

Testimony of Doug DeVries
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Chairman Stabenow, Ranking Member Roberts, and distinguished Members of the Committee, my name is Doug DeVries. I am the Senior Vice President of Agriculture and Turf Global Marketing Services for Deere & Company. On behalf of John Deere, thank you for the opportunity to provide testimony today on the issue that is perhaps the single most important challenge facing our country, our company, and the world – that of global food security.

For 174 years, John Deere has enabled human flourishing by offering advanced solutions to those who produce our food, fiber, and fuel, beautify and protect our environment, and build and maintain our homes and critical infrastructure. Deere has been driven by a consistent purpose – improving productivity and efficiency of our equipment for the benefit of our customers.

BACKGROUND

The global agriculture sector faces significant challenges in the years ahead. The world's population is growing steadily, resulting in at least 30% more people to feed, shelter and clothe in the next four decades. Every hour an additional 9,000 people join the world's population, and the world's population will grow from approximately 7 billion today to more than 9 billion by 2050. New estimates indicate a population of more than 10 billion by the end of

this century. In addition to growing in number, this population is growing in prosperity – requiring improved and more varied diets – while becoming increasingly urbanized. The demands on agricultural production are significant, requiring that we double agricultural output by mid-century to support this growing population and enable better living standards.

The impact of the emerging affluence of much of the world's population cannot be understated. Consider that over one half of the world's population lives in countries with economies growing at 6% annually or more. Fully 40% of the population is in countries growing 8% annually. As incomes in these countries rise, more and more people join the ranks of the middle class. While in many instances that may mean earning only a few additional dollars a day, it is enough for people to upgrade their diets – a first priority of most. This creates more demand for meat and animal protein in particular, in turn creating greater demand for grains.

Further compounding this challenge, we must achieve this additional output in a sustainable manner. This means doubling output with roughly no more inputs than used today – land, water, and other inputs such as fertilizer. There is limited amount of farmable land and fresh water available – most of the world's productive agricultural land is already in use. Indeed, incremental acreage can be brought into production, but it tends to be less fertile, more costly to farm, and often less suitable for sustainable agriculture. Clean water is also becoming increasingly scarce – both for urban and industrial needs, as well as for agriculture irrigation. Water scarcity already affects a significant portion of the population on every continent. Expanding industrialization and urbanization further increases the competition with agriculture for available fresh water.

The effects of climate change on food production add to the challenge. Experts believe that the impacts of a changing climate may have the most negative agricultural effect in the regions of the world that already are struggling with food security -- regions that also have less capacity to adapt.

Urbanization is another trend with significant impact on our ability to ensure agricultural development and productivity growth. As the population becomes more affluent and urban, less labor is available in rural and agricultural communities, requiring greater mechanization and the use of more modern equipment, as well as significant investments in infrastructure to deliver high quality food and agricultural products to the centers where it is consumed. In 2007, for the first time, more than half the world's population lived in cities. By 2050, 70% of the population will be urban -- nearly as many people could be living in cities as are alive on the planet today.

Higher incomes, better diets, increased urbanization, the necessity of sustainability – while addressing climate change impacts – present a significant challenge for our sector. It means producing more food over the next few decades than in the previous 10,000 years!

Given these powerful economic, social, and environmental trends, how can we double agricultural output by mid-century with the same or fewer resources than used today? Clearly we must be more productive than we are today. How do we close the productivity gap – the difference between today's rate of farm productivity growth and the rate required to meet future demands? How can we not rise to this challenge? Failure to do so will mean additional human suffering from hunger and malnutrition, leading to widespread social and economic disruption. Obviously, that is not acceptable. For John Deere, with a long history of improving the quality of life and promoting human flourishing, this is a cause of great concern.

