of the government agency informed the staff that the new advisor would have the large, well-appointed office, next to his. The professor realized who had the power to decide what and that the cultural dimension of Power Distance was at work in a way he had not experienced as a faculty member in the US.

One of the professor's responsibilities was to teach a course in managerial economics to MBA students who were members of the Chamber of Commerce. To his great surprise and consternation, it was clearly explained that he was to follow the course outline to the letter and teach the explicitly prescribed content. Any modifications required approval by the administration. The cultural dimensions of Uncertainty Avoidance along with tight control by the school organization were clearly evident. This was contrary to his twenty plus years of teaching in the US where he was allowed to reasonably determine content subject to a course description approved by the department – a situation of lower Uncertainty Avoidance and loose organizational control. Over time, the professor adjusted to the different situation and came to appreciate the cultural dimensions of the host country.

Grade School Children in Rural China

Scott Rozelle is the Helen F. Farnsworth Senior Fellow and the co-director of the Rural Education Action Program (REAP) in the Freeman Spogli Institute for International Studies (FSI) at Stanford University (Rozelle, 2012). At a conference (REAP, December 2011), Dr. Rozelle documented action research he and colleagues did on the effects of iron deficiency anemia on academic performance of grade school children in rural China (Rozelle and REAP Partners). The empirical study of 4,000 students in rural Shaanxi Province found that 39 percent had anemia. In some schools it was as high as 70 percent. Rozelle showed that an intervention program providing one multi-vitamin per day with 5 mg. of iron, over a seven-month time period and at a cost of around four cents per day, resulted in standardized math test scores improving by 0.3 standard deviations. It was a statistically significant improvement. Students in the control group had no improvement. Rozelle also reports on additional sources causing low academic performance.

To place the situation in context, he compared China to another developing country that did not solve its rural education problems. The implication was that over the next decade a large segment of human capital would be unable to join the global labor force. He persuasively argues that a dangerous human capital gap could develop in China resulting in an estimated 100 million unemployed – 70 percent unmarried, who would seek employment in the informal economy or refuge in organized crime. The silver lining Rozelle offered was that there is still time, starting right now, to alleviate future problems.

As he presented the research findings, cultural dimensions affecting human capital became apparent. In a report to the Center for Disease Control in China stating that there are still high rates of anemia, the Center's response was, "It must be those guys for Shaanxi … they have never had good diets…." Of the six perceived practices reflecting an organization's culture, this appears to be parochial versus professional. From the Ministry of Education the response was, "What does health and nutrition have to do with education?" While the Ministry of Health said, "We know this / tell us what to do about it…." The Ministry of Education sounded like a normative culture versus the Ministry of Health that was pragmatic.

Role of IFAMA

What, if anything, can the International Food and Agribusiness Management Association (IFAMA) do with regard to the cultural dimensions of human capital? Given IFAMA's conference program adaptability, it can provide practitioners with education and insights on the national and organizational dimensions of culture that affect global agribusinesses. IFAMA's membership of business managers, students and professors – all from a variety of countries and cultures – have informed experiences consistent with Friedman and Hofstede. The learning from shared cases could lower the incidence of expatriate failure, and help those in a global agribusiness career work in the rugg ed terrain of human capital.

But, what about the bigger picture beyond the private sector needs? What about public policy and programs for the large scale development of human capital as argued by Rozelle for China? Should IFAMA limit itself to just the traditional private sector needs for human capital, or should it include public policy and programs as well?

References

Friedman, Thomas L. 2006. The World Is Flat. Farrar, Straus and Giroux. New York, NY.

Hofstede, Geert. 1980. Culture's Consequences: International Differences in Work-Related Values. Sage Publications, Inc., Thousand Oaks, CA.

Hofstede, Geert. 2001. Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations, second edition. Sage Publications, Inc., Thousand Oaks, CA.

Rozelle, Scott. 2012. http://fsi.stanford.edu/mediaguide/scottrozelle/

REAP, December 2011. http://fsi.stanford.edu/events/will_china_fall_into_a_middle_income_trap_growth_inequality_and_future_instability/

Rozelle, Scott and REAP Partners. http://iis-db.stanford.edu/evnts/6930/session_2.3_rozelle_SCID_conf_ruraledugap_dec2011.pdf

Meeting the Needs of a Rapidly Changing World

CHAPTER 4

CHAPTER 4

Meeting the Needs of a Rapidly Changing World

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Human Capital Development for Agricultural Business in Nigeria

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

S. T. Penda

Department of Agricultural Economics, University of Agriculture, Makurdi, Benue State, Nigeria

Abstract

An investment in people is vital to transforming businesses in Nigeria so a vibrant and entrepreneurially-driven agricultural sector can flourish. Previous failures in large private-sector projects in Nigeria have resulted from the low-level investment into human capital development of agricultural businesses; economic instability and security. The development of the agricultural sector and smallholder farmer requires collaboration among governmental policymakers, educational institutions and private industry. The talent gap in science must be closed in order for a new generation of agricultural business entrepreneurs to transform the numerous challenges into opportunities.

Keywords: Human Capital Development, agricultural business, Nigeria

Corresponding author: S.T. Penda Email:stpenda@yahoo.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

Favorable business opportunity can be found in Nigeria's agricultural sector in production, storage, processing and marketing. The major crops produced include rice, maize, cassava, soyabean, beniseed and groundnut. The country is self-sufficient in tomato, onion, pepper and okra production. Nigeria also has abundant resources for livestock and fish. Although agricultural investment opportunities exist in these areas, most start-up enterprises hardly survive beyond three years. This is due to the high cost of production, poor macroeconomic framework, high investment capital, uncoordinated government policies and the high risk of engaging in agricultural business. In order for economic growth and social advancement to thrive in Nigeria, an investment in human capital is required to build a productive, competitive and functional workforce.

In the 1960s, Nigeria was an agricultural economy. It was among the world's leading producers of cocoa, palm oil, groundnuts, cotton, rubber, and hide &skin.[2] Agriculture sector contributed over 60% to the GDP. Today, agriculture contributes 40% to the GDP while oil contributes only 13% to the GDP. Nigeria has diverse and rich vegetation capable of supporting a heavy population of livestock. The country is blessed with reasonably abundant rainfall of between 300mm – 4000mm per annum, as well as an extensive coastal region that is very rich in fish and other marine products. Nigeria has 79 million hectares of fertile land of which only 46% of these have been cultivated. Fertilizer consumption of 7kg/ha is one of the lowest in the world. There is low livestock production and high fish imports of about 700,000MT annually.[3]Unfortunately, there is one extension worker to every 25,000 farm families compared to best practice of one to every 500-1000. The country record reports 15% - 40% in losses due to inability to process agricultural products.[4]

Framework for Human Capital Development in Agricultural Business

Human capital plays a critical role in economic growth and development because human beings occupy the center of production, distribution and consumption chain. From a macroeconomic perspective, the accumulation of human capital productivity, facilitates technological innovations, increases returns to capital and makes growth in agriculture more sustainable.

The productive workforce in Nigeria's agriculture is aging and needs to be replaced with young educated farmers that will introduce innovation and modernity into agricultural practices. Education is essential as the supplier of trained manpower and a prerequisite to accomplishing entrepreneurial goals. Agricultural ventures must be attractive, profitable and sustainable to induce economic growth. These major attributes can be achieved through scientific research to develop quality inputs, improve agronomic practices and develop good management skills. Likewise, agricultural extension services ought to be upgraded to provide the education needed to modernize production practices and change our past ways and perception of agriculture as a provider of home food to a feasible business opportunity. The concept of Farmers' Field School[5] offers a vital solution to developing a more productive workforce in the agricultural sector.

During the period from 2004-2010, Nigeria experienced sustained high growth rates, but employment responded rather sluggishly. The structure of unemployment remained basically the same during this period as agriculture self-employment continued to dominate the country's labor market. The 7 % growth in the agricultural sector reflects an increase in crop production derived from the expansion of farmlands, rather than increased productivity. Although sustaining and improving upon the recent expansion is important, strengthening both forward and backward linkages among the sectors is a more critical for business growth and poverty reduction through increased employment and income generation.

2 See www.npc.gov.ng
3 NFRA. 2008. Agricultural Investment Opportunities in Nigeria. Published by NFRA, Abuja. 3-7.
3 FMA. 2008. FMA, Abuja. 4-6..
4 Farmer Field Schools provide on the field training to farmers on best agricultural practices

Nigeria has a population of over 150 million people, of which about 49.1 % are women. The total number of vulnerable groups (women, children, the aged and persons living with various forms of challenges and disabilities) constitute about 70 % of the entire population. To address the issue of training a youthful workforce, particularly in the agricultural sector, the Nigerian government is collaborating with many international organizations, agencies and institutions in running training programs to develop young farmers and replace the aging ones. The Senate of the *University of Agriculture-Makurdi* has approved the establishment of the first ever *Department of Agribusiness and Management*[6] in a Nigerian university to enhance human capital development for managing agricultural enterprises. The Federal Government of Nigeria has also introduced compulsory courses in entrepreneurship for students in all Nigerian universities. These combined efforts will certainly improve agricultural business landscape in Nigeria.

The Challenges of Human Capital Development in Nigeria

It is imperative to provide professional development opportunities in order to enhance the capacity of Nigerians to develop entrepreneurial skills. Currently, Nigerian education is not functional or responsive to entrepreneurship development in agriculture. Executive capacity is low, as most of the employees have inadequate professional and requisite technical skills. The deplorable state of the nation's infrastructure has continued to rise and this is adversely affecting agricultural business in the country. Low technology in the agricultural sector has hindered the creation of new high-value products that generate employment and incomes comparable to those in high-performing economies. The Nigerian Government must play a major role in promoting gender equality and advancement of women as an integral part of all political, social, economic and cultural development initiatives undertaken by the country. Larger initiatives are also needed which target youth in agriculture in order to improve agricultural business.

Recommendations

1. Farmers' Field Schools should be established in all Ministries of Agriculture to enhance on-the-field training of farmers to adopt modern agricultural practices
2. The Central Bank of Nigeria (CBN) should frequently organize conferences and workshops for entrepreneurs in agribusiness in order to improve management skills
3. Manufacturers of agricultural machineries should provide ongoing training workshops for equipment operators to enhance their capacity to function efficiently

The over dependence on oil with little attention to agriculture and other sectors is responsible for the poor performance of the Nigerian economy. Today, oil and gas accounts for over 80 % of the nation's export revenue. Deliberate government policies should be introduced to provide a conducive environment for agricultural business to be profitable. Policies to enhance Human Capital Development in Agricultural Business should aim to secure the food and feeding needs of the nation; build the capacity for value addition; utilize available agricultural resources and advance technologies, which accelerate growth in the agricultural sector. Agricultural training institutions should develop curricula and teaching models that increase productivity and continually improve production to meet consumer needs. The agricultural business environment should be made attractive in order to increase participation from youth and women in agricultural enterprise development. These combined initiatives will help transform businesses and attract new ventures in Nigeria so a vibrant and entrepreneurially-driven agricultural sector can flourish.

6 See www.uam.edu.org

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Rural Team-Entrepreneurs: An Answer to Innovative, Multi-Disciplinary Human Capital Education

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Judit Katona-Kovács[Ⓘa], and Noémi Bóta-Horváth[b]

[a]*Assistant Professor, Faculty of Applied Economics and Rural Development, University of Debrecen, Böszörményi 138, Debrecen, Hajdú-Bihar, 4032, Hungary*

[b]*Ph.D Student, Faculty of Applied Economics and Rural Development, University of Debrecen, Böszörményi 138, Debrecen, Hajdú-Bihar, 4032, Hungary*

Abstract

The authors map out a pathway to developing human capital in rural regions through a concept called Rural Team-Entrepreneurs (RTE). The idea originated from the author's research in rural development and through becoming a team-coach at the Team Academy (TA) Debrecen, Hungary.

