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Dr. Gale Buchanan

Chief Scientist

United States Department of Agriculture

Under Secretary

Research, Education, and Economics

Ag In The Classroom Luncheon

Costa Mesa, California

June 27, 2008

Thank you and good morning.

As someone who has spent 40-plus years involved in agriculture and education at the university level, I can tell you it's always a special pleasure for me to talk to educators especially when it is about agriculture!

You all fill an important role in educating our future scientists, educators, and leaders about the importance of agriculture in their everyday lives. Today, more than ever, we need programs like Ag in

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the Classroom. So thank you all for your tireless efforts on behalf of American agriculture and the Nation.

In reviewing your program, I find your creative and innovative exhibits and workshop very impressive. From what I've been told, there are about 500 + Ag in the Classroom Educators and partners, here to exchange and share the creative and innovative tools you are using to inspire your students, the next generation of leadership, to be prepared to meet the food, nutrition and agriculture needs of the 21st Century.

Agriculture in the Classroom is a wonderful program that is making a positive difference to our nation's youth. And it's all because of educators like you.

So first, congratulations, to all of you who have so far been recognized for your outstanding leadership in your State Ag in the Classroom efforts.

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Later today, Tom Tate will help us recognize five of you as the Ag in
The Classroom teachers of the year for 2008.

History

The strength of Ag in the classroom has always been the fact that it's
a real grassroots organization started by people with a passion for
both education and agriculture.

More than 25 years ago a few visionary people saw the need to
improve the agricultural literacy of our Nation's youth. Then as now,
many Americans had lost touch with our nation's agricultural heritage
and the vital role agriculture plays in the lives of all of us.

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Since 1981, USDA has sponsored Ag in the Classroom as an outreach program to K-12 teachers to help students learn how food gets from the farm to the table.

Annually, USDA's Ag in the Classroom network of state contacts work with more than 90,000 classroom teachers, 20,000 pre-service teachers and volunteers to advance agricultural literacy and nutrition education. These teachers and volunteers use Ag in the Classroom resource materials with more than 5 million students each year. The USDA's annual investment in Ag in the Classroom attracts more than \$10 million in non federal contributed resources that support our programs.

These student learning benefits cost the taxpayers less than 20 cents per student served per year. We can attribute this success to the hard work of our Ag in the Classroom state contacts, who work diligently to provide the resources necessary for educating our teachers and our youth.

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Your hard work has not gone unnoticed even in the halls of Congress.

We have just passed a new Farm Bill. For Ag in the Classroom to be included in the Farm Bill is a testament to the importance AITC has in educating our youth about Agriculture. It's been 27 years in the making and we would like to commend each of you who played a significant role in bringing this initiative to the forefront. As we move to implement the new farm bill, many of you may be called upon to work closely with our administrative and program staffs to help establish guidelines and other related matters pertinent to the success of AITC and other Ag literacy initiatives.

Your charge... The farm bill identifies a lot of priorities that you can help us with.

One of the key messages I hope you will take back to your students is the new role that agriculture is playing in ensuring a better future for all Americans. I'm talking about our Nation's future national and economic security. Today, energy is as important as food and water.

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In the past agriculture provided Food, Fiber, Feed, and Flowers.

Today, agriculture is providing more and more renewal fuels.

As you all have heard, the price of both fuel and food gets mentioned everyday in the press. The good news is that agriculture and agricultural research is getting a lot more attention. The bad news is that biofuels are getting too much of the blame for increased food prices.

The fact is, last year the growth in ethanol and biodiesel consumption is estimated to have increased the Consumer Price Index (CPI) in the U.S. for all food by 0.10-0.15 percentage point.

In other words, ethanol and biodiesel consumption accounted for approximately 3-4 percent of the overall rise in retail food prices. The expansion in biofuels development is only one part of why commodity prices have risen.

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As you may know, commodities prices, both agricultural and nonagricultural, have risen sharply in recent years. This is good news for our farmers who have seen increased costs as well as profits and who have risen to the occasion to meet the growing demand for commodity crops for food, feed, and fuel.

Globally, there are many supply and demand factors at play affecting commodity prices. For one thing, higher incomes, population growth, and depreciation of the dollar are increasing the demand for food worldwide.

Strong global economic growth, particularly in developing countries is creating a growing middle class in some foreign countries. This means increased consumption of meat, dairy products, and vegetable oils.

Additionally, drought and dry weather have lowered production and reduced stocks in many grain producing regions of the world; and some countries have imposed export restrictions.

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All these factors contribute to higher commodity prices. In addition, record prices for gasoline and diesel fuel are increasing the costs of producing, transporting, and processing food products.

Americans should know that less than 20 cents of every dollar spent on food consumed at home or in restaurants goes back to the farm that is producing the crop. The other 80 cents goes toward packaging, processing, distribution, transportation and, of course, other marketing costs.

And most food packaging uses petroleum-based plastics and products that are generally moved by rail or truck, again, incurring fuel costs.