AGRICULTURAL PRODUCTIVITY

The issue of increasing agricultural productivity is nothing new, and dramatic gains have been made over the years. Productivity advancements have resulted in the typical US farmer today feeding more than 150 people – six times more than in 1960. The highly-productive US agriculture sector has played a key role in meeting global demand in the past, and will continue to do so as producers innovate and adopt new technologies. While this illustration shows us what is possible, it is also important to note that the rate of global productivity growth may have slowed in recent years. In any event, we know that the rate of annual total agricultural productivity growth must be even faster – perhaps 25% or more – in order to meet society’s future needs.

Further advances in machinery can play a big part in reaching this goal. Indeed, agricultural equipment has been getting more powerful, smarter, and more efficient for some time. These machines are truly sophisticated productivity tools. Today’s large Deere tractors include more lines of software code than early space shuttles! GPS technology can guide a tractor and implement in the field with near-perfect precision. This means less overlap in tillage and chemical application, saving time and money, while reducing environmental impacts. Consider also the dramatic gains in harvesting technology. Deere’s smallest combines today are more productive than the largest sold in 2000. Today’s typical combine does three times more work than the harvesters of a generation ago in a similar amount of time. So, while the world may be challenged to boost agricultural productivity, the technologies exist, or are under development, to help do just that not only in mechanization but also in crop and livestock genetics and other areas.

SOLUTIONS NEEDED

Enhanced Trade

Ensuring and expanding trade is a foundational requirement to meeting the world's food demands in a sustainable manner and enhancing global food security. About one quarter of all food and agricultural products today is traded. That figure will only grow, making trade – local, regional and international – even more integral to providing a growing population with the food and products they need. A strong, open, rules-based trading system helps ensure that agriculture is practiced in the places where it makes the most economic and environmental sense. Traditionally, major nations viewed food self-sufficiency as equivalent to food security. As self-sufficiency becomes less and less viable, it magnifies the importance of having more open trade policies and fewer barriers to moving agricultural goods from one nation to another. Freer trade, fewer restrictions, and stronger rules will go a long way towards facilitating worldwide commerce, stimulating economic growth, and ensuring the world's population is properly fed, clothed, and housed.

Deere believes that the United States must play a key leadership role in ensuring progress in creating a more open global trade environment. This includes enactment of pending trade agreements, development of additional bilateral and regional agreements where they make sense, and enhanced efforts to conclude the Doha Round.

Strategic Investments

Another prerequisite for higher productivity is significant strategic investment in rural sectors across the world. It is not enough to simply sustain rural communities -- we must work to ensure long-term prosperity. In developing and transitioning countries, the majority of the population tends to be engaged in some aspect of agriculture. Investing in hard and soft infrastructure for these rural areas can improve the lives and livelihoods of many people and

have a very positive impact on agricultural output. In many parts of the world, the primary impediment to productive farming is not the fertility of the fields or the caliber of the equipment, but the condition – or even existence – of adequate roads, bridges, storage, and ports.

“Soft” infrastructure is important as well, including appropriate policies that eliminate legal, financial, and social barriers to land ownership and property rights and encourage private investment across the agricultural value chain. The estimated gap in investment in this sector is significant, and while a portion of the funding can, and certainly will, be provided by public and private donor programs, the private sector must play a major role. In order to spur private sector investment in much-needed infrastructure and capacity that directly and indirectly drive agricultural sector growth and productivity, a strong focus in all countries on domestic infrastructure programs, and efforts to improve governance and reduce corruption are urgently needed. This will ensure a stable investment climate and enable leveraging public-private-partnership capabilities around the globe.

The role of the private sector as a partner with the public sector is critical to enhance agricultural productivity. For example, Deere announced an innovative public-private partnership in the state of Gujarat, India, to benefit tribal small farmers. The program is intended to help 50,000 families mechanize their farms and increase yields as much as three-fold. Deere will open small agricultural-implement resource centers across Gujarat, making more than 500 tractors available for use by local farmers. In addition, Deere will train 1,000 local tractor operators and another 500 mechanics. This project will build local capacity and enhance utilization of advanced agronomic practices, while generating additional revenues for the local producers and their communities and enhancing food security.

