

Clemson plant breeders roll out new oat variety

July 23 2012

Clemson University plant breeders announced a new high-yielding variety of oats.

Named Graham, the new variety grows to medium height, withstands falling over (lodging), matures earlier and produces more seed than comparable varieties.

"Graham has excellent seed yield potential, exceeding the Rodgers variety by 20 bushels per acre at some locations and produces a 32.2-pound bushel compared to 31.9-pound bushel for Rodgers," said Chris Ray, director of the S.C. Crop Improvement Association, which grows certified seed for sale to the public.

The new [oat](#) variety is named for W. Doyce Graham, the small-grains breeder at Clemson University from 1966 to 2003. Graham also served as agronomy department chairman from 2000 to 2002.

Farming is hard enough without starting with bad seed. Clemson University Public Service and Agriculture oversees the S.C. Crop Improvement Association, which runs the foundation seed program to provide growers with the highest-quality planting stock available.

The seed is produced at Clemson University Experiment Station research centers and made available to producers and seedsmen.

"Our mission is to cooperate with Clemson University, USDA and other

agricultural agencies in developing, testing, producing and distributing superior strains and varieties of planting stock," said Ray.

From fertilizer to fuel, prices are higher these days. Seed costs can be as much as 10 percent of a farmer's input costs. So [seed quality](#) is a major factor in grower success.

"There are four classes of certified seed," Ray said. "In order of generation they are breeder, foundation, registered and certified seed."

- Breeder seed comes from the original plant breeder who supplies the source of foundation seed.
- Foundation seed is produced from breeder's seed or foundation seed produced under the control of the originator or licensee.
- Registered seed is produced from foundation or other approved seed stocks. It is allowable for the production of certified seed.
- Certified seed is produced from foundation or registered seed stocks. It is two generations from foundation seed. Certified seed cannot be used to produce certified seed again without the approval of the state certification agency.

The crop improvement programs include such crops as soybeans, corn and peas, and fruits and vegetables, ranging from peaches to okra to beans and heirloom vegetables. Seeds are available to home gardeners via the association's [website](#).

Buying certified seed is an important part of improving plant varieties. Seed sales help pay for research that can improve yields, disease resistance and quality traits, adding to farm profitability.

Quality seed must be labeled and packaged properly, according to Ray. No seed is considered certified unless an official certification tag is

attached to the packaging.

Proper conditioning is important to remove weed seed and inert matter: pebbles, twigs and other trash. Less inert matter means easier planting, more plants per acre and easier harvest. Seed also is examined and sorted to remove undersize or diseased seed. This results in more uniform stands.

Removing weed seeds improves crop yields and quality because there is less competition for fertilizer and water. It also reduces growers' costs for chemicals, fuel and labor.

"Better [seed](#) means quicker emergence, better stand establishment and vigorous growth to suppress weed infestations," said Ray. "What's more, uniform plant development — flowering and maturity — makes it easier to time fungicide or insecticide applications. And it means easier harvest and reduced drying costs."

Provided by Clemson University

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