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## Newsroom

### News Release

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#### AGRICULTURE SECRETARY TOM VILSACK HIGHLIGHTS ROLE OF AGRICULTURE IN CLIMATE CHANGE

Copenhagen, Denmark – December 12, 2009, Secretary Tom Vilsack spoke at "Agriculture and Rural Development Day," a day-long event at the University of Copenhagen with more than 300 policy makers, negotiators, rural development practitioners, producers, civil society and leaders from the agricultural and climate change scientific community. The purpose of the event was to assemble a plan for incorporating agriculture into the post-Copenhagen climate agenda. Vilsack also participated in a number of break-out sessions.

The following are his remarks as prepared for delivery:

Climate change will be a defining issue for our community in the coming decades.

According to FAO projections, food production will need to double by 2050 to keep up with demand. This increase will have to take place in a system already under duress from climate stress, where increasing temperatures are known to erode crop production. Moreover, this increased demand will have to be met under increasing water scarcity, heightened salinity, and more erratic weather and climate patterns.

While climate change will affect us all, there are particular vulnerabilities and challenges for farmers, ranchers, and those who make a living off the land. Higher temperatures, changing rainfall patterns, and more frequent extreme events like droughts and flooding -- threatens to reduce yields and increase the occurrence of crop failure.

Climatic stresses could have real consequences on food production, dramatically affecting the yields of staple food crops, resulting in scarcity and threatening people's livelihoods, particularly in developing nations. A study by the International Food Policy Research Institute showed that rice and wheat yields in developing nations could decrease as much as 19% and 34% respectively by 2050 due to the effects of climate change.

Beyond the impact on the globe's food supply and the livelihood of agricultural producers, agriculture must play a role in mitigating climate change. Globally, agriculture is responsible for about 15% of emissions and deforestation is responsible for about 17% of emissions. It is difficult to see how greenhouse gas concentrations in the atmosphere can be stabilized without actions to address emissions and carbon sequestration on agricultural and forestlands.

We are not currently on an optimum research trajectory to

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meet these challenges.

The work of the late Norman Borlaug – a man from my home state, and a longtime friend – brought dramatic changes in productivity. Dr. Borlaug did this by fundamentally changing the way plant breeding research was done. He always kept foremost in his mind the real and ultimate goal -- ending hunger, not just increasing wheat or rice yields. Our challenge today is to spark the same kind of transformative changes for agriculture to mitigate and adapt to climate change that Norm brought about in food security.

To do so, we must adapt three of Dr. Borlaug's overarching principles to transform our efforts.

First, to be successful, we must narrow our focus to a defined scope of important problems. Second, we must work at scales large enough to tackle big challenges. And third, we should demand impact that improves the health, safety, and quality of life for people throughout the world.

In the context of climate change, the Borlaug principles need to be applied to three broad areas.

- The first area is climate change research:
  - o To manage risks, farmers will need information about expected changes in climate at a scale that is useful to them. While global and regional climate change projections are important, they are not particularly helpful to a farmer who needs to know this information at a local scale.
  - o We also need to better understand how climate change will affect pathogens, insects, pests, and weeds. We expect that diseases and pests will expand and thrive in broader areas as winters decline in severity.
  - o We must remember this research is not an end unto itself. Rather, better information is a tool, in a sense no different than a planter or combine, to apply toward achieving the real goal - making sure our agricultural production systems meet our food needs in a changing world.
- The second area is climate change adaptation
  - o We need to develop cropping and livestock systems that are resilient to climate change.
  - o We must take advantage of the world's vast gene banks to identify traits that can help confer resistance to drought and temperature extremes in crops and livestock.
  - o And we will need tools for farmers, land managers, and communities to use efficiently and far more effectively our water resources as the availability of water changes with climate.
- The third area is climate change mitigation
  - o Agriculture stands to gain from new markets to reduce greenhouse gas emissions and increase carbon sequestration. That is why when I travel around the United States, I ask American farmers and ranchers to look at climate change not as simply a problem but as an opportunity for those who want to make a living on the land to profit from reducing our carbon footprint -- not just on the land and not just in our farming operations but for the country generally.
  - o A wide range of practices exist to reduce greenhouse gas emissions, increase carbon sequestration, develop renewable energy sources, and improve energy efficiency on farms and forest lands. These opportunities take many forms. Some are simple, like shifting cultivation from conventional tillage to reduced- or no-till. Some will involve new and advanced technologies – such as precision nutrient management, wind power, and anaerobic digesters. To fully realize the potential for greenhouse gas mitigation from lands, we will need to go beyond what is available now and we need to develop new farming methods and energy conversion technologies – such as cellulosic ethanol as we work to develop second and third generation biofuels.
  - o To capture these opportunities farmers and land owners will need to re-think business models and

development ways to partner with business and industries that will be demanding greenhouse gas reductions.

- o And, governments will need to create the infrastructure required to drive environmental markets.
- o As significant as the opportunities may be in the U.S. they are more significant as we look globally.
- § Ag emissions are major source of emissions in developing countries – and these emissions sources are growing. Most of the opportunities I discussed in regard to the US apply in other countries as well.
- § In addition, globally the demand for agricultural land is one driver of land conversion and deforestation.
- § And to the extent we can increase agricultural productivity, we can reduce pressures on land and remove one driver of deforestation.

Science and technology are already playing a critical role in moving us towards in this direction. They are increasing yields, producing crops that are resistant to the effects of climate change, helping farmers convert to no-till practices, and developing solutions to decrease carbon-based fertilizers.

Research conducted by USDA has shown the benefits in terms of reduced carbon emissions of increased cropping intensity, low-energy precision application irrigation, and no till practices. But we must do more.

USDA will release a report tomorrow called The Effects of Climate Change on U.S. Ecosystems a few days ago that identified that effects climate change is having and is expected to have on natural resources and ecosystems services in the U.S. over the next several decades.

Two months ago, we launched USDA's National Institute of Food and Agriculture to focus our science on a few bold outcomes, including ending world hunger and mitigating the effects of climate change in agriculture and forestry.

Our researchers are now working to develop stress-resistant crops that are drought-tolerant, heat-tolerant, and saline-resistant. And we will develop crops that rely less on chemical inputs and more on their own genetics to resist pests and diseases.

The United States is committed to tackling the food security needs across the globe.

At the G-8 Summit earlier this year, international leaders responded to the problem of food security by committing to an increase in international assistance for agricultural development to \$22 billion over the next three years. President Obama and the U.S. will seek to provide at least \$3.5 billion over that period.

At the same time, President Obama has also made climate change one of his top domestic priorities. Under the Obama Administration, the United States has done more to reduce greenhouse gas emissions than ever before, both by supporting domestic policies that advance clean energy, climate security, and economic recovery; and by vigorously engaging in international climate negotiations. Most recently the President called for a commitment of \$10 billion from developed countries to help developing countries deal with climate change.

But action by the United States and other developed countries is not enough. Climate change is a global challenge that demands a global solution. There is simply no way to preserve a safe and livable planet unless major developing countries play a globally responsible role along with the United States in the climate negotiations.