Keywords: Rural Team Entrepreneurs, human capital, knowledge-based society

Ⓘ Corresponding author: Tel: + 36.30.5353433
Email: J. Katona-Kovács: katonanekovacsjudit@gmail.com
N. B. Horváth:botanehorvathnoemi@gmail.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

What is RTE?

Rural Team-Entrepreneurs (RTE) is a concept to describe a group of stakeholders including farmers dedicated to addressing and advancing rural development in local communities. Members find common values, mission and vision through dialogue and problem solving. Stakeholders develop survival strategies through finding new ways to reach customers, developing creative markets and innovation. The process involves team learning, mentoring and educational components.

Why RTE is Needed

A Changing Environment

The nature of farming is changing rapidly and agriculture now produces a variety of special end products that include: food, feed, fibre, fuel, feelings (public goods, experiences), pharmaceuticals–the so called "F"s. A significant proportion of the personal consumption expenditures within the "F"s pay for activities taking place beyond the farm gate. The revolution of a knowledge-based society has prompted new ideas in agriculture and business. Combining business and culture is also a part of this process and highlights the potential to develop the creative sector as one important driver in an emerging knowledge-based economy.

The complexity of this model can be seen in Figure 1. A wide range of actors with varying expertise are linked to agriculture and allow us to see why building a learning organization, in the form of RTE, is needed. Companies that are not able to adapt to rapid change will not be able to remain competitive (Marquardt 2011).

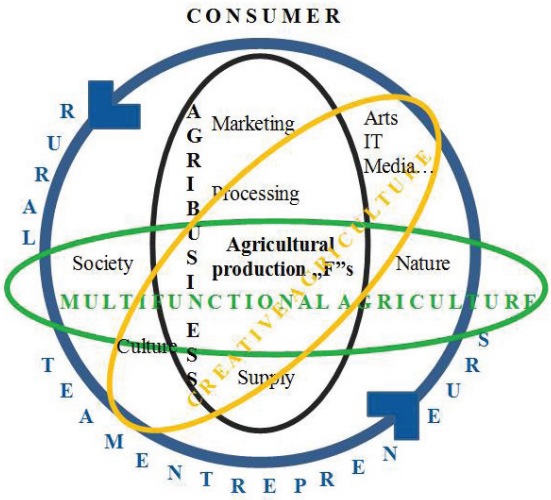


Figure 1. Rural Team-Entrepreneurs, an answer to the complex system linked to agriculture
Source: Katona-Kovács

Learning as a Strategic Driver

As the food system becomes increasingly global and standardized, farmers and other stakeholders have some doubts about the impact of horizontal networking. The research of Jokinen et al. (2010) found that farmers' networks are driven more by survival strategies focused on production methods rather than the competitive strategies needed to compete in today's markets. Farmers, involved in another study, Katona-Kovács et al. (2006), are also aware of the importance of customer demand, but feel themselves isolated from customers and believe they do not possess the marketing knowledge needed.

Opinions vary on how to best tackle the issues. While some farmers feel that a versatile skill set is necessary to be successful as a rural entrepreneur (Jokinenet al. 2010), Godin (2007) suggests it is better to be a master in one market.

Tykkyläinen (2005) showed that the decline in primary sector and reorganization of the public service sector are pushing people out of the countryside. Grassroots efforts such as the emergence of small rural enterprises are not strong enough to survive. Rural communities are subjected to a resilience test where both individual performance and community support matter to novel entrepreneurship.

Van der Ploeg and Renting (2004) describe three ways for farmers to shift their businesses: reground, deepen, broaden. Farmers must be aware of resources at their disposal. Becoming a member of a RTE would allow farmers and other team members to navigate through this complex system.

RTE Strategies

The model for Rural Team-Entrepreneurs includes the above mentioned issues while considering the following:

- Examine the unique dynamics and market chains in local rural communities
- Find new ways to reach customers, market penetration and success
- Rural entrepreneurship requires diversity and versatile skills, but individually require a mastery in one
- Focus on developing new enterprises in rural areas, novel entrepreneurship, creative solutions and innovative thinking
- More can be accomplished though teamwork and the group will be more resilient.

The Finnish Team Academy education, an innovative Finnish model for developing team entrepreneurs was founded by Johannes Partenenin 1993. His model could form the basis of this new rural education concept of Rural Team-Entrepreneurs. Team Academy is based on a learning triangle: *theory, learning by doing* and *team learning.*

1. Team members learn the *theory* from books. They begin with a recommended reading list on themes related to learning, community, entrepreneurship, customer relationship, etc.

2. Teams operate as independent cooperative companies. Utilizing the *learning by doing* approach, members are assigned real-life projects. Learning is a process that is not divided into modules or subjects, such as marketing or leadership. Projects offer opportunities to apply studied theory directly into practice and also provide a platform for students to reflect on theory in the light of their own experiences while studying.

3. Teams use dialogue as a tool to share knowledge and think together, *team learning*. The purpose of *dialogue* is to go beyond one individual's understanding – the whole organizes the parts, rather than trying to pull the parts into a whole. In dialogue, people become observers of their own thinking.

Peter Senge highlights the challenge of taking network-type educational models, like Team Academy, to different cultures. He states that Team Academy is 90% universal, but 10% depends on culture and, in our case, an added issue is rural. He stresses that an entrepreneurialism culture is needed for the future. Instead of learning by doing, he uses "*learning for doing*", emphasizing that learners care about what they want to learn. Models, such as the Lukesch model (Katona- Kovács et al. 2011), could be used as a tool to explore local partnership, local needs and local socio-cultural environment so as to find the best tools for implementation of RTE.

How to Implement RTE

The complex system of agriculture necessitates the involvement of multiple stakeholders. RTE's can be members from the same region, with different interests, talents and ages. The community of RTE has to develop naturally. One approach to community development is through identifying rural inhabitants who are pro-active, have good ideas, and are able to mobilize people around them who care about the idea. They must find common values, mission and vision through dialogue and then find a product for their RTE. The process needs a mentor or a rural team-coach. Universities could fill this important role by providing these actors and toolkits (Katona Kovács et al., 2011).

Creating a library for RTE books is also an important element. The case of Kamkwamba (2009) from Malawi is a good example of why books are needed. Mentors or even students from universities could organize dialogue events in rural areas based on a given book and knowledge needed. Networks for rural development such as European Network for Rural Development in the European Union could create supporting policies. Mentoring could come from universities, keeping in mind that RTE needs coaches instead of teachers. RTE could serve also as catalyst for change and filter throughout the region where it starts.

The authors have learned through experience that creating RTE's can be challenging, as the entrepreneurial culture and social capital is low, even at universities and in urban areas of Hungary. Some people encountered do not believe that they can influence the future. On the other hand, the Teams must trust the process and feedback from local actors who have an interest in finding the most effective way to implement RTE.

Research on how to use this theoretical model is still under development. The authors would like to make contact with those who have an interest in developing RTE, and with those who have good examples utilizing similar tools.

References

Godin, S.2007. *The Dip: A Little Book that Teaches You When to Quit (and When to Stick)*. New York, New York: Penguin Group.

Jokinen, P., M. Järvelä, A. Paloviita and A. Puupponen. 2010. Do local food supply chains meet the target of sustainable livelihood? A case study in Central Finland.In: *Rural areas and development. Linking competitiveness with equity and sustainability: new ideas for the socio-economic development for rural areas.* Editor: Fieldsend, A.,Warsaw. (7):141-154.

Katona-Kovács, J., Fieldsend, A. F., Alderson, M., and Szabó, G. 2006. Human and social factors as endogenous factors stimulating the Leader programme in Hungary. European Rural Development Network Studies. *Endogenous factors stimulating rural development*.(4):169-184. European Rural Development Network.

Katona-Kovács, J., High, C., and Nemes, G. 2011. Importance of Animation Actions in the Operation of Hungarian Local Action Groups. *European Countryside* (4): 227-240. http://versita.metapress.com/content/56524v315831080j/fulltext.pdf

Kamkwamba, W. 2009. How I harnessed the wind? TED talk in 2009 http://www.ted.com/speakers/william_kamkwamba.html

Marquardt, M.J.2011: Building the Learning Organization. Achieving Strategic Advantage through a Commitment to Learning. Boston: Nicholas Brealey Publishing.

Partenen, J. Team Academy in a nutshell. http://www.tiimiakatemia.fi/en/

Senge, P.M. 2006. The Fifth Discipline. The Art & Practice of the Learning Organization. Doubleday: New York.

Tykkyläinen,M.2005. Spatial Restructuring of Rural Finland. in: Schmied, D. (ed.), *Winning and Losing, The Changing Geography of Europe's Rural Areas*, Aldershot Ashgate 265-280.

van der Ploeg, J.D., and Renting, H. 2004. Behind the 'Redux': a Rejoinder to David Goodman. *SociologiaRuralis* 44 (2): 233-242.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Linking Agricultural Research with the Agribusiness Community from a Pro-Poor Perspective: the Importance of Human Capital Development

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Laura Donnet[ⓘa] Jon Hellin[b] and Jens Riis-Jacobsen[c]

[a]*Associate Scientist, Socio-economics Program, International Maize and Wheat Improvement Center (CIMMYT), Apdo. Postal 6-641, 06600 Mexico, D.F., Mexico*

[b] *Senior Scientist, Socio-economics Program, International Maize and Wheat Improvement Center (CIMMYT), Apdo. Postal 6-641, 06600 Mexico, D.F., Mexico*

[c]*Director of Information and Communication Technologies, International Maize and Wheat Improvement Center (CIMMYT), Apdo. Postal 6-641, 06600 Mexico, D.F., Mexico*

Abstract

Improved crop varieties are a key output of agricultural research and have contributed to significant increases in agricultural production and productivity However, the benefits from advances in plant breeding have often not reached the majority of poor farmers. This essay tackles the challenge of enhancing human capital development in the International Maize and Wheat Improvement Center (CIMMYT) in order to enhance impact on food security and poverty reduction. Key changes in strategic planning, leadership, organizational alignment, talent and performance culture along with the need for new ways of thinking and action are outlined.

Keywords: non-profit organization, agricultural research, innovation, MasAgro.

ⓘCorresponding author: Tel: + 52.55.5804.2004 (ext. 2129)
Email: L. Donnet: l.donnet@cgiar.org
J.Hellin: j.hellin@cgiar.org g
J. Riis-Jacobsen: j.riis@cgiar.org

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

An estimated 70 percent increase in world agricultural production will be needed to meet food demands by 2050. Improved crop varieties are a key output of agricultural research and have contributed to significant increases in agricultural production and productivity (Evenson and Gollin 2003). Scientific crop breeding will continue to play a critical role in meeting the challenge of increasing food production. However, the benefits from advances in plant breeding have often not reached the majority of poor farmers cultivating marginal lands. Enhancing the productivity and profitability in these marginal areas will require approaches that promote the translation of innovations in plant science into concrete benefits for poor farmers.

