

Hairy Vetch as a Cover Crop

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Currently, winter rye is the predominant cover crop in New England. However, legume cover crops, particularly winter-annuals such as hairy vetch, can add significant amounts of nitrogen to the soil when incorporated. Four years of research at the University of Massachusetts have demonstrated that significant reductions in nitrogen fertilizer use can be achieved with the use of hairy vetch (Figure 1).

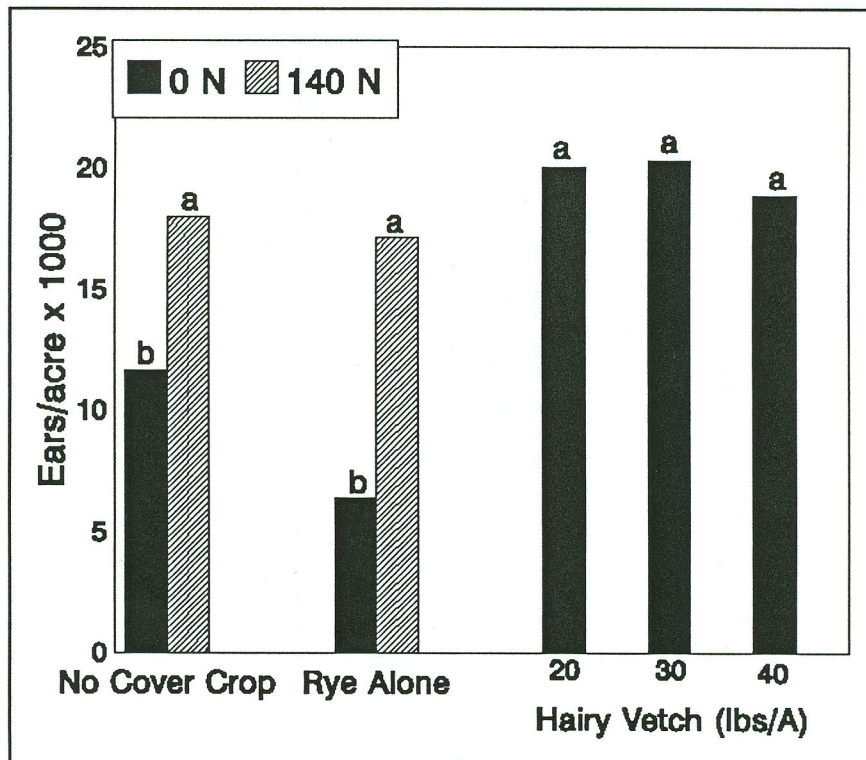


Figure 1. Marketable sweet corn ears for 7 cover crop regimes. Cover crops were seeded Aug. 26, 1990. Corn planted June 11, 1991.

Hairy vetch as a cover crop that has been gaining in popularity among vegetable growers in New England, however, there has been little use of this cover crop by dairy farmers. There are several good reasons for this. Many dairy farmers are not looking for more nitrogen sources because of the amount of manure that they have available. Another limitation is the time for seeding of this cover crop. Research has shown that vetch should be seeded no later than Sept. 15 to ensure adequate establishment before winter. Seeding this cover crop after this date could be a waste of expensive seed. Many dairy farmers may not have corn off their fields in time to establish hairy vetch.

There are some reasons for its use and some solutions to the obstacles. One possible place where dairy farmers could use this legume is on fields located far away from the barns, where trucking manure can be more difficult. As far as the time of seeding, one possible way to get around this is to overseed this cover crop before the corn has matured. This will allow the cover crop to establish itself. Research at the University of Massachusetts found that overseeding hairy vetch one month before corn harvest was very successful in establishing this cover crop.

We have been recommending mixing hairy vetch in with winter rye. Winter rye will establish quicker than hairy vetch and give better erosion control. It has also been established that winter rye is more efficient in taking up nitrogen. This means that nitrogen that is still in the soil after the corn is harvested will be taken up by the rye and then added to the soil the next spring rather than lost through leaching.

The seeding rate of vetch will depend on how it is seeded. If a grain drill is used, then rates as low as 30 lbs/acre have been shown to be effective. If the cover crops are to be spun on and then lightly disked-in, then rates closer to 35 lbs/acre should be used since the uniformity of germination will not be as good as when drilled. With overseeding, perhaps rates of 40 lbs/acre are needed.