Of course the best way we can minimize the impact of biofuels production on food prices is to move towards more sustainable next-generation biofuel technologies that do not rely on grains and oilseeds used for food or feed.

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That is why the Administration is refocusing its policies on ethanol and heavily investing in new technologies that will produce cellulosic ethanol from a wide variety of biomass sources. These biomass sources include new energy crops like switchgrass, miscanthus, hybrid poplars, and other crops as well as agricultural and forestry residues and waste products such as restaurant grease.

The Food and Agricultural Science workforce faces a great challenge of meeting the workforce needs of the emerging bioeconomy.

As K-12 teachers you are in a critical position to help assure that the next generation has the knowledge, skills, attitudes and aspirations to help us meet the new demands that are being placed on the global Food and Agricultural Science System.

The recently passed Farm Bill laid out a number of priorities, including bioenergy that USDA and the food and agricultural sector partners need to address. Other priorities that AITC can help address include nutrition, especially childhood obesity.

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The North Carolina AITC program, through a CSREES funded grant recently developed an agriculture literacy and nutrition education program entitled, “The Farmer Grows a Rainbow.” A companion resource to USDA’s MyPyramid, this initiative provides pre-Kindergarten – fifth grade teachers with curriculum materials needed to introduce knowledge that will result in improving food choices and better eating and exercise behaviors. The lesson plans in this program are aligned with national educational standards in various academic disciplines including science, literacy, math, and social studies.

In 2008, Ag in the Classroom state contacts from 40 states received training on this program, which will allow them to deliver it to state and regional level educators during train-the trainer events. The “Farmer Grows a Rainbow” training kits are available in print and web-based versions in order to deliver all curricula to students. This cost-effective and timely initiative addresses a top priority of USDA and CSREES.

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Your innovative and creative effort to address the nutrition education needs of our students in the “Farmer Grows a Rainbow” is to be congratulated. Getting this new curriculum used in our schools, will help improve the knowledge and food behaviors the students and ultimately improve lives.

USDA is very impressed with the innovative “School Garden Network” you have been able to learn about this week here in California. What a powerful approach to have students to do math and science projects and problems that they will get to apply through hands on experience in their very own community. Later on, they will harvest the foods of their labor, experiencing the taste of food they have grown with their own hands.

I hope you can apply your creative and innovative talents toward programs that can teach young people about biofuels, other forms of renewable energy, and energy conservation.

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Just this past weekend in Washington, DC, we launched our “Power Plant Garden”, a demonstration garden, where visitors can view 20 + plants, such as soybeans, corn, sugar, switch grass and sunflower, plants that can be converted into alternative fuels. We hope that some of you might get your students to start up Power Plant gardens in your communities to help the students and others in the communities learn about the important role that bio-energy will have in meeting our future energy needs.

I am pleased to learn about your new bio-energy curriculum development efforts in helping students learn about the bright futures they can have in bio-energy alternatives, helping our nation gain energy independence. I hope you can visit our demonstration garden at the National Arboretum in Washington, DC... And to develop demonstration gardens at your own schools.

Bio fuels/energy ...

It is great to know that a few AITC programs have already laid the groundwork in this area of study and we applaud their efforts. The

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Minnesota “Fields of Energy” DVD demonstrates the vital role agriculture plays in the frontier of renewable energy and through the video field trips, students will learn concepts essential to understanding the science of producing different forms of homegrown renewable energy, explore the benefits and concerns of renewable energy sources, and discover career opportunities in the growing field of energy.

South Carolina’s “Biomass” Lesson Plans on Alternative Fuels for grades 7-12 is an innovative, hands-on approach that allows the teacher to incorporate their own materials into the lesson plans to ensure new information on this constantly growing field is captured. These lessons plans are standards based and are designed to enhance student’s understanding of the subject-matter.

As mentioned, this field of study is ever changing and we face many challenges ahead. In that regard, I would challenge you to look at new and creative ways to incorporate bio-fuels and energy lessons into your current curricula. Think about how you might expand on the South Carolina and Minnesota projects or design you own curriculum

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around this subject-matter. By this time next year, it would great to hear of your accomplishments.

We are pleased with AITC's demonstrated ability to address new and emerging issues and their efforts in ensuring educators are being provided tools to incorporate some of these new and innovative approaches into their curriculum.

I am really pleased to see so many of our national priorities are being addressed by the topics contained in your conference here this week.

How do we awaken the scientific curiosity of the next generation of citizens to become part of the solution? We encourage you to apply your creative energy to forward thinking and innovation in addressing the food, nutrition and agricultural education.

As I mentioned earlier, the strength of Agriculture in the Classroom comes from its grassroots organization and the fact that local educators are very much a part of the movement. Giant strides have been made since its founding in 1981. Agriculture in the Classroom is

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regarded as a refreshing and flexible educational program designed to supplement and enhance the teacher's existing curriculum.

Thank you again for your wonderful enthusiasm, innovation and creativity to help strengthen our young people. I look forward to learning more about your outstanding programs.

Keep up the great work that is so important to our nation's future....

Thank you and God Bless.