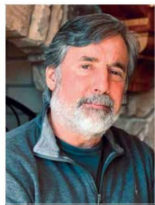




New Dogwood Health Trust Report Plants Seed for Job Growth in WNC Agtech

Eat Your View



By ROBERT TURNER

Dogwood Health Trust released a new report on November 17 that describes how Western North Carolina might become a leader in agriculture and food technology (agrifood tech), which could drive regional economic development and job growth in a food sector that helps local farmers and value-added producers.

The Dogwood Report recognizes that agriculture is an essential part of economic development and cultural identity in Western North Carolina. Local food is also a buffer against climate change and possible disruption in long-distance food supply chains.

The report suggests that the Asheville region already has a number of assets that make it a regional food hub, including lots of small farm producers and support from restaurants and the community. Other important

factors, the report says, include a strong nature-based tourism brand, a diverse microclimate, plenty of water and electricity and less risk of climate disruption than other areas of the country.

Agtech represents the kinds of jobs that we want to attract to our region, including precision agriculture technologies like satellite and drone sensors and imaging, biologics to improve microbial life and nutrient uptake, soil health and carbon sequestration, robotics and robot tractors, controlled environment agriculture (automated greenhouses) and food preservation and waste reduction technologies.

The Dogwood report looks at how Western North Carolina might create, attract and grow agrifood tech businesses and how innovation can improve efficiency and productivity on the farm and in the value chains. The report uses the term “agrifood tech” to incorporate food processors and value-added producers, like small makers of salsa or hot sauce, and not just farmers and growers. The report takes a larger view of the entire food ecosystem that can create a more circular economy

for Western North Carolina, where everything from the farm to processing, distribution, consumption and waste reclamation occurs within a closed-loop system, keeping more money in the local economy.

Why is this new technology important to the future of food production? The current industrialized food system is highly dependent on fossil fuels for the manufacture of chemical fertilizers and pesticides, and a lot of the new science and investment is driven by consumer awareness and demand for fewer chemicals in our food and the environment.

Food and agriculture represent more than 30 percent of greenhouse gas emissions (including long-distance transportation). We need pesticides that are less damaging to ecosystems and the environment, food crops more resistant to heat and drought, new technologies that reduce food waste, more regional supply chains to cut food miles and better methods of cultivating that protect soil health and fertility so less inputs are needed. Those challenges represent opportunities for innovative companies.

Unfortunately, most of the big investment from Wall Street is focused on big grain and wheat farms that can afford the new equipment and technology. Because of the mountainous terrain in Western North Carolina, most farms here are small compared to farms in other areas of the state and country. But Western North Carolina has the advantage of a huge base of organic growers which makes it positioned well for the future.

WHAT’S OLD IS NEW AGAIN

Most small growers in our region are growing organically, which means they often use farming practices from an era long before Big Ag and chemical pesticides took over in the 1960s and ‘70s. Farms in the 1950s killed weeds mechanically with a small tractor and cultivating attachments. Industrial farms today spray harmful chemical pesticides to do that job, leading to what many scientists are calling a “bug apocalypse.”

What organic growers need now is new equipment based on the old ways. Many growers are trying to weed fields with hand tools, a very labor-intensive task. Some growers are searching out old equipment, left rusting in fields, to refurbish it and bring it back to life.

Vegetable farming, and particularly organic farming, is difficult and labor-intensive work to be sure, and the innovation needed is a suite of technologies and equipment that works to reduce labor and improve yields and profitability but doesn’t cost an arm and a leg. A few companies have answered the call by manufacturing new equipment based on the old ways. Gaia Herbs in Brevard is an early adopter of this

new equipment. The Gaia farm uses no insecticides or herbicides in its organic and regenerative production model, and has stopped using plastic ground cover for weed control because it’s a petroleum-based product that often ends up in the garbage after a couple years. Gaia equipment manager Todd Stiles and assistant farm manager Zach West needed efficient ways to cultivate the land and to weed between rows of herbal crops.

They discovered a small tractor called an “Oggún” that is based on an Allis-Chalmers “G” tractor design from the 1950s, now manufactured by a tiny company called Ronnie Baugh Tractor. With center-mounted attachments, the tractor offers the visibility to cultivate or weed rows with a lot less labor than weeding by hand.

“This is where small growers in the region need help and technology—new, cost-effective equipment based on organic production models,” says Stiles. To me, that sounds like an opportunity for inventors, engineers and entrepreneurs in the region.

THE IMPORTANCE OF STEM EDUCATION

To support a valuable workforce and build the agtech sector in WNC, we’ll need to get more young people interested in science and STEM (science, technology, engineering and math) education to prepare for it and support the industry as it grows.

One of the people working on that is Michelle Benigno, the director and STEM specialist at The Science House, which has an office located at the NC State Mountain Horticultural and Research Extension Office in Mills River.

NC State University is the only land grant university with a STEM outreach, and Michelle spends her days traveling through WNC to elementary, middle and high schools teaching the teachers (and often students) new lesson plans that will spark their imagination and interest in science.

At her office, she also has a large room full of shelves that hold an impressive array of scientific equipment that she can lend to schools, including hundreds of hand-held computers, microscopes, soil, water and weather sensors and other testing equipment. She delivers the tools young people need to spur interest in science and technology, because she knows we’ll need that science-minded workforce in the future.

Western North Carolina would be wise to build on our existing assets and actively seek out and attract more companies and people in the agtech sector. Can Western North Carolina become the Silicon Valley or Research Triangle of agtech? Why not?

Robert Turner is a farmer and author of Lewis Mumford and the Food Fighters: A Food Revolution in America. Learn more at EatYourView.com.