

## Multiflora rose

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commitment from Agriculture Secretary Penrose Hallowell to come up with new legislation similar to HB 2360 which was defeated this past session. HB 2360 would have allowed the Secretary of Agriculture to declare a plant a noxious weed by holding a series of hearings before a noxious weed committee, but without the currently required legislative approval.

Bowers said Tuesday the Commission would not oppose such a move if the

Commission were represented on the weed hearing panel.

Bowers, shortly after the meeting, issued an order curtailing production of autumn olive at the Commission nursery.

Both the multiflora and autumn olive moves were taken administratively and will require no further Commission approval.

Rep. Hayes also asked Penn State University to work on management guidelines for multiflora rose.

Hayes, backed by 40 Huntingdon County farmers, said he would check the Soil Conservation Service to be sure they are not using multiflora rose or autumn olive as cover to reclaim land.

Bowers said the Game Commission had stopped planting multiflora rose several years ago but still sees a place for the species in wildlife management.

He said the Commission is doing some studies using Roundup to eliminate multiflora rose.

"But we are not going into an all-out program to annihilate multiflora rose," he added.

Bowers blames much of the problem experienced by the farmers in Huntingdon County and other areas on birds who eat the multiflora berries and spread the plant in their droppings. The plant quickly takes over uncultivated meadows or land along stream banks.

This summer, the Huntingdon County farmers and County Agent Harold L. Lockhoff asked their County Commissioners to do something about the problem. The County Attorney told them they would have to go to the Secretary of Agriculture for help.

They did so at the County Fair in August. There, the Secretary invited them to come down to Harrisburg to talk.

Hayes organized the date and led the day for the farmers Representatives of the Grange, Farmers' Association, and even the Holstein Association backed him up.

Hayes asked the Game

DOVER, Del. — Use of sewage sludge as fertilizer on cropland is a long-established practice in some parts of the world though only a recent development in the U.S.

But as the prices of commercial fertilizers and the cost of sludge disposal mount, researchers are taking a close look at how this waste material can be safely and effectively used for agricultural purposes in this country, too.

For the past three years scientists at the University of Delaware Agricultural Experiment Station have been studying the feasibility of using sludge from Kent County's sewage treatment plant on field crops.

When Station soil scientist William Liebhart began his

Commission to firm up its oral commitments at its January meeting. Bowers confirmed on Tuesday that the full Commission would be informed of his action at the January meeting.

Why was it so easy for the Huntingdon County farmers to succeed where so many others had failed?

Actually, they will say, it wasn't easy until they got the ear of the new Majority leader. He made sure the group in Harrisburg was listening.

It was all downhill sledding after that.

project back in 1977, the first thing he did was analyze the sludge for its nutrient content.

He found that an application of 2.77 dry tons per acre would provide roughly 300 pounds of nitrogen and 235 pounds of phosphorus. Fifteen percent of the nitrogen is ammonium. The rest is organic nitrogen — an excellent ratio for plants.

An analysis of heavy metals in the sewage waste showed up an excess of only one — zinc. This occurred at nearly twice the level considered safe for crops under current guidelines. While this poses no threat to humans (nutritionists say the American diet tends to be too low in zinc) Liebhart was concerned about a possible toxic effect on plants and soil.

To find out how well plants would perform with the sludge, he established research plots near the treatment plant and started growing both corn and soybeans there.

He applied sludge at four different rates — 0, 440, 880 and 1760 pounds of nitrogen per acre. The two highest applications used several times more nitrogen or sludge than should be used under normal conditions. But the scientists felt this test was necessary to judge the safety margin for the soil amendment.

Results to date are encouraging, reports Liebhart. "We've found no visible sign of zinc toxicity in either corn or soybeans. Neither growth nor yield have been adversely affected by the sludge."

Analysis of plants grown on sludge-amended soil shows increased concentrations of both manganese and zinc. But both are well within normal ranges and don't indicate problems for either the plants themselves or for their use as animal feed.

Other research has shown that soil type and soil pH may be more important than the application of sludge in controlling zinc uptake in plants, says the soil scientist. The native supply of plant-available zinc in soils is quite variable. Low pH also favors zinc uptake. This indicates the importance of site management where sewage is used as fertilizer.

"We are now reasonably assured there's no problem with the use of sewage sludge on field corn as long as amounts used are those needed to meet fertilizer needs, and not as disposal mechanism," reports Liebhart.

With proper management he feels the material has potential on Delaware soils as a safe and effective fertilizer.

He and fellow scientists have just started a new project at the University's Georgetown Substation where they will be comparing the performance of several vegetable crops under various sludge and commercial fertilizer treatments.

Work is also in progress to evaluate the rate at which plant-available nitrogen is released from sludge. This will help researchers learn how much of the material farmers need to use for adequate crop growth.



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