This essay tackles the challenge of enhancing human capital development in the International Maize and Wheat Improvement Center (CIMMYT) in order to enhance impact. CIMMYT is an international non-profit research and training organization headquartered in Mexico. CIMMYT's mission is "*To sustainably increase the productivity of maize and wheat systems to ensure global food security and reduce poverty.*" CIMMYT applies the best science to develop and freely share the following: high-yielding, stress tolerant maize and wheat varieties; large, unique collections of maize and wheat genetic resources; productivity-enhancing and resource-conserving farming practices; and training and information related to the above. A key imperative to human capital development within CIMMYT is to make it a more effective player in the global agricultural community and to enable it to steer a steady course among the community's multiple stakeholders.

Drivers and Challenges for a Non-profit Agricultural Research Organization

Crop breeding in CIMMYT has rightly focused on finding solutions to the key constraints to crop production, many of which center around abiotic and biotic stresses (Delmer 2005). In the past the impact of an organization like CIMMYT was partly determined by the number of improved crop varieties generated while far less attention was given to whether this germplasm was adopted by farmers and the impact of this adoption. CIMMYT, like many other non-profit, multiple stakeholder research organizations, now faces the challenge of demonstrating impact in farmers' fields. A number of factors have come together that have both encouraged and supported CIMMYT's reinvigorated focus on food security and poverty reduction:

- Increased food price spikes, and their detrimental impact on the poor, has focused CIMMYT's managers on the urgency of moving beyond the assumption that an increased in agricultural productivity will lead to poverty reduction; greater attention is being given to impact pathways and the required conditions for linking poor farmers and micro and small enterprises to markets and agrifood chains from a pro-poor perspective (Danse and Vellema 2007).

- Change in donors' demands and criteria for funding and evaluation has led to an increase in funding for agricultural research that goes beyond crop breeding activities and which includes complementary disciplinary research that facilitates technology uptake, e.g., social science along with capacity building of agricultural researchers and partner organizations. This is encouraging agricultural research organizations to employ scientists that represent a broader range of disciplinary backgrounds.

- The paradigm shift from an industrial to a knowledge society means that the primary source of wealth is human capital. The challenge for senior management in agricultural research organizations is to ensure there is sufficient human capital to convert data into meaningful information. From an agrifood value chain perspective, meaningful information needs to be created and shared by a broader range of private and public sector value chain actors, i.e., socially embedded innovation (Danse and Vellema 2007).

A refocus is needed for CIMMYT to meet the unique opportunity of delivering technology solutions to increase food security and overcome poverty. A key component of this adjustment is a far greater emphasis on human capital development. This essay focuses on CIMMYT's role in a large Mexican government agricultural initiative called *Sustainable Modernization of Traditional Agriculture* (MasAgro) to illustrate how CIMMYT is meeting this new challenge.

Sustainable Modernization of Traditional Agriculture (MasAgro)

MasAgro is a network of value chain actors that includes farmers, research and development organizations, private seed companies and extension agents. MasAgro aims to increase maize and wheat productivity by enhancing farmers' access to appropriate technologies, including improved seed. Mexico is the center of maize diversity and maize is central to the livelihoods of millions of producers. However, maize productivity and producers' incomes, particularly in rain-fed areas, remain very low, and there is limited use of improved maize varieties.

A major bottleneck to farmers benefiting from improved maize seed is the development of a strong seed sector that is responsive to farmers' needs and demands. A paradigm shift is required whereby farmers are seen as creative entrepreneurs who value new technological opportunities and who constitute a potential market for innovative and more sustainable technologies, an idea that is elaborated by the Base of the Pyramid (BoP) approach (Prahalad 2010; London and Hart 2004). Research organizations and firms must be able to manage a variety of business models, market strategies and modes of chain coordination to offer the flexibility needed in markets which include poor farmers (Wiersinga et al. 2011) in a way that values their resources and capabilities for healthy and sustainable food production.

A Strategy Centered on Human Capital Development

CIMMYT's coordinating role within MasAgro requires that it acts as a network broker (Hellin 2012), a catalyzing agent who fosters the emergence of an agricultural innovation system in Mexico. CIMMYT is facilitating the establishment of linkages, multi-stakeholder interaction and capacity building amongst different actors in the innovation system[2]. In order to play an effective network brokering role, human development changes are required within CIMMYT; changes that provide an institutional environment encompassing both the 'traditional' technology-generation research approach with one that places more emphasis on outcomes and impacts (See Exhibit).

The shift from a traditional technology-generation focus to an organization that maintains this scientific excellence, while simultaneously encompassing a greater emphasis on outcomes and impacts, will take time. Some existing staff may no longer have the skill sets to meet future challenges and may need to be replaced. Recruitment of new staff to cope with fast growth is time-consuming and even more so when it comes after several lean years when CIMMYT downsized. Furthermore, upgrading of support service partnerships are needed to complement internal capability, such services include information and communication technologies. Senior management has not specified the timeframe for the required institutional changes, but three years is a realistic vision. In the meantime, MasAgro is a strong incentive and opportunity for CIMMYT to become a more effective player in the global agricultural community.

Conclusions

For CIMMYT to be a leader in poverty reduction and food security, a big change is necessary along the lines of broader networking with the agribusiness community, total innovation in seed product and, in general, technological package solutions and full tracking of impact. To achieve such high lev-

2 An innovation system can be defined as a network of organizations and individuals that are focused on bringing new products (e.g., improved maize seed), new processes, and new forms of organization into social and economic use. The institutions and policies that affect their behavior and performance is also part of the innovation system. An innovation system consists of a web of dynamic interactions among researchers, seed firms, extension agents, farmers, traders, and processors (Hall et al. 2005). Innovation systems depend on learning processes, feedback loops, and iterative interactions that are decidedly non-linear (Spielman et al. 2008).

els of innovativeness, CIMMYT must first convert its culture into a more participative and more respective one. There is a strategic role for senior management and human resource professionals to be the change leaders. MasAgro, epitomizes the opportunity (and challenge) faced by CIMMYT in meeting pressing food security needs. The Mexican government has large expectations from the network brokering role that CIMMYT is playing in MasAgro. There now exists an opportunity for CIMMYT and its staff to manifest their commitment to poverty reduction through new ways of thinking and action.

References

Danse, M.G.; Vellema, S. 2007. Small-scale Farmer Access to International Agri-Food Chains: a BOP-Based Reflection on the Need for Socially Embedded Innovation in the Coffee and Flower Sector. *Greener Management International*: 39 - 52.

Delmer, D.P. 2005. Agriculture in the developing world: connecting innovations in plant research to downstream applications. *Proceedings of the National Academy of Sciences,* 102(44): 15739-15746.

Evenson, R.E., and Gollin, D. 2003. Assessing the Impact of the Green Revolution, 1960-2000. *Science* 300(5620): 758-762.

Hall, A., L. Mytelka, and B. Oyeyinka. 2005. *Innovation Systems: Implications for Agricultural Policy and Practice*. ILAC Brief 2. Rome: IPGRI.

Hellin, J. 2012. Agricultural extension, collective action and innovation systems: lessons on network brokering from Peru and Mexico. *Journal of Agricultural Education and Extension* 18 (2): 141-159

London, T. and Hart, S. L. 2004. Reinventing Strategies for Emerging Markets: Beyond the Transnational Model. *Journal of International Business Studies* 35: 350-370.

Prahalad C. K. 2010. The Fortune at the Bottom of the Pyramid, 5th Anniversary Edition, Revised and Updated. Pearson Education, Inc.

Spielman, D.J., Ekboir, J. Davis, K. and Ochieng, C.M.O. 2008. An innovation systems perspective on strengthening agricultural education and training in sub-Saharan Africa. *Agricultural Systems* 98: 1–9.

Wiersinga, R.C.; Eaton, D.J.F.; Danse, M.G. 2011. Seed provision in developing economies: converting business model. In: Vellema, S. (ed.) Transformation and sustainability in agriculture connecting practice with social theory. Wageningen Academic Publishers, 2011, Wageningen.

	Traditional Technology Generation Focus	Greater Outcome and Impact Focus	Key Human Capital Management Changes Allowing for Combination of Columns 2 and 3
Strategic Planning	Harnessing scientific expertise to develop improved maize & wheat varieties	• Focus on innovation and collaboration • Cascading strategic priorities • Enhance solutions delivery	•Present Projects systematically and to display synergies •Improve job quality and working environ ment
Leadership		• Value and treat people as primary assets • Value openness, diversity and creativity	• **Foster employee creativity** (seeking input and participation in planning) • **Foster engagement with successful results** • **Increasing efforts in communication** of organizational culture to current and potential employees, partners and stakeholders (videos, web, etc.)
Organizational Alignment	• Vertical and centered in genetics and crop breeding disciplines. • Research and subsequent develop ment of improved germoplasm	• Horizontal, incentive- compatible, and cross-disciplinary. • Interaction with socioeconomics and business and supply chain management for developing integrated solutions including the design and implementation of joint ventures with private seed companies	CIMMYT is implementing changes in evaluation and promotion. These changes may, for example, place less importance on the number of peer-reviewed journal articles and more importance on the impact of the staff's work through training courses for national partners from the public and private sector.
Talent	Technical	Human, management, leadership	New staff is being recruited with different skill sets including monitoring and evaluation, systems-thinking and broader natural and social science backgrounds. Existing staff is being offered training on project management. Training in leadership, building effective teams and facilitation skills will be needed.
Performance Culture		Performance focused culture: clear and agreed performance standards	Introduction of **electronic work plans** and evaluation system that will develop indicator and metrics for judging the success of individuals, projects, program and the institution in ensuring impact.

Exhibit. Human capital development in CIMMYT that allows for continued generation of agricultural technologies along with greater focus on impact.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Technological Transition and the New Skills Required by the Agribusiness Sector

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Renato Dias Baptista

Assistant Professor, Department of Business Administration
UNESP – Univ Estadual Paulista, Campus Tupã, Avenida Domingos da Costa Lopes, 780, CEP, 17602-496, Brazil

Abstract

Adoption of new technologies throughout the agribusiness chain is necessary to meet the higher food and fuel needs of a growing and wealthier population. However, modern technologies require the development of new skills and changes in working patterns and relationships at all levels of the organization. Companies that invest in technology without investing in human capital development will not reach their full potential.

Keywords: technological advances, Brazil, human capital

Corresponding author: Tel: 55. 14. 34044200
Email: R. D. Baptista: rdbaptista@tupa.unesp.br

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

The agribusiness sector has become an industry that makes production efficiency a priority. Attitudes and production processes are changing as the market evolves. The changes imposed by globalization are hard to ignore and are putting pressure on companies to increase production volume to meet the higher demands of a growing and wealthier population. Companies have to compete in a global environment where the competition is tough.

Companies are hopeful that improvements in technology will help them meet the increased demand. The use though of technology in production is different across nations, companies and operators. There is a technological gap and this gap can determine the competitiveness of a company. This 'technological gap' can limit a company's ability to compete in a changing market. If a company uses outdated equipment, they run the risk of becoming obsolete (Baptista 2009). Managers need to realize the importance of investment in human capital to teach workers how to use and understand new technology.

Given the complexity of the global market, the lack of understanding of advanced technologies can handicap companies in their ability to compete globally. This weakness is found among managers, equipment operators, businesses and organizations around the globe.

For Robbins (2008), Spector (2009) and Baptista (2007, 2009), the acquisition of new technology creates changes in an organization. Working patterns, techniques and management models change as human capital requirements change. According to the studies of Dutra (2001) and Zarifian (2003), these factors drive change in the behavior of employees and require employees to develop new skills.

We live in a time that demands increases in production efficiency. This is causing a change in the relationship between human beings and equipment and technology in the workplace. Workers have to quickly learn how to use new technologies to meet the pressures of a changing global market. It is a world that Trivinho (2001) characterizes as techno-symbolic and involves a techno-acculturation.

