

FINAL REPORT

LONG TERM NO-TILL COVER CROP SEEDING IN VINEYARDS

by JUNE PENDLETON

The goals of this project are to reduce chemical use, soil erosion, compaction, and cost, while improving organic matter, water holding capacity, and fruit yield. Additionally, it will enhance habitat for birds, small game, and for sod and soil-borne organisms.

Pendleton Farm is a full-time operation whose major enterprise is growing juice and wine grapes to sell to commercial processors. The operation has not changed, but we are looking at ways to transfer the operation to our two sons.

The Yates County Soil and Water Conservation District, with two nearby SWCD'S, shared with our farm in the purchase of an RD-88 Truax no-till drill. YCSWCD has arranged storage for the drill. They give technical advice to growers and help them calibrate the machine. The Finger Lakes Grape Program leader of Cooperative Extension is interested in the project. He has been involved in a NYS Experiment Station organic grape growing project in which row middle seedings are being tried.

The project was begun as described in the proposal. Plot 1 was seeded to Dutch white clover. Plot 2 vineyard growth was too thick for drill to fit through so could not be planted in 1994. Plot 3 was seeded to 30% Scaldis fescue, 30% red fescue, and 40% dwarf perennial rye grass. Only the grass mixture grew.

In 1995 we continued the project. Dutch clover was seeded in a different 5 acre block on July 28 to replace the failed 1994 planting. Next was planted 5 acres of red fescue. This was a change from the plan to use half clover with the fescue. Replanting had used all the clover.

The 1994 grass seeding grew well. It began well this year. Spring and summer rainfall was well below normal until mid July. The seeding has offered minimal competition to the grapes. It is growing vigorously since recent rainfall, but lay nearly dormant during the long dry spell.

It will take several growing seasons to determine the economic value of the vineyard cover crops. So far the idea looks promising.

So far the Truax seeder has not proved as good as its maker's

claims. It is very rugged machine, and does plant seeds of several different types through its three separate hoppers. However, it has some problems.

First, it was not assembled correctly. In fact that was probably part of the problem with the failed clover seeding. The drill plants deeper on one side than the other. By adjusting disk opener height we were able to improve depth control. However, it will take some major shop time to fix the problem.

Second, the machine with wheels is too heavy, long, and wide for easy vineyard use in July and August when seedings would normally be made. YCSWCD wanted towing capability for moving from farm to farm. We would recommend a three-point hitch drill. Although none was available in 1994, at least two narrow drills are available now.

Pendleton Farm will continue to experiment with no-till row middle cover crops because of our highly erodible soil and the need to control costs in the present very difficult farming economy. We continue to tell other growers of the benefits of no-till row middle seeding versus tillage or mowed weeds.

So far we have had several opportunities for outreach. "The Canandaigua Daily Messenger" published an article on November 8, 1994 which detailed the project and the SARE program. We made a presentation to the Canandaigua Lake Watershed Task Force meeting on November 15, 1994.