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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]

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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

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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.

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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.

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