

## Which small grains overwinter the best?

by Tomoko Ogawa

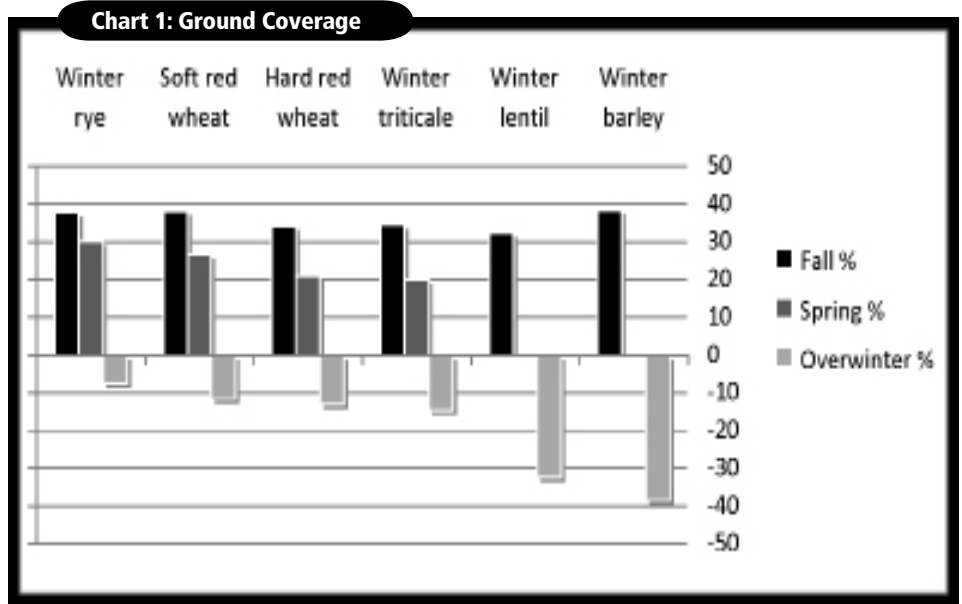
**Driven by the practical nature of our members, PFI is always looking for ways to work together to farm better. Part of the quest is to make good land stewardship more profitable for our members.**

With that in mind, PFI has found another good reason to plant cover crops: They are yummy and can be used to feed humans as well as livestock.

### PFI's Small Grains Study

To learn more about the ability of various small grains to overwinter on the Iowa landscape and be profitable, PFI began exploring which cover crops could be good at both covering the soil through the winter and being harvested for food quality grains. PFI is assessing which winter small grain crops, such as winter wheat, rye or barley, could do double duty.

PFI planted cover crops (using a no-till, drilling method) on October 5, 2010, following soybean harvest at ISU Agronomy Farm near Boone. Six different crops were tested. The test consisted of four hard red winter wheat varieties, three soft red winter wheat varieties, four winter rye varieties, one winter



**Graph 1. Fall ground coverage, spring ground coverage and overwinter percentage of six different varieties**

triticale variety, four winter barley varieties and one winter lentil variety.

On November 29, 2010, prior to snowfall, 16 different small grain varieties and one winter lentil variety's coverage of the soil was measured. Then in spring

the cover crops were measured again after snow melted on March 2, 2011.

### Some species clearly better than others

All cover crops had the same amount of fall growth going into winter. While different *varieties* varied in their overwintering performance, their differences were not statistically significant. On the other hand, differences among *crops* were statistically significant.

Among crops, winter rye performed best, followed by soft red winter wheat, hard red winter wheat, winter triticale, winter lentil and winter barley. By looking at individual varieties, hard red winter variety Arapahoe performed best at overwintering in our experiment this past year. Arapahoe actually grew under the snow and was the only variety to have more biomass present following snow melt.



**Plot comparison photo, May 2, 2011**

**From left to right: Kaskaskia (soft red wheat), Elbon (rye) and Overland (hard red wheat)**