Strategic Research

In addition to a focus on investment in infrastructure and capacity in the agriculture and rural sectors around the world, a renewed emphasis on agricultural research is required. In recent years, support for basic agricultural research has been declining. This reduction in research capacity, coupled with the growing demands on the agricultural sector, present a critical shortcoming. While Deere recognizes the fiscal challenges facing the US and many other countries, programs that can deliver lasting agricultural productivity results in the coming years through investment today are dearly needed. In addition, targeted priority areas of specific research such as efficient water use, targeted crop genomics, enhanced nutritional and health benefits of crops, and reducing post-harvest losses will pay dividends. While emphasizing the need for more public sector research support, the private sector is also playing a critical role. For example, at John Deere we spend more than \$2 million a day on research to create more efficient equipment, efficient utilization of inputs, and management of the harvested crop. This investment in research is taking place at Deere and many other agribusiness companies around the world, and is helping to deliver critical successes to ensure accelerated productivity growth.

Focus on Sustainability

Finally, the more rapid rate of agricultural productivity growth must be achieved in ways that conform with society's expectations for sustainability and corporate social responsibility. For Deere, this commitment is reflected in pretty much everything we do – which should not come as a surprise considering that farmers are the original conservationists. A strong example is the advancement in Deere engines over the last thirty years – today's larger engines are 99% cleaner-burning than just 15 years ago! What's more, these gains have been accomplished with virtually no decrease in fuel economy. In recent engine generations, in fact,

fuel economy has improved in certain respects. This is a significant achievement in light of the design changes required to reduce emissions so dramatically.

CONCLUSION

As we can see, tremendous challenges face the world today, and none so stark as those facing the agricultural sector. In order to close the global productivity gap, we must think differently and much more aggressively. This drives John Deere's efforts as we expand our global presence and broaden our product lines. Several recent significant projects will expand our global manufacturing capacity, including in some place where opportunity for improved productivity is greatest, such as China, India and Russia. By expanding our presence throughout the world and making our products more available to more customers in more places, Deere is seeking to help close the agricultural productivity gap. This is also true of our competitors and virtually all companies associated with agriculture.

The growing investments by our industry will help to feed the world in the years to come. But even more is clearly needed. To promote awareness of the enormous challenges and opportunities facing global agriculture, Deere and three other companies (DuPont, Monsanto, and ADM) launched the Global Harvest Initiative in 2008. The GHI collaborates with key partners in the related spaces of food security, hunger, environment/conservation, economic development, sustainability and national security to promote policies that can ensure we meet global agricultural demands while responsibly meeting other societal needs. To focus attention on immediate needs, GHI has developed the Global Agricultural Productivity Report and the Global Agricultural Productivity Index in collaboration with USDA, the Farm Foundation and others to provide a meaningful metric for efforts to advance agricultural productivity worldwide. These reports and much more information is available at

www.globalharvestinitiative.org, and are highlighted each year at the World Food Prize symposium.

In closing, I want to express our optimism about agriculture's ability to accelerate productivity and growth sufficient to meet the future global nutritional requirements. It will not be an easy task, nor can success be taken for granted, but it can be done. I am also confident that Deere has the plans, the products, and the technological prowess to contribute to meeting the mechanization so critical to meeting that goal. After all, this is what Deere has been doing for nearly 175 years. In the early days of our nation, John Deere's steel plow made possible the settlement and development of much of America. Today, our equipment is arming another economic revolution –helping to feed, fuel, and clothe a growing, more affluent population with growing aspirations. In this way, we are supporting greater prosperity around the world, and furthering our corporate mission of serving those linked to the land. We have an opportunity – and an obligation – to help the world grow in sustainable ways and facilitate human flourishing everywhere.

Thank you again for the opportunity to testify, and I will be pleased to respond to any questions the Committee may have.