

Northeast Buckwheat Growers Newsletter

Thomas Björkman, Editor Horticulture Dept., Cornell-NYSAES, Geneva NY

2011 Buckwheat Field Day

The 2011 Northeast Buckwheat Field Day was held in Big Flats, NY at the USDA Plant Materials Center. The center's director, Martin Vander Grinten had prepared excellent plantings for showing different methods or raising buckwheat.

Elizabeth Dyck of the Organic Growers Research and Information Network (ogrin.org) described the benefits of local production and marketing of organic buckwheat seed for cover crop use. She is helping growers start up farm enterprises to be local supplies. Small-scale seed producers are finding good selling opportunities at farmers markets. These markets are

good for selling or delivering to other vendors who use buckwheat cover crops in their production system.

Thomas Björkman of Cornell reviewed buckwheat grain production methods. Field demonstrations of planting methods are described on page 2.



Production—the aftermath of prevented harvest

With heavy rains just before harvest, some fields have simply been too wet to harvest. The Birkett Mills report that the crop is coming in slowly, as growers wait for more fields to dry out. Unfortunately, some fields will be abandoned unharvested.

If you can't harvest on time, shattered seed will produce a lot of volunteers in the spring. Seed mortality is highest if they stay on the surface. Birds, rodents and beetles eat them, and weathering reduces their vigor. If the fields are passable even after considerable seed shattering, then combining may remove enough seed to matter. It will reduce the amount of volunteers next year even if the yield is poor. If you have crop

insurance, check with you agent once there is trouble.

Volunteer seedlings usually sprout in mid-May. Seedlings that germinate right at the surface tend to be quite weak. That's good for getting removing the seed bank.

If the ground is prepared for another crop in May, buckwheat will sprout right away and grow quickly. Unfortunately, spring buckwheat is not usually a worthwhile prospect. More likely, buckwheat will be a weed in your main crop. It is easy to kill seedlings with many herbicides, or with cultivation. The key is to get

Continued on page 3

Seeding method and rate

The field day provided an excellent opportunity to see what happens when you adjust the seeding rate, and what the ideal plant structure looks like.

There was also excellent evidence that packing of some kind is essential after broadcasting, and that a higher seeding

rate does not compensate for inaccurate broadcasting.

The ideal branch has a lignified main stem and one or two dominant branches.



Effect of population. *Left, 25 lb/ac. Center, 50 lb/ac. Right, 75 lb/ac.*

The standard seeding rate produced plants with just the right amount of branching to carry a large crop. The low seeding rate produced more branches, and looks about the same from above. But the thicker stems come at the expense of seed yield.

The higher seeding rate nearly eliminated branching, thereby limiting the crop. The slender, succulent stems are also at higher risk of lodging. Thus going higher on the seeding rate only increases cost and problems.

The exact optimum seeding rate depends on the fertility of a particular field, and rainfall. Compare the shape of these plants with yours to see whether to adjust your future seeding rate.



Effect of planting method. All were sown at 50 lb/ac on freshly prepared ground.

Left, Drilled plots had a well-shaped plant in straight rows.

Center, Broadcast and packed had similar plants, but no rows. The population was the same except for some extra late-germinating small plants that didn't contribute to yield.

Right, Broadcasting without packing gave very poor stands (about 20%) with large weedy areas.

Buckwheat extension funding

In the distant past, New York State provided funds for applied research and extension because of support from the agricultural industry. These funds were matched by Federal funds. Those sources of funds now support much less extension and competition for them is strong.

Those of us with a commitment to keep growers competitive by providing the best research-based information and training, continually look for new ways to support it.

Continued on page 4



Health Research Notes

It's long been known that buckwheat has a much lower glycemic index than you would expect from its starchy composition. The glycemic index is a measure of how quickly blood sugar goes up after eating, which is a particular problem for those who have or are at risk for diabetes. One of the compounds responsible is called D-fagomine. It slows the breakdown of sucrose and starch. A research team in Barcelona has developed a method for isolating large amounts of D-fagomine from buckwheat seeds. They have shown that adding this compound to meals of starch or sucrose will indeed reduce the blood sugar spike. They hope to make this a food ingredient for more healthful foods.

The [team](#), led by Prof. J.L. Torres at the [Catalonian Institute of Advanced](#)

[Chemistry](#), is a public-private partnership with a university spin-off company, [Bioglance](#). The company expects to be the ingredient supplier. It is not clear how much buckwheat might be used for this ingredient if the market takes off.

This development is another in the array of buckwheat compounds that help with the current epidemic of metabolic syndrome. These include fagopyritol, a cofactor in insulin receptors; rutin, a capillary strengthener; and a cholesterol sequestering protein.

*Gómez, L et al. 2011. [D-Fagomine lowers postprandial blood glucose and modulates bacterial adhesion](#). *Brit. J. Nut.* (in press) doi:10.1017/S0007114511005009*

Prevented harvest *(continued from page 1)*

them fairly early, before the first true leaves are fully expanded.

If it's really wet next spring, it may be tempting to let the volunteer buckwheat go on to make a crop. If the initial stand is reasonably solid and vigorous, the population will adjust to some extent. The biggest challenge is ripening, since the long summer days are telling the plant to keep growing right when it should be ripening seed. Plus, hot weather during bloom will tend to shut down seed production.

Harvesting wet fields results in a lot of soil compaction and ruts. It is worst in the parts of fields that are already least well drained. Recently, radishes have become a tool for perforating that compacted layer. These cover-crop radishes are relatively cheap and they don't require the horsepower of deep tillage. They work best if sown in the first two weeks of August. That allows the roots to grow deep and thick late into the fall. The radishes mostly winter kill.

The Cornell fact sheet on buckwheat harvest can be found online at nmsp.cals.cornell.edu/publications/factsheets/factsheet51.pdf.

The Cornell fact sheet on radishes is at www.covercop.net

Extension funding *(Continued from page 3)*

Thomas Björkman, Editor

Dept. of Horticulture
Cornell University
630 W. North St.
Geneva, NY 14456

PHONE:
315-787-2218

E-MAIL:
tnb1@cornell.edu

www.hort.cornell.edu/
bjorkman/lab/buck

Whether it is traditional extension-funding sources or new ones, they all are looking for the most bang for their bucks. Buckwheat competes against everything from dairy to childhood nutrition to bedbugs. Programs that have high impact are most likely to get funding.

Some measures impact include the retention or expansion of the industry, the number of growers

attending field days and acting on information in the newsletter, and even grower involvement in the organization.

A grower-led NBGA has been a challenge because buckwheat is often a small part of any farm operation. Devoting the time to organizing growers has been difficult to justify. However it may be needed in order to keep the needed support.

About the Northeast Buckwheat Growers Association

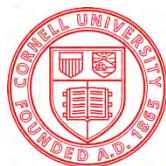
The NBGA is made up of about 150 buckwheat growers in the Northeast.

Membership may be obtained by contacting the editor and providing contact information (address, phone, email). There is currently no charge to join.

This semi-annual newsletter goes out to those who have signed up as members of NBGA. The printed version is sent to

members in the Northeast, and electronic version elsewhere. The complete member list is distributed to members each fall.

The Northeast Buckwheat Growers Association has been on the World Wide Web since 1998. An on-line Buckwheat Production Guide for the Northeast and back issues of this newsletter are available there.



Thomas Björkman *Northeast Buckwheat Growers Association*

Cornell University
New York State Agricultural Experiment Station

Department of Horticulture
630 W. North St.
Geneva, NY 14456