The use of technology in agribusinesses is not a recent development. People have used various forms of technology in production for centuries. In every period, new patterns of behavior were required as technology developed and changed the way work was done. In general though, compared with other industries agribusiness technology has been rustic. For example traditional agriculture often employed very basic tools. The technological development of these tools though has allowed the industry to keep pace in food production to meet the world's growing demands. At every stage in history, changes in technology required changes in working patterns and the development of new skills to operate the new technology. All of these new technologies generated a reduction in the time needed to perform a task and helped increase output and improve quality.

A reduction in the time needed to produce goods was the goal of Taylor and is still one of the roles of engineers who develop equipment updates and calculate the advantages of machines with "zero defects" and higher productivity. Everyone searches for maximum efficiency and the effectiveness of the results are judged by corporate leaders. These corporate leaders demand that workers operate at the highest technological standard to compete in the global market.

Why do we characterize technology as a factor of great impact if it has been present for so long? The answer lies in the increased efficiency and rapidity of change associated with the microprocessor; without it, globalization would not be the same. This change has profoundly impacted the policies of planning and development of human resources that are now not directed only to "doing it faster," but "how" to operate the new technology.

How is it possible to change the existing management structure that was built up around old technology? The old machines that are being replaced by equipment using cutting-edge technologies mark a new reality in agribusiness and require significant changes in teaching and developing workers.

The answer lies in the new models that have developed that focus on increasing human capital. They require equipment operators participate in training exercises on equipment maintenance, technology use and work techniques that emphasize teamwork, creative thinking, multifunctionality and a systematic view of the machine and task. This comprises a set of new agribusiness skills needed to perform work effectively. Operators must study technology, and not only in an operational sense.

Ironically, technology–demonstrates the need to revisit the holistic view of work. This vision calls for a redesign of labor relations and the role of leadership in companies. The need for new skills is not directed only at the leadership, but also to the workers who must operate the equipment.

Agribusiness and Brazil

According to studies by the Brazilian Ministry of Agriculture, "The world is experiencing a period of great concern, particularly after the outbreak of the financial crisis in the United States in September, 2008. The links in agribusiness supply chains often need to review their plans for making the best decision possible" (2011). Although all nations are under pressure, Brazil's leading position in the agriculture sector makes it a leader in the development of new management techniques in agribusiness: The three main categories that need to be looked at are: a review of management/leadership styles, new worker categories and the demand for equipment using cutting edge technologies. Brazil's agriculture sector is expected to grow 40% by 2019 (Agroanalysis 2012; FAO 2011). This calls for a review of public policies related to agriculture and the use of equipment using cutting edge technologies. For example, in the case of the alcohol-sugar sector, technology is continuously changing. With the expansion, professionalization and mechanization of harvesting techniques, the role of workers within the sector is changing (Liboni and Albuquerque 2010).

In all sectors, old machines are replaced by new equipment using technologies such as GPS (Global Positioning System), self-lubrication, spray sensors, safety systems for night work, intelligent fertilizing and spraying, etc. This marks a new reality in agribusiness as well as significant transformations in human resource policies for the sector. These factors indicate the need for a close relationship between the manufacturers of agricultural equipment and companies in the alcohol-sugar sector in the training of manpower. New ways of managing professionals who work in this sector are needed. When deploying the latest technologies, the simplest tasks may appear to be overly complicated for workers who have not had the right training.

Under the assumption that the complexities of the equipment require new skills from the operators, managers should redesign the way they manage the operators. Old management practices cannot generate the changes necessary for organizations to benefit from the adoption of advanced technologies. The old autocratic leadership style that prevails in the archaic structures does not get results in technological models that emphasize skills such as creativity, integration, systematic vision, initiative, internal entrepreneurship, assertiveness, resilience, communication, teamwork and continuous change. The naive action of only investing in equipment and forgetting about human capital can lead an organization, and even a country, to failure.

The latest technologies are not just operationalized, they need to be integrated into the company to achieve their full potential. In this case, the worker–a semantic term also obsolete – becomes a thinker within the organizational system and is dependent on a leadership that fosters these skills.

All these aspects show the challenges in the agribusiness sector with regards to the training of manpower. It is necessary to invest in human capital to generate the development of these new skills to create an increase in productivity to meet international demand. The need to develop human capital at every level of production is a need that rarely bothered the agriculture sector in the past.

A Look Forward

How do you move an organization from stagnation into a high technology environment? There are different methods and actors that all play a role. One is the very organization that needs to review their assumptions about innovation, the 'life' of an idea, its management policies and strategies. After all, the human being is not reducible to a simple stimulus-response or a segmented functional reaction. The complexity that involves the transition into environments that use advanced technologies is subject to the human brain, which is an interconnected network of billions of neurons. The success of a new technology depends on the gradual assimilation of old and new systems. Without new technologies and new management systems, traditional systems would not be able to provide solutions to the new problems created by a changing global market.
Adoption and adaptation should not be an isolated action or the sole responsibility of organizations, but a connection of strategies involving entrepreneurs and public policies aimed at both the agribusiness sector and the education sector.

According to the IPEA, as early as the 1990s, Brazilian agriculture has been gradually integrated into the system of large transnational corporations that dominate the main chains of global agribusiness. In the case of the alcohol-sugar sector, this accelerated the growth rate. This growth generated an investment in equipment in the agriculture and manufacturing areas to help meet the growing demand for vehicles that use ethanol. For Barbosa et al. (2009), the change meant the industry required more manual labor, and also more investments in training workers. The sector has sought to address the knowledge gap, through an investment in training workers and human capital development. In this way, workers learn to not only use the new technologies available to them but understand the increased production potential that comes with adoption.

Identifying the process of alignment between available human capital and acquisition of technology is a necessary condition to decipher the problems faced by the sector.

The equipment industry also has an important role in creating partnerships with businesses. The equipment industry needs to train the manpower that will operate the technology, as well as continuously developing human resources in the industry: HR-HR relations (HR-manufacturer/HR-agribusiness). This partnership is one of the solutions to avoid the stagnation of knowledge and enables the training of skilled manpower. This helps equipment operators connect with clients/industries that use the machines they sell. These clients/industries are responsible for the technological innovation needed to create new equipment. In this skills training strategy, the State, as well as bodies representing the workers and industries in the sector must also make investments designed to meet the needs of a skilled workforce.

Only well-coordinated action can help increase the number of trained citizens in the face of new technological developments in the coming years. The technological gaps are not a determinist condition, but a reflection of evolutionary constraints to be corrected. Thus, despite the archaic thinking or strategies still in force, the technologies used by the agribusiness sector require a revision in the relationship between managers and employees and the ways workers operate in the sector. The use of new technologies does not guarantee success; human capital is needed to help meet industry needs and the global demand for food. The desired competitiveness will be achieved by investing in both human capital development and new technology.

References

Agroanalysis. O Papel dos emergentes. Disponível em: http://www.agroanalysis.com.br/materia_detalhe.php?idMateria=859. (acesso em: Mar. 2012).

Baptista, R. D. 2009. Comunicação e cultura organizacional: O papel das tecnologias e rede digitais na mudança dos sistemas de trabalho na era da globalização. Doutorado em Comunicação e Semiótica. Pontifícia Universidade Católica de São Paulo, PUC/SP.

_____. Comunicação e cultura: os gaps tecnológicos e os impactos sobre as pessoas. Disponível em: http://www.cibersociedad.net/congres2006 . (Acesso em: 18 Jan. 2007).

Barbosa, E. T. et al. 2009.Responsabilidade social das usinas do setor sucroalcooleiro: uma análise do nível de investimento em aspectos sociais internos, externos e ambientais. UFPB.

Dutra, J. 2001. Gestão por competências. São Paulo: Gente.

FAO. Brasil deve liderar expansão da agricultura. Disponível em: http://www.fao.org/news/story/es/item/43238/icode/ (Acesso em: 22 de June. 2010).

Ipea. 2008. Desenvolvimento rural. Políticas sociais – acompanhamento e análise. n. 16, nov.

Liboni, L. B., L. G. Albuquerque. 2010. Gestão de pessoas no setor sucroalcooleiro. Observatório do setor sucroalcooleiro, FEA.

Ministério da Agricultura, Pecuária e Abastecimento. Brasil projeções do agronegócio 2010/2011 a 2020/2021. Disponível em: http://www.agricultura.gov.br/ Acesso em: 06 de mar. 2012.

Robbins, S. 2008. Comportamento organizacional. São Paulo: Prentice Hall, 2008.

Spector, P. 2009. Psicologia nas organizações. São Paulo: Saraiva, 2009.

Trivinho, E. R. 2001. O mal-estar da teoria: a condição crítica na sociedade tecnológica atual. Rio de Janeiro: Quartet.

Zarifian, P. 2003 Objetivo competência: por uma nova lógica. São Paulo: Atlas.

Innovation in Practice

CHAPTER 5

CHAPTER 5

Innovation in Practice

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Building a Talent Pipeline: Development of the 'Alltech Mini-MBA'[1]

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[2]

Aidan J. Connolly[ⓘa] and Kate Phillips-Connolly[b]

[a]*Vice President Corporate Accounts, Alltech, Summerhill Road, Sarney, Dunboyne, Meath, Ireland*
Adjunct Associate Professor of Marketing, UCD Michael Smurfit Graduate Business School, Dublin, Ireland

[b]*Centre for Global Business Systems, Trinity College, College Green, Dublin 2, Ireland*

Abstract

By the time Alltech had reached its twentieth anniversary, the Company's growth had surpassed even the ambitious goals of its founder, Pearse Lyons. This success, however, has led to a dilemma faced by many corporate leaders – a need to create a new cadre of managers who can take the company forward.

After analyzing how best to fill this gap, a commitment was made to build a highly customized, internal education program using lecture, case study and project-based learning processes. Developing staff management skills, increasing loyalty and empowering complex decision-making have been some of the rewards realized from this commitment. Backed by senior management, Alltech has used lessons learned from the mini-MBA to shape its future strategy. This paper examines the options Alltech explored, the model it chose, and the costs and benefits of adopting an executive education program in agribusiness.

Keywords: Alltech, Executive Education, MBA.

ⓘCorresponding author: Tel: + 1. 859.494.3978
Email: A. J. Connolly: aconnolly@alltech.com
K. Phillips-Connolly: kpcetal@gmail.com

1This article was originally published in the IFAMR, Volume 13 Issue 2, Copyright (c)2010. It is republished here with the express permission of the authors and IFAMA. Further use through reproduction requires the permission of IFAMA.

2 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Background

By the time Alltech had reached its twentieth anniversary, the Company's growth had surpassed even the most ambitious goals of its founder. This success, however, led to a dilemma familiar to many agribusinesses – a need to develop a succession program by grooming new managers who could take the Company forward, expand and manage new opportunities while maintaining the corporate culture and vision. The challenge of creating a pipeline that ensures advancement is common, while the specifics differ by company and industry.

Founded in 1980 by Dr. T.P. Lyons, Alltech is now the eighth largest firm in the animal health industry globally, and the only company among the top 20 entirely committed to 'natural nutritional solutions.' Starting with a modest investment of just $10,000, Dr. Lyons forecasts a future of $1 billion in sales. Alltech markets its solutions in 116 countries, through 86 of its own offices. Alltech managers are typically young, highly educated, technically skilled in animal nutrition or veterinarian science, and ambitious, but with a relatively low level of formal business education. Managers are expected to follow the example of the President by visiting farmers and feed mills directly to understand market needs, including those in non-sales or marketing positions. Examples abound of managers who were promoted after succeeding in the face of overwhelming odds. The corporate culture reflects the style of its President, valuing decisiveness, self-reliance, and technological skills. Alltech seeks employees who are articulate, hard working, possess a 'fire in the belly' and a sense of fun.

