

Sustainable Agriculture Research and Education Program
Final Report - grant FNE 94-44 ✓

The following report is a final report, with all parts of the grant completed. The Field Day, planned for the fall of 1995 is the only part not complete.

- 1.) Project goals and/or objectives: To assist in the reduction of solid waste, specifically hardwood leaves and their plastic bag containers, into our landfills while reducing the use of expensive fertilizers. This was done in the fall of 1994. In the following manner, the leaves were raked to the roadside, by the homeowner, where I picked up & deposited them into my truck through use of the leaf shredder. The leaves were then taken to the test site & unloaded into three groups, for later use.
- 2.) Using the shredder, 10 loads of leaves (4-5 ton) were disposed of in the above manner. The three groups will be used as follows:
 1. leaves will be put on direct to the land for crops that are high nitrogen producers (beans, peas, etc.).
 2. the leaves will be mixed with finished compost (cow manure, sawdust, and hay mix) to make a mulch bed for high nitrogen feeders (squash, cukes, etc. to keep the moisture and nutrients in the bed.
 3. the leaves in group 3 will be used as a carbon source with dairy manure to make compost.
- 3.) Cooperators to date include:
 - * local homeowners in Hardwick
 - * USDA Natural Resource Conservation Service, Caledonia County Conservation District.
 - * dairy farmers
 - * local vegetable growers interested in similar practice
 - * UVM Extension and AgrAbility - northeast region office - technical info, pictures & slides, outreach activities for joint mid-summer demo
- 4.) Things that were done, and ongoing: First a test on the leaves was done for nutrient values, with the following findings: N-P-K = 0 - 10 - 30, with high magnesium (305 ppm) and high calcium (1093 ppm). The direct soil use I have been using for the last two years with beans. The leaves were incorporated into the soil with my tiller, two weeks before planting. Findings, the bean plants grown in the leaf mix soil grew larger and produced beans 5-7 days sooner than the beans that were not. More tests on crop growth will be done this year.
- 5.) Cost breakdown:

the machine ranges between \$1550.00 - \$2000.00 for the unit.

With care and maintenance, one should get 8 - 10 years minimum. or \$155.00 - \$200.00 per year. ✓

- With time and gas, total cost will be between \$300.00 - \$500.00/year.
- The cost of commercial fertilizer of equal N-P-K is between \$200.00 - \$300.00/ton with mag. added.
- Then lime will need to be added for the calcium at \$80.00/ton bagged, \$46.00/ton bulk (5 ton minimum).
- Organic fertilizer is 10 - 20% more.
- My cost for 3 acres:
 leaves - 5 ton at \$350.00 - \$400.00/yr
 commercial fertilizer - 5 ton 0 - 10 - 30, \$10,000/yr +
 lime \$230.00 = \$10,230.
 * savings are +\$400.00/yr with leaves.

- 6.) New ideas: . Compost mix, soil additive, mulch, the list is long for use of leaves, to enrich the soil not as an additive to our landfill. Leaves are Mother Nature's food for the earth, not trash for the dump!!!!
- 7.) Another vegetable grower used a truckload of leaves for his berries. He had not been able to get the volume of leaves, plus to have them shredded was an added bonus. Two other growers like the idea and are looking into the shredder vs rising fertilizer prices. I plan on getting the word out, with the help of UVM Extension and Soil conservation.
 * The use of NRCS is with a compost grant from Lake Champlain Water Quality, to work with dairy farmers for storage of their manure through composting. The farmer puts a better product on their soil, plus need to use less, which can be sold to local gardeners. Part of pile # 3 of the leaves was used as a carbon source instead of paper. The natural cellulose in leaves breaks down better than paper in the compost process.
- 8.) The outreach program will show farmers and homeowners the total package of what leaves can do for them. The results are incomplete because of the season of the leaves. My results, will be complete in the fall of 1995, with the harvest of the crops in the test.

DON'T BAG IT COMPOST IT!!
 Tod DeLaricheliere, landowner
 Ginny DiFrancesco, UVM Extension - AgrAbility
 May 9, 1995