

GROWERTALKS

Guest Column

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Innovation in All We Do

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In February, via Zoom, I attended the opening General Session of the 99th annual USDA Agricultural Outlook Forum, held live in Crystal City, Virginia. There, Secretary of Agriculture Tom Vilsack delivered the keynote for the two-day conference, echoing the conference title “U.S. Agriculture: Seeds of Growth Through Innovation” in his remarks.

Ironically, across the District of Columbia, Commerce Secretary Gina Raimondo delivered a talk on the Georgetown University campus, also discussing innovation. Her title was “The CHIPS Act and a Long-term Vision for America’s Technological Leadership.” While Vilsack was talking about agriculture and Raimondo was talking about the recently passed CHIPS and Science Act, both referenced Abraham

Lincoln’s Civil War-era investments in U.S. agriculture.

Vilsack specifically noted that in the middle of the Civil War, Lincoln created the U.S. Department of Agriculture and ushered the passage of the Land Grant College Act (Morrill Act), which established what is today’s network of state universities focused on “agriculture and the mechanical arts” (agriculture and engineering). These investments in agriculture, Vilsack noted, were essential 70 years later in getting us through the Dust Bowl crisis and have allowed U.S. agriculture to dominate the world agricultural scene. He noted that in just his lifetime, the productivity of U.S. agriculture has increased 17 times.

Raimondo likened Lincoln’s investments in agriculture in the 1860s, which have allowed U.S. farmers to become world leaders in grain production, to Franklin Roosevelt’s and Harry Truman’s investment in nuclear technology, and Kennedy’s investment in putting a man on the moon. She believes the CHIPS Act, which passed Congress last August by a bipartisan vote, is a similar investment—the bill directs a \$52 billion infusion to boost microchip production in the U.S. once again and the related science to keep both our chips and chip manufacturing state-of-the-art.

Vilsack also talked about the downside of agricultural innovation. Increased productivity has made farming very expensive. This has forced many farmers to leave the farm and has led to a huge increase in the average farm size. Fewer farms have stressed rural economies. Today, 50% of farmers report negative farm income. Another 40% of farmers report positive farm income, but only if off-farm income is added to the household tally. Less than 10% of farmers record positive income from just their agricultural enterprises. Paraphrasing Lincoln, Vilsack said, “The dogmas of the past are not enough for the present circumstances. We need to find alternative ways to increase farm incomes.”

To answer these challenges, Vilsack noted USDA was investing in several areas to provide alternative sources for agricultural income. The Commodity Credit Corporation is investing to develop a series of climate-smart practices. Organic agricultural production provides opportunities for producers to address specialized niche market opportunities. There's a burgeoning ecosystems services market. Processing capabilities are finding new uses for agricultural products, such as an asphalt-like product derived from soybeans and bio-based fuel products. And specialty crops are providing other alternatives for U.S. agricultural producers.

All of these are increasing opportunities, thus providing alternatives for farmers. In turn, these activities are reinforcing rural communities. The seeds of innovation are all about opportunity, and Vilsack concluded, "I have never felt more positive about U.S. agriculture's future."

In our little corner of agriculture, we often hear the word "innovation" linked to new varieties, and our industry's annual pilgrimage to California for Spring Trials serves as a high point for many breeding companies to expose their latest and greatest. Truth be told, our industry's life-changing discoveries were much more about transitioning how we operate. Using soilless media, plastic containers, tissue culture, hybrid seed, plug technology and seed technology to dramatically improve germination percentages, and the advent of hybrid vegetative varieties were all monumental improvements for growers.

Mass marketing of floriculture products, combination planters and the availability of landscapers who focused on residential accounts, and even urban landscaping, were equally significant industry changes for consumers. And offshore production of both inputs and finished products have changed the horticultural economies of many countries and have made floriculture truly an industry international in scope.

But as both Vilsack and Raimondo implied, we must be ever vigilant for additional opportunities to make the really big investments that can truly change our world! **GT**

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