There were two unique requisites in the development of new Alltech managers. Although the company was young, and relatively small by international standards, it already had an unusual global reach. The manufacturing, research and development, and sales and marketing operations are divided nearly equally across the major regions of the world. Since managers come from, and work in many languages and cultures, developing a strong sense of the Alltech corporate culture was a priority. Secondly, Alltech was unusual in its industry because of its balance between an emphasis on hands-on relationships with customers, a strong research focus, and a commitment to marketing and sales. Consequently, it was important that a management development plan incorporate elements from across divisional boundaries.

Options

After reviewing the options, the three most effective strategies appeared to be:

1. headhunt successful agribusiness executives from other organizations;
2. train key employees through existing university MBA and executive education programs in both a business and agribusiness focus;
3. build an internal executive education program.

In evaluating the costs and benefits of these options, the following points were considered:

Head-Hunting

The obvious cost in recruiting new ag-executives is the agency fee, which is often 30% of the first year's salary. A hidden cost, however, is the time it takes to acclimate a new executive. It is estimated to take two years to learn the culture of Alltech, and adapt to the company's practices and philosophies. Executives in the agribusiness industry conservatively calculate the cost of finding new executives to be topping $250,000.

MBA Programs

There are a variety of MBA programs on the market, from the short executive education seminars to stand-alone courses. Alltech has had some experience with these options and noted the following points when considering them for a wider company application:

Employees who are looking to advance their careers often request the opportunity to do an MBA. Organizations often agree because they are afraid of losing the employee, and/or they feel it will help prepare the employee for a move to a more senior position. Regular MBAs typically involve either a one-year fulltime program or a two-year part-time program, while Executive MBAs are typically part-time. Part-time and Executive MBAs can be more attractive to the organization, because they allow employees to continue working while completing their studies at night and on weekends. Employees like the degree status and reputation the MBA has developed.

However, there are significant disadvantages for the organization. During the program, the additional demands on the employee can reduce their effectiveness in their current position. Anecdotal evidence suggests that this marathon of short nights, long days and busy weekends, leads to stress in both work and family life. Then, having completed the MBA, the graduate may become frustrated by a perceived lack of opportunities within the organization if the employee feels that the employer and fellow workers are not respecting their new skills or if the graduate feels that the organization is not receptive to adopting their suggestions for change. Considerable anecdotal evidence exists of employees leaving for other organizations within a year of completing their MBA, making it a bad investment for the organization that has invested $100,000 in the employee. Finally, even when all goes well, the relative value of the MBA for the organization may be limited, as much of the course is not relevant to the organization or to the industry in which it competes. This is particularly true for agribusiness, which differs significantly from most industries that offer MBA programs.

Executive Education Courses

Another approach is to use a la carte courses, offered by universities, business schools and independent programs. These courses can be useful, particularly when addressing specific needs. However, they are generally piecemeal and are frequently employee-driven, rather than representing a considered plan that reflects both the employees' desires and the organizational needs. Costs of such programs typically range from $5,000 to $45,000. Only a handful of institutes offer courses with an agribusiness perspective.

Management Development Programs

Finally, a company may hire consultants to provide development programs for employees. Such programs are usually ad-hoc but may include a more structured program developed in conjunction with university-based business schools. These programs vary in purpose, from training and staff development to morale boosting. The most relevant for Alltech are those that provide an overview of business management. Typically they run for 3-10 days. These courses are most beneficial for managers with a lot of experience, either as a refresher, or to familiarize them with the basics of expertise outside their own. However, they are too short to actually serve a development function. Such programs can be expensive, with investments ranging from $1,000 to $10,000 per employee per course.

Additionally, the Company's experience with underwriting MBAs has been disappointing. While MBA graduates acknowledge value gained from the training, much of the program was not relevant to their work or the Company. Despite the extraordinary effort made by participants, work suffered during the MBA process; moreover, the cost to the families of the employees was unacceptably high. Half of the sponsored employees left the firm within two years of completing their MBAs. Frustration arose when promotions were not given or suggestions not implemented.

EMBAs obviously miss the target population within Alltech, and while Executive Education courses are also used by Alltech, they are too specific to be seen as a management development solution. The Company was intrigued by Management Development programs, often offered in association with well-respected universities but felt that although the short time frame was attractive in work terms, it was insufficient to lead to meaningful management development. As with virtually every course and program examined, the emphasis is too often on industries that are fundamentally different to agriculture.

Developing an Internal Executive Education Program – A Hybrid Solution

Alltech's objective was to find a way to systematically develop the management potential of existing employees in ways that would complement the technical nature of the industry and the corporate culture. In the final analysis, building its own program by adapting the best, most relevant elements from the available options was considered more cost efficient than sponsoring MBAs and off-the-shelf programs. Structuring the program to fit the needs of the company would not only maximize the return on the investment but make it less easily transferable to other firms.

The Alltech Advanced Management Development Program (AMDP)

In 1998, Alltech Vice President, Aidan Connolly partnered with his former professor, Professor Frank Bradley, Head of the Department of Marketing at University College Dublin (UCD, Ireland) to design a program for Alltech. Connolly felt some of the classes offered by UCD on negotiations, marketing, and finance could be easily adapted to fit, while other courses such as leading strategy innovation at Alltech, managing an agri-sales team, personal organization, and decision making in a global enterprise and communication skills would require new course development. The courses were designed to maximize program impact while minimizing the time spent away from the office. The timing of the program worked around the business cycle of the Company.

Initially, the program was proposed as a single two-week module. Such was its success that subsequent modules were proposed and accepted, leading to a total course load completed in one-third to one-half the time of a classic MBA program. Although the first module reflected the bias of its creators – a sales and marketing focus – subsequent modules covered a broad range of skills managers needed to assume senior positions. Critical feedback was solicited from participants upon module conclusion in a *town hall* format. The lessons learned from previous classes continued to shape and refine the course content.

Structure of the AMDP

Known colloquially as the 'Alltech mini-MBA,' the program is broken up into four modules, with interstitial 'refreshers,' and runs over four years:

Module 1: Strategic Market Management

This 10-day double-length module introduces the core topics, including business concepts (Financial analysis, Competitive marketplace), strategy (Strategic analysis, Strategies for growth), relationship management (Managing sales relationships, Customer management, Managing partners), and industry (Managing technological products, Managing the challenges of sustainability). The module concludes with a project workshop, business theory, case studies and presentations by participants. The fortnight format contributes in several ways; it establishes the *bootcamp* atmosphere, creates a critical momentum for attendees who often have not studied for several years, and allows students to adapt to business models and frame their thinking processes.

Module 2: Brand Driven Growth

This six-day module examines the elements of developing and using the brand, from inception (Fundamentals of brand driven growth, Brand ideation workshop) to application (Tactical use of sponsorship, Sponsorship for growth). The art and skill of negotiating is also covered (Negotiation strategy and skills). The module concludes with the students preparing presentations to address specific challenges. Project work in this field has included market plans for new Alltech products and product ranges such as Alltech's Lifeforce™ for horses.

Module 3: Managing Groups and Teams

This module was developed to reflect Alltech's highly group-based management and operational style. Over a five-day period, the students work on the nature of groups (Managing groups and teams exercise, Responding to the leadership challenge) as they relate to their own region (Managing people and change, Managing the sales team) and the firm as a whole (Managing the global enterprise). The program concludes with the students working in teams to prepare project presentations.

Module 4: Thought Leadership and Innovation in Agribusiness Firms

The final section of the Alltech mini-MBA is heavily focused on developing leadership skills and innovation (Coaching for innovation, Driving management innovation, Leading strategy innovation in Alltech, Value innovation leadership).

The modules emphasize skills development, and are supplemented with *refreshers* between each module in which the class meets to complete eight case studies over a two-day period. The refreshers emphasize industry knowledge and understanding, using case studies chosen to reinforce particular themes and the latest in competitor intelligence. The case studies come from the best recently published cases from the Harvard Agribusiness program, from other Universities that illustrate food, feed or agribusiness themes, and from within Alltech. A team of case writers ensure that cases written from an internal Alltech perspective are high-quality and reflect standards of those purchased from outside the organization. Over 27 unique cases have been produced during the past 10 years, with many peer-reviewed.

The first two-week module is held on the campus of the Michael Smurfit School of Business at UCD. Subsequent modules are held at Alltech's European headquarters in Dublin, Ireland and the refresher courses are held at corporate headquarters in Kentucky. Bringing the students to Alltech centers not only contributes to corporate culture development but also strengthens the relationships between the offices. It also facilitates one of the highlights the program. Upon completion of each module is a final project in which participants are divided into teams and asked to address a challenge the Company is currently facing. On the last day, the teams present their analysis of the challenge and recommendations for action to a panel that includes senior directors of the Company. This high-profile exercise not only gives senior management the benefit of the ideas of their best and brightest up-and-coming managers, but it lets them see how the participants perform in a realistic pressure situation. The participants love the opportunity to show senior management just what they are capable of and to feel they are contributing to the strategic direction of the Company.

The Students

Mini-MBA candidates are selected from the pool of Alltech's 2,200 plus employees and are recommended by both a line manager and a director as having shown management potential. In some cases, they have been recently promoted to, or hired for, management positions. In all cases, each cohort, or class, is vetted by Connolly to reflect considerations such as regional balance, area of expertise, and level of experience. The idea is to achieve a level of productive diversity so that each participant brings something to the class.

Although the first candidates had an average of 10 years' experience with the organization and typically came from sales and marketing, more recent groups have less corporate experience. Naturally, this has also influenced the program content and this has moved in recent years from a pure strategic focus to allowing more time for discussion of current processes and procedures. Another trend has been the broader range of departments represented, and this has influenced the need to deepen the element of agribusiness since these candidates are less likely to be familiar with modern farming practices.

Over the last 10 years, seven classes have graduated from the course, representing 98 senior managers, with a further 88 currently at various stages of the four-year program. The program has been such a success that other employee programs have been developed around it. A *Talent Development Program* (TDP) has been put in place, which focuses on employees who are not ready for the mini-MBA.

For employees that have completed the mini-MBA an *Alumni* program has been developed. This has reaped multiple benefits through continuing to develop skills, continual recognition of the status attained by having completed the mini-MBA, and of allowing the Company to avail of the base of expertise within the firm. Case study analysis involving competitor firms, for example, or of firms facing similar challenges can yield fruitful insights and perspectives for the Company. The program uses an on-line blog system so that participants can review and comment on the teaching material (usually case studies) before the session. The sessions are then held by teleconference, so there are no travel requirements (or costs). Because only 'Alums' can participate, they are all experienced in case study analysis, and the case studies are of firms that are relevant to their work, resulting in discussion that is lively and productive. Nearly half the Alumni participated in the initial session.

The success of the mini-MBA has exceeded all expectations, but perhaps the most unexpected benefit has been the value that employees put on participation in the program. Within the firm, selection for participation in the program is genuinely valued, and graduation with the receipt of a certificate from the Alltech AMDP is recognized as a mark of achievement.

Outcomes

Outcomes for Alltech

Although the Alltech 'mini-MBA' is not inexpensive, estimated at $2,000 per employee per five-day-module, it is clearly more cost-effective than the other options. Internationally, the cost for a five-day open enrolment module ranges from $5,000 to $7,500. This allows more employees to participate. As the mini-MBA is structured solely for Alltech, and agribusiness, participants are able to use and apply everything they learn.

