

How to avoid creeping green alfalfa

BY JOYCE BUPP
Staff Correspondent

BAIR — That green out in your alfalfa fields this summer may not all be valuable dry matter. If the green crawls, creeps or flies, you'd better take a closer look.

And, according to Stan Gesel, Penn State entomologist, if the green is walking sideways, you've probably got potato leafhoppers and most likely a problem in the making.

Leafhoppers, which do not winter here but migrate in from the South about June 1, are only about an eighth-inch long, wedge-shaped and a yellow-green color. But this tiny insect can wreak havoc to hay stands, especially new seedlings.

A yellowing of alfalfa leaves is one outward sign of leafhopper infestation. The insect stings the leaf, sucks out plant juices and leaves behind the real culprit, a toxic material that plugs up the system of internal vessels that feeds the leaves. Plants become stunted in growth, have lowered disease resistance and may eventually die.

Just one leafhopper per alfalfa stem can result in a two percent

protein and 10 percent hay crop weight loss, or about \$19 per acre in yield and quality losses.

Since spray costs run an estimated \$8 per acre, forage producers must watch closely to determine when infestations are at the level where spraying is an economic investment.

Gesel recommends checking the pest populations with a sweep net, taking 20 sweeps at each of five different locations in the field being studied.

Sweep the net in a 180-degree half circle, sort of a one-handed golf swing, into the first three-or-four inches of the alfalfa stand.

Hold the insects in the net and empty them into a large paper bag. Fasten the bag top tightly closed and sit it in the sun for about a half-hour. The heat from the sun will kill the insects so that they can be counted. For quicker results, sit the bag in a very low, 120 degree oven for five minutes.

Charts with infestation damage levels and spray recommendation programs are available through the county agriculture extension offices.

"Don't cut back on alfalfa seed costs, that's too small a hay cost

input to be scrimping on," voiced two of the forage seminar speakers, economist Donald Dum and agronomist John Baylor, both of Penn State.

Seed and pest control costs are actually two of the lowest dollar inputs per acre of alfalfa hay, according to data these two specialists have accumulated over several years of research in forages.

Forage producers can expect to spend \$145 per acre just to establish an alfalfa stand, so each year that a field can be kept profitably productive will stretch the initial investment. And, it takes another \$226 annually per acre just to operate that hay stand, almost 40 percent of that in machinery costs. Fertilizers and lime claim another 20 percent of the annual operating costs, while labor and land investment contribute a third.

Low yields from poor stands and high machinery overheads boost the cost of operating each acre. The economist's data shows that 3.6 tons of hay per acre are needed just to break even, based on 1979 cost inputs.

But top hay producers in the

state, says agronomist John Baylor, are harvesting twice that tonnage. Baylor's figures stem from his work with the Pennsylvania Alfalfa Growers program.

This Penn State research, reported to be probably the best in-depth forage study in the country, is a six-year cooperative effort between the University and hay growers from across the state who pencil-pushed detailed cost and yield data on their alfalfa acreages.

The top 10 producers in the study averaged about seven and one-half tons per acre of hay equivalent in both 1979 and 1980, or about one and one-half tons protein and four and one-half tons total dependable nutrients.

Most of these top yields were on tested limestone soil, all conventionally seeded except for one no-till, and planted in a variety of seed types.

Each of the top yields had one notable thing in common: they used liberal quantities of manure in rotation.

Most stands made four cuttings and one produced five, and

production went for both haylage and dry hay.

Cutting intervals were mostly at 35 to 40 days, with a slightly longer period allowed before the last cutting.

The test stands also required fewer sprayings, which the researchers attributed to an all-around better management program. Best yields came mostly from fields in their first full year of production.

Baylor noted that these top yields had an exceptionally high nutrient removal rate, showing the importance of maintaining high fertility levels on hay crops.

He especially stressed a regular soil test program and abundant levels of phosphorus and potassium.

Trial research data also emphasized the need to watch trace nutrients carefully, particularly boron and sulfur, which often are present at only marginal levels.

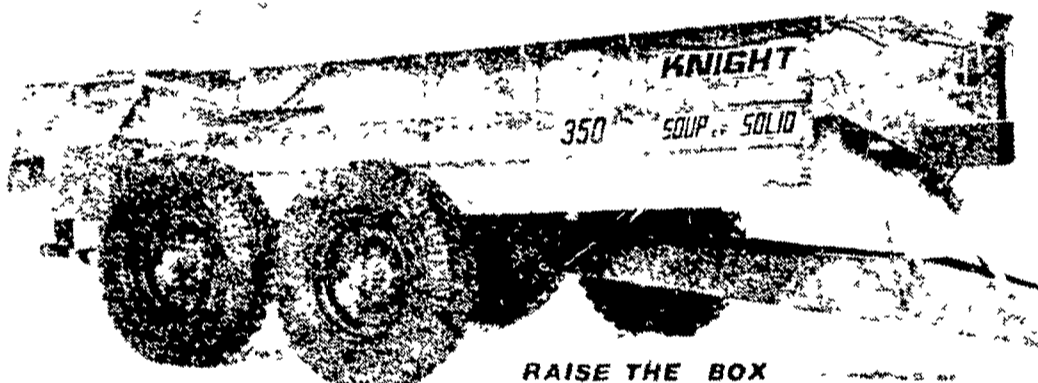
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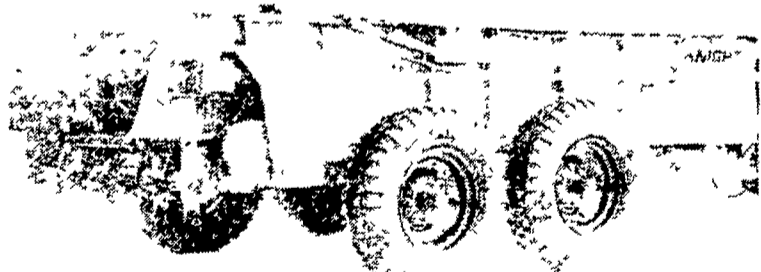
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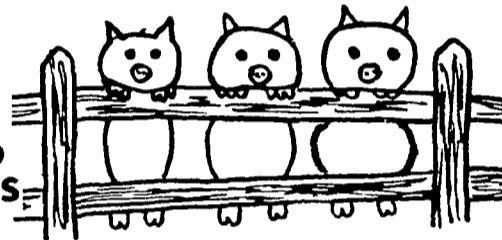
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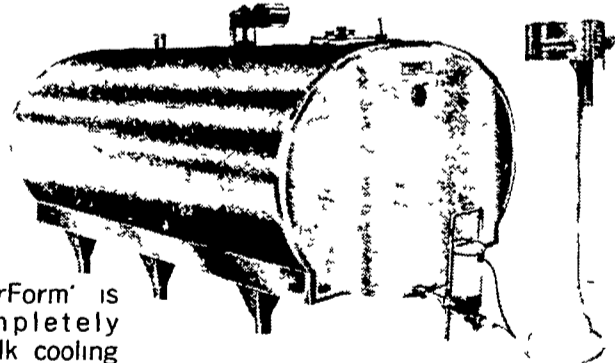
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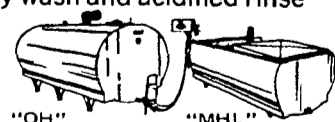
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