## Watch For Noxious Weeds

Robert E. Leiby David L. Dunbar Lehigh Co. Extension Some weeds, if not controlled, can cause public health problems and can interfere with agriculture in significant ways.

Because many of these weeds spread easily, grow quickly and compete heavily, they reduce crop yields and interfere with harvest. Others create traffic safety problems by covering signs and blocking driver visibility, especially at intersections.

In Pennsylvania, some of those weeds are called "noxious" and they include the following: marijuana, chicory, Canadian thistle, multiflora rose, Johnsongrass, musk thistle, bull thistle, Jimsen weed, mile-a-minute weed, kudzu, and shattercane. Noxious weeds may not be planted, propagated, or sold in Pennsylvania.

In 1982, the state legislature passed the Noxious Weed Control Act to establish specific procedures for controlling noxious weeds and handling complaints about them. The law, in addition to defining and naming noxious weeds, created the Noxious Weed Control Committee which may designate "noxious weed control areas" where certain weeds are causing problems.

When a weed control area is declared and properly advertised, all landowners within its boundaries have 60 days to eradicate the offending weed(s) from their properties. Landowners who fail to comply may be required to reimburse all township expenses in eliminating the weed and may be fined up to \$300 or sentenced up to 90 days in prison.

Landowners who interfere with township efforts to eradicate the weed(s) may be subject to a maximum fine of \$2,500 or a prison sentence of one year.

Landowners and municipalitles with noxious weed problems may submit written complaints to the Bureau of Plant Industry, Pennsylvania Department of Agriculture, 2301 N. Cameron Street, Harrisburg, PA 17110, (717) 787-4843). Such complaints should include a description of the problem, the names, addresses and phone numbers of the complaining and violating parties, and directions to the problem site. When possible, a weed sample should accompany

the complaint. Townships have the authority to adopt their own weed control ordinances, and they may petition the state secretary of agriculture to establish a noxious weed control area.

If a problem occurs along a state road, the township should notify the state Department of Agriculture, not the state Department of Transportation.

Weed control recommendations may be obtained from county extension offices.

## Lehigh Valley Horse Council

Tom Yetter will host the next meeting of the Lehigh Valley Horse Council at his T.N.T. Farms, Inc., in the Fogelsville/New Smithville area at 7:30 p.m., Monday, July 29.

Yetter will present a program on the topic "Starting the Horse and Rider Over Fences." From I-78/Rt. 22 at the New Smithville exit 13, drive 1-1/2 miles north on Rt. 863. The farm's slate-blue buildings are on the left.

Ag Progress Days A wide range of programs from equine education to food safety to alternative agricultural practices — will be featured at the 23rd annual Ag Progress Days sponsored by Penn State's College of Agriculture, August 13-15.

Held at the University's 1,500acre Russell E. Larson Agricultural Research Center at Rock Springs near State College, the three-day event will include exhibits, farm machinery demonstrations, and tours of Penn State's research areas.

Ag Progress Days will run from 9 a.m. to 5 p.m. on Tuesday and Thursday, August 13 and 15, and from 9 a.m. to 8 p.m. on Wednesday, August 14.

This year's theme, "Ag Science Touches Your Life," will highlight many of the ways that agriculture directly or indirectly affects our daily lives.

Ag Progress Days is one of the largest outdoor showcases of agricultural research and technology in the East. More than 250 commercial exhibitors will show and demonstrate approximately \$20 million worth of agricultural equipment.

The event also features tours of research farms and conservation education areas; exhibits and presentations by Penn State faculty on topics such as sustainable agriculture, international agriculture, food safety, mushroom production and composting, nutrient management, forest management and the conversion of forage to food and fiber products; a working computer classroom; a museum fuil of antique home and farm implements; landscape, lawn and garden advice; information on how to start a small business; and more.

New this year is an equine educational program. The program includes breed exhibitions, handling and training clinics, riding demonstrations, and horse shoeing and tack displays.

## Hay Preservatives

Generally, hay with a moisture content of 20 percent or less will not spoil during storage. Large round bales should contain hay that is slightly drier (approximately 18 percent).

If hay is baled with more than 22-25 percent moisture, often it will become moldy and much of the feeding value will be lost. Hay with a moisture content of about 25 percent provides an excellent environment for growth of aerobic microorganisms.

Marvin Hall, Penn State forage specialist, said hay preservatives work by inhibiting or reducing the growth of aerobic microbes in moist hay. Microbial growth causes heating and a subsequent depression in digestibility. Most hay preservatives do not improve forage nutritional quality. They merely prevent a quality reduction.

Hay preservatives can be grouped into three categories: orsganic acids and their salts, ammonia-based materials, and microbial additives. Hall said propionic acid is the most effective and most tested preservative presently available. Since it is a liquid, tanks(s) and a spray application system must be added to your baler.

Spray nozzles must be spaced to distribute the chemical evenly over all forage as it enters the baling chamber. The amount of active ingredient that must be applied depends on the moisture content of the hay. Small bales with 20-25 percent moisture should be treated with about 0.5 percent propionic acid (as baled basis). Application rate should be increased to one percent for hay with 25-30 percent moisture. No consistent response to any preservative has been observed with hay containing more than about 30 percent moisture. For more uniform coverage, it is best to use a 50 percent solution and apply twice as much of the diluted acid. The main disadvantages of propionic acid is its corrosiveness and the cost of application equipment.

To overcome these problems, buffered acids and salts of acids have been developed. These products have not been tested as extensively as propionic acid. Buffered acid applied at about 1 percent (as baled basis) was as effective as one percent propionic when applied to alfalfa hay baled with 30 percent moisture. If buffered acids continue to be as effective as propionic acid, producers will have to balance the added cost of buffered acids with the reduced wear they cause on equipment.

Ammonia is toxic to many microbes and can be a very effective preservative for moist hay when applied to good quality forages at only one percent of forage weight (as baled). Caution: Do not exceed one percent level since further ammoniation of highquality forge can cause hypersensitivity and, ultimately, death of livestock. Ammoniation to one percent provides an additional benefit by increasing the crude protein content of the forage by two to four percentage units.

Anhydrous ammonia applied at a one percent (as baled) rate has consistently preserved hay with up to 30 percent moisture content. In some trails it has preserved hay with up to 35 percent moisture.

The major disadvantage of using anhydrous ammonia as a preservative is the difficulty of accurate application, according to Hall. Devices have been made to

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