The course is designed to roll out over a four-year-period, building upon each Module and Refresher. Participants can consolidate what they have learned by using it in the workplace.

Measuring the effectiveness of development programs is generally difficult, but easier with an in-house program. Feedback is solicited after each course and changes are implemented based on this feedback. Participant progress is easy to track through annual reviews and advancement to more senior positions. Retention rates – a critical metric – are more than 93% for program graduates over the past ten years. These are exceptionally strong results in the agribusiness sector and compared with a typical exit rate (voluntary and involuntary combined) of 15% per annum. These rates are higher for a number of reasons. While in the four-year program, participants look forward to doing the next module and the continued interaction. Most employers request a two-three year "golden handcuffs[3]" phase following the completion of a spon-

3 Golden handcuffs are a system of financial incentives designed to keep an employee from leaving the company. These can include employee stock options which will not vest for several years but are more often contractual obligations to give back lucrative bonuses or other compensation if the employee leaves for another company.

sored EMBA as a suitable ROI[4] period for their investment of time and money. With a smaller investment, Alltech is enjoying the ROI from employees, and there stands to be even greater benefits in the long term.

Program participants know they have been selected to do something that no other firm in the industry offers. They are taught how to use their new skills to make a difference to the Company and are given the tools to do so. Turnover in the most relevant positions has dropped by more than half of what is normally expected. Moreover, the effects seem to be long-lasting, as some graduated more than seven years ago.

Comments made by the attendees include:

> *"I've worked for Alltech for 10 years, and this is the first time I truly feel I understand the strategy and where we will be in the future."*
>
> *"The best part of the course is interacting with colleagues from all over the world – we represent 16 countries in my group – and understanding that the issues faced by all of us are very much the same."*
>
> *"I now understand better where Alltech is positioned in its competitive space."*
>
> *"Coming from the finance department, the exposure to our sales and marketing strategy, our customers and competitors, was something I had not been exposed to before."*

Additional benefits for Alltech include: the relationships that are fostered between employees from far-flung offices, better communication between senior management and rising managers, and the deepening of the Alltech culture. These benefits, in turn, help make the Company more effective and increase job satisfaction. Finally, the relationship between Alltech and the University has not only improved the mini-MBA, but has led to the formation of other working relationships.

Outcomes for the University

The Alltech program has also been a success from the University's point of view. The commitment of Prof. Bradley, and his successor, Prof. Damien McLoughlin, have driven this success. Obviously, the Alltech program is a source of continuing revenue that allows the University to maximize the value of its existing assets (staff, program courses and infrastructure). It is a source of industry input, including voices from the field. Perhaps the most telling change has been the change in attitude over time on the part of the other instructors. Initially, there was little interest, and instructor recruitment was not easy. Now, instructors are asking to participate. They have discovered that the diversity and experience of the groups adds to their own understanding of their subject, and the groups have developed a reputation for being highly motivated, highly capable students.

Fittingly, it has also proved to be a good way for the University to develop its team of Executive Education instructors. Similar programs have since been developed by the Smurfit School of Business at UCD for a myriad of organizations including the Irish Food development (Bord Bia), Google, the Irish Electricity utility (ESB) to name but a few. These institutions are using the same basic format as the Alltech program.

Conclusions

The growth and success of the Alltech Management Development Program was nearly as seamless as it seems in this review, and itself reflects the corporate culture of the Company and the industry within which it works. With a founder who values decisiveness and innovation, this allowed the creation of a program that would suit the Company's need to develop the managerial skills of their articulate, hard working employees. It takes both 'fire in the belly' and a sense of fun to be nominated for and successfully complete the Alltech mini-MBA.

4 Return on investment.

That culture was the agar in the petri dish of the developing mini-MBA. The components were basic: clearly identified objectives, thoughtful analysis of the ideal ingredients, continuous feedback loops, and a highly committed internal champion.

Alltech's commitment to its customized executive education program is providing a series of positive outcomes including improving managers' understanding of the corporate vision and strategy as well as of their industry; creating a cadre of the next generation of leaders, while deepening their loyalty; developing corporate competencies; and in the process, identifying new business strategies. Crucially, these results are being achieved in a very cost effective manner.

Finally, the process has opened doors for Alltech to engage other organizations in a discussion about management development. This includes the CEOs of Alltech's customers, fellow suppliers to the agriculture industry and companies from other fields in how Alltech has created a pipeline of new agribusiness management talent.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Human Capital Formation for Agribusiness The Case of Zamorano University

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Ernesto Gallo[Ⓘa] and Michael A. Boland[b]

[a]*Director and Professor, Agribusiness Department, Zamorano University, Pastizales E-5 Blvd. Hacienda, Tegucigalpa, PB93, Honduras*

[b]*Professor and Director, The Food Industry Center, Department of Applied Economics, University of Minnesota, 1994 Buford Avenue, Ruttan Hall, St. Paul, Minnesota, 55108, USA*

Abstract

Zamorano University in Honduras has developed a program which takes a holistic approach to preparing students for careers in Agribusiness. The academic foundation is integrated with the *Learning By Doing* (LBD) approach giving students real life experiences in food production, processing, entrepreneurship, costs and marketing and supervising. Fifteen business units are operated by the university to complement students' education: cattle, swine, poultry, tilapia, honey, ornamentals, horticulture, feed, seeds, retail supermarket, and similar enterprises. Agribusiness students also undertake entrepreneurial ventures and have international business training. Some of the Zamorano agribusiness educational strategies might be interesting for other universities.

Keywords: Human Capital Development, *Learning By Doing (LBD)*; entrepreneurship

Ⓘ Corresponding author: Tel: +504.287.2129
Email: E. Gallo: egallo@zamorano.edu
M. A. Boland: boland@umn.edu

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

Zamorano is a 70-year-old, private university in Latin America, with 1,250 students from 20 countries who have rural and urban backgrounds. It operates in Honduras and is incorporated in Delaware (USA). The history of the university through 1994 is richly documented by its former Rector, Simón Malo. Over 30% of the students come from family farms in Latin America. This university has a unique educational approach, which requires a high level investment in financial and human capital resources.

The program utilizes a holistic approach to student development, though: knowledge, competences and human virtues. The academic formation is complemented with the *Learning By Doing* (LBD) program, which gives students integrated learning experiences in food production, processing and marketing. Fifteen actual business units are operated by the university campus in: cattle, swine, poultry, tilapia, honey, ornamentals, horticulture, feed, seeds, retail supermarket, and similar enterprises.

Students graduate with 180 undergraduate academic credits with a major called Agribusiness Administration. They complete 44 months of classes in four years, which is about 30 percent more than in many North American universities as documented by Boland, Lehman and Stroade (2001) and Boland and Akridge (2004). After their junior year, the students are required to participate in an internship[2]. Additionally, graduates have completed two years of work experience, which is accepted as labor experience by the highest ranked business schools in the region and fills a work requirement needed to complete the MBA admission process. Graduate students also need the 55 academic credits granted to the LBD education. Students have classes 50% of the time and work 50% of the time. After graduation, students work in agribusiness firms primarily in administration, sales and marketing; some start working in production. A number undertake master and doctoral programs in the USA and other countries.

Value Chain Experience

Consider the experience and education students gain in the cattle chain. Besides taking animal production coursework, the students will inseminate a cow, assist in birthing calves, formulate feeds, and pasture or feed animals. Later, students milk cows, produce ice cream, yogurt, cheeses or fluid milk. They calculate product cost and help in product retailing in the university food store or for local food retailers like Wal-Mart. Students also slaughter animals and prepare meat cuts, sausages, and similar products. All this is done by hand. Students gain real experience from all aspects of business along the value chain. Students experience a similar process in other agribusiness chains such as honey, fruits and vegetables, poultry, tilapia, swine, biological control products, etc.

The LBD modules are the same for all the majors, which reinforces the discipline within a cohort across all majors.

Academic Formation

Students have a common curriculum in the first two years. Starting in the third year, they choose a major: agronomy, agroindustry, agribusiness administration, or environment. The science component of the core curriculum has more emphasis on life sciences: biology, biochemistry, botany, etc.; compared with other universities.

In the third and fourth years students take courses in their chosen career path, which is similar to other universities. For example, a Zamorano agribusiness student has course work similar to those taken by a business student in the USA. However, the Zamorano Agribusiness Administration course work is different in

2 For the agribusiness major, students intern in multinational firms and Latin American firms. Some pursue internships in agribusiness programs at Clemson, Florida, Kansas State, Illinois, Louisiana State, Purdue, and Texas A&M. They work on a variety of projects. For example, at Kansas State the students helped collect public information, which was used in writing some of the North American case studies in Boland Gallo (2010).

regards to the application of tools, the cases and examples, which are mainly oriented to agribusiness such as biomasses production, processing and distribution. The other big difference is in the agribusiness experience acquired by the students in the LBD modules. Zamorano is working towards accreditation in USA.

Student's Life System as an Educational Tool

Students live on campus and wear uniforms consisting of denim shirts and jeans suitable for their work. They share dorm rooms as there is no off-campus housing. The rules of discipline, respect for schedules and the interaction with students from 20 different countries develop additional virtues in the students that prepare them for the labor market. This is called "the invisible curriculum."

The Agribusiness Education Approach at Zamorano University

In 2005, the director started a new educational approach.

Agribusiness students are expected to be as well prepared in business matters as any business student. The emphasis is in "firms" rather than "farms." The difference is in the cases and studies, which are focused on Gallo's 12 F's of Agribusiness Demand: Food, Feed, Fiber, Fuel, Forest, Flowers, Fish, Furfural & bioplastics, Pharmacy, Fun, Fertilizers and Flora & Fauna services. Agribusiness professors use cases on food, agricultural commodities, trade, and similar topics in agro-food.

During the fourth year of the agribusiness LBD program, senior students supervise junior students' work in the university enterprises or work in an internal business consultancy designed to help managers or small businesses improve operation efficiency. They may work on projects related to cost analysis, quality, market research, or new product development.

Learning Entrepreneurship by Doing Entrepreneurship LeBDe

As a new part of their co-curricular activities, agribusiness students organize special events such as international business, administration and economic congresses, with limited and subsidiary participation from professors.

Students also manage the marketing, financial and operational components involved in organizing and managing a congress. They face the realism of operative cash flow, marketing, and working with businessmen on fund-raising, hotels, airlines, donors and academicians from other countries. Internal coordination with university academic and administrative authorities is also required. The process helps them develop an entrepreneurial spirit, identifies real leaders and promotes teamwork. Net profits from the events generate about $15,000 USD annually. The profits are used to further finance their own educational experiences.

Another event organized by the agribusiness students is the *ZamoTour,* a two-day tour to campus and neighboring farms paid for by urban families wishing to experience rural country life. The trip includes activities like feeding calves, nursing baby animals, jamborees, and cultural activities. Another profit center evolved out of this project when students discovered they could fill a need for private urban elementary schools by offering rural field trips for children, which include a variety of nature-sharing experiences for kids.

Financing Part of their Own Education

Students' profits from these activities are primarily used to fund a trip to Florida to attend the *Americas Food and Beverage Show* in Miami, then visit Florida agribusiness firms, interact with farmers, importers, brokers, wholesalers and retailers of organic, ethnic and conventional food in the US market. A portion of these funds are earmarked for solidary in order to assist students in paying academic, travel, or internship expenses.

