

# Hairy Vetch extending new roots in the 90's

by Allison Arkinstall

For a leguminous cover crop that has been put on the back burner for half a century, hairy vetch is filling a very functional niche for innovative farmers in Ontario today. Its use as a very high quality forage and high nitrogen fixing cover crop make H an attractive option for integrating into today's sustainable farming systems.

George Stock, a dairy farmer from Tavistock, Ont. sowed 9 acres of spring barley and hairy vetch for forage as part of a field demonstration of hairy vetch with REAP-Canada in 1989. Stock harvested 3 Vac of palatable barley-vetch hay over 2 cuts, taken July 1 and August 25, which tested at 16.3 % and 24.6 % protein respectively. These values were higher than Stock's alfalfa based hay which measured 12.7 % and 18.8 % protein for first and second cut.

## Likes timing

This was, however, because of adverse weather conditions during harvest in 1989. He was especially impressed with the second-cut vetch hay. Although it had been rained on quite heavily, Stock applied a hay inoculant when baling to reduce leaf loss. The milking cows were fed the first cut while the heifers were fed the second cut with no additional protein supplement.

Stock likes the timeliness of taking off spring-seeded vetch hay after his established alfalfa. He noted, however, that the second cut hairy vetch hay matted on the ground because of heavy rains. On the first crop the barley in the mixture provided support so that the vetch stayed off the ground and dried out faster.

Stock also tried seeding the outside rounds of the field to alfalfa in 1989 to see if it would establish. In the spring of 1990 a thick hay stand was present. Stock felt he had struck upon an excellent forage nurse crop for an alfalfa underseeding. "I can take off a good hay crop instead of growing cereals and having to spray, and at the same time establish a good alfalfa stand."

This year Stock sowed 14 acres of barley and hairy vetch and underseeded it to alfalfa on April 28. He's looking forward to another good hay crop.

## Capitalize on Vetch

Gary Chipps, a dairy farmer from Delhi, Ont. is also learning how to capitalize from hairy vetch. It voluntarily appears on his light sandy loam soils. His neighbours call it a weed but Chipps thinks it has a place for feeding the dairy herd with his light soil. Chipps' dairy feeding program relies on baled hay and cob corn, so he is pleased at how well hairy vetch performs on his farm. "It establishes earlier than alfalfa and it survives much better on my drought-prone soils."

His first experience with vetch came in mid-July 1989, when Chipps baled mature rye and hairy vetch from a neighbour's farm. This late harvested feed still provided a crude protein level of 16 percent. Encouraged by its feeding potential, he sowed 4.5 acres to pure stands of both common and Certified Madison hairy vetch in mid-August last year. He took off 309 bales on May 28 and with little regrowth appearing, Chipp's no-till planted corn.

Chipps, like Stock, found that the hairy vetch lodged heavily when it was rained on, so this year he will sow rye and hairy vetch in August for an early 1991 hay crop. Last fall he sowed two different lots of hairy vetch. Chipps noted that the common hairy vetch variety stood better than the certified variety Madison. "I like the more erect growth of the common variety and its wider leaves give me better hay" adds Chipps.

He experienced a volunteer hairy vetch problem in an oat field no-till drilled on March 15. Chipps harvested some of the field as hay at oat heading in mid-June. Where the vetch was the thickest he is planning on combining the vetch and oat mixture for seed for future plantings. With the price of hairy vetch doubling in 1990 to \$1 .50/lb due to increased demand, he feels he has, by chance, an opportunity not to be missed.

Hairy vetch spring-drilled into winter wheat on silt loam soils is a system that two farmers have mixed feelings about.

Harry Wilhelm, a Tavistock area low-input farmer, likes the system. In mid-May 1989, Wilhelm drill-seeded 18 acres of hairy vetch at 25 lb/ac and he harvested a 60 bu/ ac wheat crop. To economize on trips over the field, Wilhelm decided to combine the drilling of the vetch with the nitrogen fertilization of the wheat.

John Van Dorp, a hog and dairy farmer from Woodstock, Ont. tried the drilling technique on a side hill and encountered a few problems. He drill-seeded 8 acres of hairy vetch into wheat that was 6 to 8 inches high. The wheat was established following corn and Fusarium reduced the wheat yield to 50 bu/ac. The lack of competition from the wheat crop caused the vetch to grow into the wheat heads at harvest making direct combining difficult

Both Wilhelm and Van Dorp experienced vigorous vetch regrowth, yielding 2 t/ha and 3.5t/ha fall biomass, respectively. Both consider hairy vetch to be superior to red clover in biomass production.

Wilhelm has confidence in the spring-seeded hairy vetch and he has interseeded all of his wheat this year with vetch. Van Dorp however, remains skeptical. "It really is a sheer nightmare not knowing whether you are going to get a 50 bu/ac wheat crop and wonder if the vetch is going to come up over the wheat."

So, Van Dorp seeded hairy vetch last August as an Overwintering cover crop on a field that has a 15 degree slope. He's really pleased with the potential that hairy vetch has in what he terms his "soil-building program". He has experienced severe erosion problems on his farm and he feels that the soil-holding capabilities of the hairy vetch will play an integral part in this plan.

"When I started growing hairy vetch, the first thing I noticed was the tremendous fibrous root mass." states Van Dorp. That, along with the nitrogen potential in the biomass, can do wonders for both soil structure and fertility. He herbicide-killed the vetch in mid-May, tilled it once with an Aer-Way implement and followed with the no-till corn planter. Van Dorp envisions a lot of nitrogen potential in that killed biomass and he is hoping that such a system can reduce his commercial nitrogen input for corn.

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