

Pea and Bean Crop Rotations with Buckwheat

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Growers interested in maintaining soil health can benefit from a once-common practice: following early peas or beans with buckwheat.

We have worked out the parameters that maximize the value of buckwheat while minimizing the effort required at that busy time of year. Many pea and bean fields are left open after harvest until farm operations slow down a little. Planting buckwheat is an easy alternative with a payback in better-working soil and a smaller weed seedbank. Peas and beans have a narrow harvest window, so it is not unusual to harvest when the soil is wet enough to cause compaction. Buckwheat can also be helpful in rectifying that damage. A number of growers have made buckwheat planting a routine post-harvest operation, and are happy with the result.

The rule of thumb for planting after a previous crop is to allow two weeks for the incorporated residue to break down. The pea-to-buckwheat sequence seemed likely to allow less time since the residue is high in nitrogen, soil microbes are already active in mid-summer, and buckwheat does not require much nitrogen.

We found that the best results came when waiting about a week. Planting immediately reduced the stand too much, waiting 10 days allowed weeds to get started. Incorporating crop residue was essential, not just to speed decomposition and killing pathogens, but also to loosen the soil and kill weeds and thereby get buckwheat off to a good head start.

The buckwheat can be used in several ways. First, it can be used strictly as a cover crop to improve tilth and suppress weeds, then followed by a fall-planted crop. Second, it can be raised for commercial grain harvest and sold to processors. Finally, it can be raised for cover crop seed and sold locally.

A cover crop is killed just as it comes into full bloom, typically 35-40 days after planting. If compaction is a serious issue, it can be followed by cover-crop radishes in the fall.

Rotating buckwheat for grain after early legumes can make good sense for certain growers. Buckwheat can provide revenue. The price of buckwheat grain has risen substantially in recent years. In the Northeast, demand exceeds supply. Wholesale buckwheat grain will be the best fit for growers who have a large land base (rotating tens of acres), and access to drills and combines for small grains. Buckwheat does not require additional farm labor, or cash besides seed cost.

Buckwheat for cover crop seed makes sense for growers with a few acres who can meet the exacting standards of high-vigor weed-free seed and are able to direct market to their local grower community. Elizabeth Dyck (www.ogrin.org) has been developing marketing strategies that strengthen the organic economy, and can be used in New England as well. Vegetable and berry growers who find buckwheat cover crops useful will welcome a local supply as cost-effective.

Keys to success: Fast start. No Gaps. Kill on time.

Further information is at www.covercrop.net