Analysis of the Zamorano Agribusiness Educational System

Knowledge and Virtues

Some people might question whether there is any value in learning how to milk a cow. The Zamorano LBD program is a combination of academic learning and task mastery. Although the process of milking a cow, learning to make cheese, or producing a mycorrhiza fungus are valuable skills, it is the virtues acquired through having to milk the cows at 3:00a.m., learning to apply safety and sanitary standards, contributing to a team or learning to supervise others that form permanent non-transferable virtues. The labor component complements a solid academic foundation. Skill sets and theories may change, but virtues remain.

Time Constraints

This educational system faces an important challenge. The objective is to develop a professional, who is almost bilingual – with two years of labor experience in agribusiness within four calendar years. This is a difficult multifaceted goal. In the US, undergraduate programs normally take four years, but classes are only in session eight months per year. At Zamorano classes are conducted 11 months per year. The university sets high standards that motivate students to achieve the highest academic level.

Cost

This educational system is very expensive by Latin American standards. The annual full operative cost is about $15,000 per student. Many students get grants from their governments to pay the cost. Most students receive financial help. This is strategically risky as priorities of current governments often change. The US, Japan, Taiwan, and European governments and NGOs also have provided grants for students. In addition, the system requires an investment in fixed assets: land, factories, classrooms and labs. To build a new university like this would cost about $50 million USD in Latin America – a prohibitive amount for new universities. In the United States, the cost would be much higher. The entire program would be difficult to duplicate, although some aspects can be replicated, such as providing opportunities to develop real business knowhow, international learning experiences and student managed entrepreneurial projects.

Human Capital Resources

Zamorano University requires faculty of a certain rank to be bilingual and have a doctorate degree. There is a shortage of faculty working in agribusiness management who possess a doctorate and desire to live in Latin America. The university provides housing and a generous benefits package for faculty. Nonetheless, many faculty are near retirement and succession planning could be a problem in the future.

Zamorano University works closely with colleagues from North American and European universities to keep skills, curriculum, and teaching methods up-to-date, especially concerning the case study method. The university board includes executives or retired executives of multinational agribusiness firms, like Monsanto: alumni and businessmen. The board is very active and meets quarterly in different countries, twice in the US and twice in Latin America, and has academic, financial and other committees. The current president is the great granddaughter of the founder, Samuel Zemurray who was the majoritarian owner and president of United Fruit, Boston–owners of the Chiquita brand.

Zamorano's tuition has increased 50% since 2005, while enrollment has increased 31% in the same period. This is quite an accomplishment. The agribusiness major experienced the highest growth. US and European students also enroll in summer LDB training programs at Zamorano.

Summary

The Zamorano education program and its LBD are quite exceptional. Extensive practical knowledge of agriculture coupled with hands-on work experience, human virtues and exposure to the entire food economy value chain makes this a unique model. Enrollment has grown from the original 150 high school students in 1942 to 1250 university students in 2012.

This paper suggests that agribusiness educators should complement the human capital formation of the future agribusiness leaders, including in their programs, extracurricular business and entrepreneurial activities performed by the students.

References

Boland, M.A., E. Lehman, and J. Stroade. 2001. "A Review of Baccalaureate Degree Programs in Agribusiness Management." *International Food and Agribusiness Management Review* 4(3):1-11.

Boland, M.A. and J.T. Akridge. 2004. "A Summary of Undergraduate Curriculum in Agribusiness Management Degrees." NFAMEC Working Paper #1. https://www.agecon.purdue.edu/cab/NFAMEC/home.htm

Boland, M.A. and E. Gallo. 2010. *International Agribusiness Management Strategy: A Book of Case Studies in Honor of Professor Ray Goldberg.* Kansas State University Press, Manhattan, Kansas. Published simultaneously in English and Spanish.

Gallo, Ernesto. 2009. Agribusiness Megatrends. Keynote Speech given at IAMA 19th Annual World Form and Symposium, Budapest. June.

Malo, S. 1999. *El Zamorano*: *Meeting the Challenge of Tropical America.* Manhattan, Kansas: Simbad Books.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

Dealing with Cultural Differences in Public-Private R&D Projects: The Experience of the Australian Seafood Sector

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Domenico Dentoni[Ⓘa] and Francis English[b]

[a]*Assistant Professor, Management Studies Group, School of Social Sciences, Wageningen University*
Hollandseweg 1, 607 7KN, Wageningen, The Netherlands

[b]*Researcher, The University of Adelaide, North Terrace, Adelaide, South Australia, 5000*

Abstract

This essay 1) discusses the current agribusiness managers' human capital problem of dealing with cultural differences in public-private Research & Development (R&D) projects involving firms, government agencies and universities and 2) proposes a "learning by doing" process for managers to recognize and deal with cultural differences during project implementation.

Keywords: culture, human capital issues, *Learning by Doing*, Australia, seafood.

Ⓘ Corresponding author: Tel: + 31 (0) 317 483623
Email: D. Dentoni: domenico.dentoni@wur.nl
F. English: engfc001@gmail.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Introduction

Although R&D institutional contexts, market structures and levels of education vary significantly across countries and agribusiness subsectors, managers face similar problems worldwide when dealing with cultural differences in public-private R&D projects. Therefore, this essay focuses on one "typical" case (Yin 2009) as a representative example of how managerial competence of dealing with cultural differences influence the outcomes of public-private R&D projects globally. The case is based on 35 marketing and supply chain R&D projects funded by the Australian Seafood Cooperative Research Centre (CRC) between 2007 and 2011.

The proposed "learning by doing" process for managers is based on the Australian Seafood CRC experience. Consistently with a "process study" approach of engaged scholarship (Van de Ven 2007), this proposition aims to develop opportunities for future research and practice to tackle the broad question: how should this 'learning by doing' process be tailored to local conditions to effectively deal with cultural differences during project implementation and stimulate innovation from public-private partnerships?

The Human Capital Problem

Managers of agribusiness organizations often have different cultures. That is, they have different systems of values, beliefs and norms (Schein 1990). Cultural differences are not only present across regions and countries, but also within them (Lenartowics and Roth 2001). They become problematic when the outcomes of R&D projects are more uncertain, longer term and dependent on the future behavior of many actors (Rogers 2003, Spielman and von Grebmer 2006). For this reason, problems stemming from cultural differences are more acute in marketing and supply chain R&D rather than in technology R&D projects. Ultimately, they affect the process of innovation and industry competitiveness and jeopardize returns on R&D investments (Kandler and Laland 2009, Roach 2009).

The managerial difficulty of dealing with cultural differences in public-private R&D projects is a human capital problem, as it requires the development of specific competencies – complex sets of knowledge, skills and attitudes (Rausser 1999, Nijhof et al. 2006). Overall, the human capital problem of dealing with cultural differences is characterized by the difficulty in: recognizing and disentangling the nature of the cultural difference (difference in values, beliefs and/or norms); distinguishing between managerial assumptions and hypotheses and integrating knowledge from diverse disciplines and backgrounds (Dutta 2008, Massa and Testa 2008, Klerkx et al. 2009, Anandajayasekeram 2011, Peterson and Magen 2011).

Generally, human capital problems can be solved by hiring or training managers with a specific set of competencies (Nijhof et al. 2006). Yet, to learn to deal with cultural differences during the implementation of a project, a "learning by doing" approach is necessarily required. That is, competences can be fully developed, refined and tested only through deliberate and thoughtful action (Maurer et al. 2003, Wals et al. 2011). Accordingly, this study tackles a question of "what to do to learn" rather than "what to learn." Therefore, it focuses on proposing a process to deal with cultural differences among managers in public-private R&D projects and to learn from it rather than on identifying a set of necessary learning objectives.

The Case of Seafood CRC Marketing R&D Projects

The Seafood CRC is based on an investment equal to 137 USD million between 2007 and 2013 shared between private and public actors. Its marketing and supply chain projects aim to provide knowledge and expertise to the industry to seize market opportunities and innovation concepts in post-harvest technology to optimize operations. A significant group of these projects implemented between 2007 and 2010 were affected by cultural differences across stakeholders. Specifically, industry representatives, firm managers, Seafood CRC managers and academics:

1. Had a different idea of what constitutes "value created by an innovation" and "what is valuable when." That is, some stakeholders wanted to create value earlier in time and others later. Therefore, project stakeholders had differences in *values*.
2. had different expectations of how and when a proposed R&D innovation will create value in terms of benefits, costs and risks involved. In other words, they had differences in *beliefs*.
3. had different ways of communicating and exchanging knowledge, which sometimes created misunderstandings among project participants. Thus, they had differences in *norms*.

These cultural differences were acknowledged by agribusiness leaders only when some of their negative effects became tangible. Between 2007 and 2009, discussions among project stakeholders revealed that in a significant number of cases.

Industry leaders had a feeling of distrust towards academics' and project managers' ability to understand current industry problems:

- Researchers and project managers doubted firm managers' open-mindedness and ability of understanding "big pictures";
- Project managers could not find initial consensus on expectations and values with stakeholders only because of inconsistent or infrequent communication;
- Industry leaders and firm managers did not realize that project managers had not different values, but only different perceptions and expectations from them.

Once the negative effects of these cultural differences became evident, Seafood CRC managers and researchers progressively and purposively undertook a process to deal with them. After analyzing its positive effects on the relationships among project stakeholders and industry intentions of adopting project innovations and on the related managerial competences, the authors of this essay (who participated in a number of mentioned projects) adapted this process into a procedure for future Seafood CRC projects and proposed it as a widely applicable process.

The *Learning by Doing* Process

Based on the Seafood CRC experience between 2009 and 2011, the process of learning to deal with cultural differences among stakeholders during project implementation is formalized in Table 1. It contains elements of participatory project design (Schuler and Namioka 1993) in the context of public-private R&D marketing and supply chain projects.

It is proposed that this sequence of steps – integrated with traditional project implementation steps – has a positive impact on the managerial competence of dealing with cultural differences and ultimately on innovation and returns on R&D investments. Specifically, each step of the process facilitates the development of a set of skills and attitudes that overall reflect the needed competence.

The proposed process is grounded on only one case tackling a human capital problem that is typical across public-private R&D projects worldwide. By comparing this process with other cases, researchers and practitioners can build on and test this process. Interesting points of discussion include: to deal effectively with cultural differences, under which conditions should this process be made explicit versus implicit to stakeholders? For example, how does this process vary in geographical regions – such as East Asia and Africa – where having an "upfront attitude" with stakeholders is not part of traditionally accepted social norms? Does the order of these steps matter? And to what extent do time and resources invested have to vary across regions and industries to make the process equally effective?

