REAP On-Farm Research and Demonstration Field Day

By Roger Samson

Approximately 20 people turned out on Aug17th for the second annual REAP field day held at the farms of Harry Wilhelm and Lloyd Kalbfleish of Tavistock, Ontario. The group consisted of local farmers, government and private crop consultants.

At the Wilhelm Farm

The first field visited was one that had been in winter wheat in 1987 and had oilseed radish seeded after harvest. The oilseed radish, seeded just 5 days before the field day, was already emerging, hence demonstrating its rapid growth capabilities (Oilseed radish is a cover crop widely used after small grain harvest by organic farmers for its ability to improve soil tilth, scavenge soil nutrients, and suppress weeds).

The second field visited was a white bean field that had been rotary hoed and cultivated for weed control. Harry gave a demonstration on the use of a rotary hoe and stressed the importance of proper timing and precision planting when using mechanical weed control. This was Harry's seventh straight year not using herbicides on white beans as he couldn't justify their cost nor their potential to reduce white bean yields.

The final stop at the Wilhelm farm was a corn field that received only $1.00 per acre in chemical weed control. Harry explained with the use of his corn planter how he applies a 6" band of atrazine behind the planters press wheels at the time of seeding. By band applying at a rate of 2 lb. per acre in corn planted in 36" rows, Harry uses only 1/3 of a pound of atrazine per acre for weed control along with 2 row crop cultivations. This was his 13th year at banding herbicides in corn and he appears to have mastered the system as his fields were almost entirely weed free.

After many questions about Wilhelm's excellent weed control systems the tour enjoyed a much needed refreshment break. Watermelons were provided courtesy of Rob Chesney; a local tobacco producer diversifying into the melon business.

At the Kalbfleisch Farm

The Kalbfleish farm was the site of the 1986 REAP Field Day and results from last years research were presented beside this years trials. The first trial viewed was a replicated experiment that demonstrated the economics of several weed control systems and the

establishment of interseeded forage species with and without herbicide bands. The corn was an outstanding crop and was causing extensive shading to the interseeded red clover and ryegrass. In terms of weed control results were similar to 1986 in that cultivation and herbicide banding were providing excellent weed control.

A preliminary economic comparison was made between the 1986 Kalbfleish corn crop (4C structured rotational corn) and that of a continuous corn system. The 1986 corn crop was grown without insecticide following mixed grain seeded down with red clover plow-down. A fertilizer and herbicide banding system further reduced input use by enabling reduced applications to be made with the corn planter.

After the main corn experiment an adjacent small plot trial was toured that consisted of various interseeded grass species in corn. The interseeded winter rye and winter triticale had established well earlier in the season but were dying by August because of the very hot weather in late July. The annual ryegrass appeared to be the only species able to survive in the very high yielding com crop.

The final stop on the tour was a soybean field that was grown on the site of the 1986 corn weed control cover crop site. In the second year of this trial an overall system of two rotary hoeings and one cultivation was used across all soybean plots. No differences could be visually observed between last year's corn treatments and this year's soybean crop. However, many of the farmers on the tour were most impressed with this field, particularity as it had received no herbicides or fertilizers.

Editor's note: The results are in from REAP On-Farm Researches 1987 trials evaluating the 4 C system. The highest yielding treatments produced 202 bushels/acre for corn and 58 bushels/acre for soybean. A full report on our weed and crop management systems will follow in our next issue.