

# Crowd Funding Paid For Ag Research Project

By Lorn Manthey, Contributing Editor

South Carolina farmer Carl Coleman and his friend, Buz Kloot, a Research Associate Professor at the University of South Carolina (USC), used a crowd-funding proposal at [www.experiment.com](http://www.experiment.com) to raise money for a research project they titled “How much fertilizer do we really need?”

“No ag-related grant-funding organization in their right mind would fund a crazy scheme like ours, so we came up with this approach for the tech-savvy marketplace,” Kloot says. Their first attempt in 2014 raised just over \$5,000 for tests conducted on Coleman’s farm.

“Frankly I was shocked that we raised \$5,000, but many of the supporters were farmers who really wanted an answer to our question,” Kloot says. “They’re the drivers of the soil health revolution. I’m really doubtful that we could find any of this funding through conventional channels.”

They publicized the project through emails to their personal contacts and social media. They received donations from across the country.

For the second request in 2017, they raised more than \$20,000, including \$10,000 from a grant match by USC’s VP of Research.

Says Kloot, “We knew we were aiming high, but we went for it anyway.”

Kloot says the idea for the second phase of research evolved after 3 years of observing cover-cropped fields where there were slight increases in soil organic matter along with steady concentrations of pH and K where no lime or potassium had been applied. “We want to better understand how healthy soils perform using cover crops and lower rates of applied fertilizer. We think the results will help farmers quantify their fertility needs and could help them save money,” Kloot says.

Kloot and his research team found that for healthy, cover-cropped fields, recommended potassium inputs made no difference in yields over 3 years (5 crops since November, 2014). No phosphorus was added to the plots because soil tests showed it was adequate. P drawdown was far slower than crop removal rates suggested. In 2017, they experienced close to record soybean yields in the plots with no P or K inputs.

“Our findings are really quite radical,” Kloot says, “because for the last three years we haven’t needed any P, K or micronutrient fertilizer as opposed to the published recommendation of a 20 percent reduction.



Research Associate Professor Buz Kloot (left) and South Carolina farmer Carl Coleman used a crowd-funding proposal to study fertility on Coleman’s farm.

We’re demonstrating what healthy soils can do to help farmers save on fertilizer, increase soil carbon and reduce the amount of energy needed to produce fertilizer.”

The project has 40 randomized and replicated plots (60 by 100-ft. each) and the 5 crops since November, 2014.

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# Couple Runs Popular Dandelion Tea, Coffee Business

John and Irene Feddema raise 3 acres of dandelions in 5,000-sq. ft. plots. Though the yellow blossoms are lovely in the spring and summer, it’s all about the roots.

“We mill the roots for coffee and also make a mild tea,” John Feddema says. Since starting Dandy Joe coffee in 2011, the couple has developed a following of customers who purchase their products at the local farmers market or have it shipped to them.

“Dandelion coffee and tea has no caffeine and is alkaline to counteract the acids in other foods,” Feddema says. Those qualities attract customers, but some claim even more benefits for a variety of health conditions. “We hear such amazing stories of how their lives have improved so much.”

Positive testimonials motivate the Feddemas throughout the labor-intensive steps of processing roots into beverages. To gain the most nutritional value from the dandelion, harvest begins after the first freeze. Feddema loosens the soil with a mini excavator so the roots from 4-year-old plants can be harvested. Part of the root remains so nature takes care of producing the next year’s crop, Feddema says.

After knocking off most of the dirt, the roots are washed in a rotating drum. Roots are then broken apart and washed again. Then they are sliced and spread on racks. With furnace fans in the ceiling and a dehumidifier, the roots dry in about 3 days and can be stored

until needed.

Roasting is very low tech, Feddema says, using several used stoves with working ovens. With thin layers, it only takes about 45 min. at 350 F degrees. The roasted roots are run over a vibrating screen to shake off an outer layer that’s used for tea. The rest is milled finer to make coffee. Feddema created his own mill for grinding coffee from an electric lawn mower.

Besides selling dandelion coffee and tea, the Feddemas blend it with Echinacea and rhodiola rosea that they also grow to create Triple Dandelion Tea, their most popular product. They also sell raw milled or sliced dandelion root.

The profits aren’t huge, but the Feddemas find satisfaction in the work because of their customers’ responses.

Since they are old enough to be retired, they would like to see younger entrepreneurs continue the business they have created on their farm near Camrose, Alberta.

“It’s quite a unique venture,” Feddema says. He notes that they only ship product to customers in Canada. For more information, check them out on Facebook - Dandy Joe Roasted Dandelion Root Coffee & Teas.

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John and Irene Feddema operate a popular dandelion tea and coffee business that’s based on 3 acres of dandelions they grow on their Alberta farm.



Roots are washed in a rotating drum, then sliced and spread on racks to dry (left). Feddema converted an electric lawn mower into a mill for grinding dandelion coffee.

# Aluminum Pens Built For Guinea Pigs

If you’ve ever considered raising guinea pigs as a business, Henry Fisher of Little Mountain Welding has the equipment you’d need.

“We use aluminum to build our pens to make them lightweight, and because spiders don’t like aluminum. Their webs won’t stick to it,” explains Fisher. Eliminating spiders reduces mites that can create health problems.

“The guinea pig market is very good right now,” he says. He builds the USDA-approved pens for producers with operations of all sizes, and he can customize the pens

according to size and other needs, including adding wheels to make them portable.

The Jersey Shore, Penn., welder’s standard design stacks 5 pens (20 adult guinea pigs/pen) in an 8 by 4-ft. unit 6 ft. tall to accommodate 100 breeding guinea pigs, plus their offspring.

“The pens have stainless steel water nipples that are plumbed to be automatic and built-in grain hoppers. The lids are on hinges with stainless steel snap latches,” Fisher says.

His pens are unique because they are made of aluminum instead of plastic or vinyl.

They clean up easily by simply scraping the contents into a wheelbarrow or container.

Cost for standard units is \$2,500.

Fisher also builds aluminum horse barn slider doors and stainless-steel butchering equipment, and he repairs stainless steel milking equipment. He recently started working on building horse treadmills.

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Little Mountain Welding builds USDA-approved aluminum pens for guinea pig operations of all sizes.