Economics of agriculture can blossom in one’s backyard

By Michael Mazourek, Commentary
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It’s that time of year when mailboxes welcome seed catalogues and home gardeners delight in planning for the coming harvests, closely inspecting the descriptions of each new variety for their benefits and projected bounty. As a plant breeder at a publicly-supported university, I may know the behind-the-scenes story about those offerings. But, most importantly I know that increased diversity, flavor, sustainability and yield are a direct result of your tax dollars at work.

Having grown up on a New York state farm, I’ve been inspired to use traditional plant breeding methods to create new vegetable varieties that address the challenges — environmental and pest-related — that our nation’s and the world’s farmers are facing today. As a father, I strive to do it in a way that is earth-friendly and which showcases the vegetable’s natural health benefits.

My group at Cornell University has developed the Trifecta muskmelon that is more naturally able to hold its own against downy mildew (a devastating pathogen) and the striped cucumber beetle, while not compromising on its sweetness and high beta-carotene. We’ve created varieties of Vitamin C-rich red peppers that defy Phytophthora, a blight that causes enormous economic damage. Currently, we’re working with farmers in the South to create a cucumber that can stand up to insect pressure and diseases that remain unchecked due to year-round moderate temperatures. These cucumbers build upon the Marketmore series of cucumbers that you will recognize in your vegetable catalog, but may have never realized its Cornell roots.

Closer to home, we are working on varieties that will allow us to support farming in the Northeast.

New York state was once a breadbasket of our young nation but as land became plentiful out in the rich soils of the western states and we tapped into aquifers for irrigation, the Empire State ceded its title to the Golden State’s temperate climate. In the face of climate change and increasing drought and water management issues that are growing challenges in other regions, New York has the opportunity to innovate so that we’ll have sustainable, high-productivity agriculture that will buffer and supplement decreased production from other states.

The re-investment takes seed money, literally and figuratively. Just as the definition implies, funding is needed to start such an enterprise — and to create the seeds that allow us to better feed New Yorkers, Americans and the global community.

My own research has been generously supported by you, the taxpayer, through the Farm Bill, the USDA’s National Institute of Food and Agriculture, and the state Department of Agriculture and Markets.

Just as the scope and scale of public cutbacks have increased, the needs of the public and of industry have continued to rise due to intensified competition and threats from disease, invasive pests and other changes brought on by a warming climate.

The improvements we are making to vegetable crops are addressing these issues, creating varieties which require fewer herbicide and pesticide applications, increase yield and incomes for the farmer, and improve flavor and quality for the consumer. We need the public’s help to address the future of funding. When the people have advocated for more support for applied research, government stakeholders have listened.

So as you flip through those gardening catalogs, take a moment to think about how supporting that distant-sounding agriculture comes to fruition in your own backyard.

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