Table 1. Steps for Managing Cultural Differences in Public-Private R&D Projects

	Steps	R&D Project Phase	Description	Skills and Attitudes "Learned by Doing"
1	**Mapping Cultural Differences of Project Stakeholders**	Consultation process, before R&D project starts	Project stakeholders discuss if initial contrasting perspectives on the value proposition of the R&D project are due to cultural differences. -Differences in values, beliefs and norms are evaluated and disentangled.	Disentangling the nature of the cultural difference: is the difference based on diverging values, beliefs or norms?
2	**Seeking Consensus through Hypotheses-Testing**	Before data collection	The methods of data collection and analysis to test hypotheses are discussed and agreed. -Stakeholders receive information on trade-off between research costs and likelihood that hypotheses are tested with appropriate methods.	Translating and relating concepts and frameworks from own discipline and field of expertise into others, and vice versa.
3	**Hypotheses-Testing**	Data collection and analysis	Core activity of the researchers. -If changes in methods are necessary during data collection, these are discussed according to jointly established norms of communication. -Except from urgency situations, late results are preferred to results based on methods not validated by stakeholders.	
4	**Discussing Hypotheses Tested**	After data analysis	Based on results of hypotheses-testing, stakeholders discuss updated beliefs on how innovation creates value.	Challenging own and others' beliefs based on data collected and analyzed with agreed methods.
5	**Narrowing Focus of Hypotheses-Testing**	Further rounds of data collection and analysis	More focused and realistic methods of hypotheses testing are iteratively conducted to fill remaining gaps in beliefs among project stakeholders. -End of hypotheses-testing process with go/no-go point for upon the question: it is worthwhile doing another round of hypotheses-testing given project costs and expected value of innovation?	Linking information search through focused data collection to jointly agreed project design and implementation.
6	**Deciding on Innovation Adoption**	End of R&D project	Core activity of the industry end-users. -If innovation is not adopted, project manager investigates if the cause is still divergence in beliefs on innovation value. - If innovation is not adopted and no divergences in beliefs exist, then no negative evaluation of project performance as firm managers gained market resources, capabilities and competencies. -If divergences in beliefs still exist, evaluation of project performance as negative. The project manager tackles follow up question: what are the factors that prevented hypotheses-testing to eliminate gaps in perceived value of innovation among stakeholders?	Disentangling causes and consequences and identifying conditions of joint project implementation success.
7	**Discussing Outcome of Innovation**	After end of R&D project	Firms launch competitive innovations in marketing & supply chain. -If innovation is successful, merit is recognized to project managers, innovator and adopters who build curriculum of past positive performance. -If innovation is unsuccessful, project manager and stakeholders pose questions: were methods or content of hypotheses inadequate to test innovation in marketplace? If so, which elements or conditions were underestimated or ignored in the hypotheses-testing process? Were some of these elements or conditions underestimated or ignored because of differences in communication norms during project implementation?	Disentangling causes and consequences and identifying necessary and/or sufficient conditions joint R&D innovation process success.

Acknowledgements

This research has been funded by the Seafood Cooperative Research Centre (CRC) as part of the Project 2010/749. The authors would like to thank Seafood CRC managers as well as Seafood CRC industry and research partners for fruitful discussions during data collection and analysis.

References

Anandajayasekeram, P. 2011. The Role of Agricultural R&D within the Agricultural Innovation Systems Framework. *Report Prepared for the ASTI/IFPRI-FARA Conference*, Accra, Ghana, December.

Dutta, B. 2008. Communication in Cross-Cultural Context. *The Icfai University Journal of Soft Skills* 2 (2): 7-12.

Harrison, G.W. and J.A. List. 2004. Field Experiments. *Journal of Economic Literature* 42 (4): 1009-1055.

Kandler, A. and K.N. Laland. 2009. An investigation of the relationship between innovation and cultural diversity. *Theoretical Population Biology* 76: 59-67.

Klerkx L., A. Hall, and C. Leeuwis. 2009. Strengthening agricultural innovation capacity: are innovation brokers the answer? *International Journal of Agricultural Resources, Governance and Ecology* 8 (5-6): 409-438.

Lenartowics, T. and K. Roth. 2001. Does Subculture within a Country Matter? A Cross-Culture Study of Motivational Domains and Business Performance in Brazil. *Journal of International Business Studies* 32 (2): 305-325.

Massa, S. and S. Testa. 2008. Innovation and SMEs: Misaligned perspectives and goals among entrepreneurs, academics, and policy makers. *Technovation* 28 (7): 393-407.

Maurer, T.J., K.A. Wrenn, H.R. Pierce, S.A. Tross and W.C. Collins. 2003. *Journal of Organizational Behavior* 24 (1): 107-131.

Nijhof, A., T. de Bruijn, O. Fisscher, J. Jonker, E. Karssing and M. Schoemaker. 2006. Learning to be responsible: developing competencies for organization-wide CSR. In *The Challenge of Organizing and Implementing CSR*, edited by J. Jonker and M. de Witte, 148-172. London, UK: Palgrave Publishers.

Peterson, H.C. and S.E. Magen. 2011. From motivating assumptions to a practical innovation model. In *The TransForum Model: Transforming agro innovation toward sustainable development*, edited by H. Van Latesteijn & K. Andeweg, 97-129. Dordrecht, NL: Springer.

Prahalad, C.K. 1993. The role of core competencies in the corporation. *Research/Technology Management* 36: 40-47.

Rausser, G. 1999. Private-Public Research: Knowledge Assets and Future Scenarios. *American Journal of Agricultural Economics* 81(5): 1011-1027

Roach, M. 2009. When Do Firms Use Public Research? The Determinants of Knowledge Flows from Universities and Government Labs to Industrial R&D. *Paper presented at the DRUID Summer Conference*, Copenhagen Business School, June.

Rogers, E.M. 2003. *Diffusion of Innovations (5th Edition)*. New York, NY: Free Press.

Schein, E.H. 1990. Organizational Culture. *American Psychologist* 45(2): 109-119.

Schuler, D. and A. Namioka. 1993. *Participatory Design: Principles and Practices*. Hillsdale, NJ: Erlbaum.

Spielman, D.J. and K. von Grebmer. 2004. Public-Private Partnerships in Agricultural Research: an Analysis of Challenges Facing Industry and the Consultative Group on International Agricultural Research. *EPTD Discussion Paper* 11.Washington, DC: International Food Policy Research Institute.

Spielman, D.J. and K. von Grebmer. 2006. Public–private partnerships in international agricultural research. *Journal of Technology Transfer* 31(1): 291–300.

Van de Ven, A.H. 2007. *Engaged Scholarship: A Guide for Organizational and Social Research.* Oxford: Oxford University Press.

Wals, A.E.J., T. Lans, and H. Kupper. 2011. Blurring the boundaries between vocational education, business and research in the agri-food domain. *Journal of Vocational Education and Training* 64 (1): 3-23.

Yin, R.K. 2009. *Case Study Research: Design and Methods*. Newbury Park, CA: Sage.

International Food and Agribusiness Management Review
Volume 15 Special Issue A

The PMA Foundation for Industry Talent

Global Networks, Global Perspectives and Global Talent
Discussions on the Development of Human Capital in Agribusiness[1]

Margi Prueitt[ⓘa] Marianne van der Laarse[b], and Alicia Calhoun[c]

[a]*Executive Director, PMA Foundation for Industry Talent, Produce Marketing Association (PMA), P.O. Box 6036, 1500 Casho Mill Road, Newark, 19711-6036, Delaware, USA*

[b]*PMA Country Representative Southern Africa, Produce Marketing Association (PMA), South Africa*

[c]*Program Director, PMA Foundation for Industry Talent, Produce Marketing Association (PMA), P.O. Box 6036, 1500 Casho Mill Road, Newark, 19711-6036, Delaware, USA*

Abstract

The Produce Marketing Association Foundation for Industry Talent, formed by leaders in the industry in 2005, directs resources to sustaining a vibrant global produce industry through its most valuable resource... people.

Keywords: Increased talent for the global produce industry

ⓘCorresponding authors:

Tel: +1 (302) 607.2174
Email: M. Prueitt: MPrueitt@pmafoundation.com
M. van der Laarse: mvanderlaarse@pma.com
A. Calhoun: ACalhoun@pmafit.com

1 This Special Issue was made possible through the generous support of Alltech and Kincannon & Reed. The essay collection was distributed during a special session on human capital development presented during the IFAMA 2012 Forum in Shanghai, China on June 14, 2012.

Of the impending issues facing the global produce industry, the manpower shortage that US companies will face within the next ten years is soon to be critical. Baby Boomers have been holding onto their jobs in top, middle and lower management. But, at some point, this workforce group will be retiring. The PMA Foundation for Industry Talent was formed to prepare the industry for this imminent demographic loss through its sharp focus—attract motivated talent to enter the industry, develop talent already engaged in the industry and retain them throughout their careers.

It became clear that the most important element was getting the word out about the abundant opportunities in the industry to college level students who are thinking about careers. Since most students think only of the companies that exhibit at campus job fairs, they may not be exposed to the many companies in the produce industry that don't have college recruitment programs. Thus, PMA Foundation's signature program, Career Pathways, was designed to engage students in the fresh produce industry.

Having grown from twenty-four students from six US universities in its first year (2004) to a robust seventy-three students from twenty-one universities in 2011 (sixteen US universities and five other countries in 2011, the Career Pathways program offers students a unique experience. The program includes customized educational workshops on the produce supply chain, a "branding you" session, a career path discussion panel and more. Students have numerous opportunities to network with industry professionals and walk the exposition floor. Industry mentors, called Career Ambassadors, answer student questions, introduce them to other professionals and help them prepare for the opportunities and rewards available to them in the produce industry. Ultimately these programs have a high success rate of employing students within the produce industry–nearly 50% of Career Pathways participants are attracted to the produce industry. And, because of increasing interest from member companies, plans are in place to expand from the Pack Family Career Pathways Program and three regional programs to at least six total in 2013.

As the world gets smaller and the PMA global expansion strategy more robust, PMA, PMA Foundation, the affiliate PMA Australia/New Zealand, and the PMA representative in South Africa have collaborated on programing to address human capital challenges in Australia/New Zealand and South Africa. Four university students from Australia have participated in the Pack Family Career Pathways Program at PMA's Fresh Summit and students from other universities in both Australia and New Zealand are engaged in a variety of talent-related activities at the annual the Fresh Connections conference events throughout the year. Students are required to complete a comprehensive project report following their experience with the goal to increase the impact of the experience. These papers are also a tool used to select which students attend the PMA Foundation programs in the US.

PMA Foundation's programs are addressing what the PMA South Africa Country Council identified as its top concern - the lack of talent entering the field of agriculture. Since August of 2011, the PMA and PMA Foundation in South Africa have been partnering with educational institutions and leading agriculture organizations to bring awareness to students of the exciting career opportunities in agriculture through career and bursary fairs. After two such fairs with approximately 2000 students and dozens of companies involved, we know from students and prospective employers alike, that events are making a difference. In fact, University of Pretoria faculty partners credit it with an immediate increase in the number of students enrolling in ag related studies.

The experience of these two fairs yielded a few keys to success for others wanting to benefit from our experience:

- an empowered and representative committee
- a supportive university administration
- a clear focus on the target market
- "student friendly" marketing methods like social media, sms (text messaging), email, post-graduate student ambassadors, and young ag company employees as well the traditional as on-campus flyers and banners

- faculty partners committed to encouraging students to take advantage of the opportunity inclusion of young high school students

In the case of PMA Foundation's Career and Bursary Fairs in South Africa, the focus was on students who have already enrolled for BSc. but haven't made a final decision on their major. However, since employers need graduates for many job functions, those enrolled in marketing, finance, and other fields gained insight into opportunities in the ag industry.

On the industry side, it is essential for all communication with exhibitors to be clear about the target market for their outreach to ensure the exhibitors are well prepared with both handout materials and appropriate employees–the younger the staff members, the better.

Some opportunities to capture:

- Registration: it is difficult, but important to capture contact information. An electronic registration system would resolve the problem.
- Post-event enrollment statistics: doing so will give metrics for future marketing to students and prospective employers and allows for communicating success stories to exhibitors and the media.

PMA Foundation for Industry Talent knows it cannot rest on recruitment strategies. The development and retention of talent already in the industry starts with the first day of employment—actually, it is the last step of the recruitment process. Since a company must always keep focus on its human capital as an important corporate asset, the PMA Foundation provides educational and development opportunities to help companies begin retaining people as soon as they walk in the door.

International Food and Agribusiness Management Review

The Official Journal of the International Food and Agribusiness Management Association

www.ifama.org