Herbicide Studies At Weed Field Day

Plant, First Cut Early To Fight Alfalfa Weeds

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LANDISVILLE (Lancaster Co.) — The early bird gets the first worm, so the story goes. Just so, early seeding of alfalfa and prompt harvesting may be the best weapons against weeds and their effects on forage quality, according to a Penn State forage expert.

As the result of studies undertaken by Penn State, fewer weeds and greater yields could be possible by seeding alfalfa in April instead of May and harvesting 60 days after emergence, said Dr. Marvin Hall, associate professor of forage management at Penn State, at the annual Penn State-sponsored Weed Field Day at the Southeast Research Farm.

On Thursday morning, Hall told about 100 farmers and agri-industry representatives at the field day that, by waiting too long to cut newly seeded alfalfa in hot weather, the alfalfa can't compete as well against the weeds.

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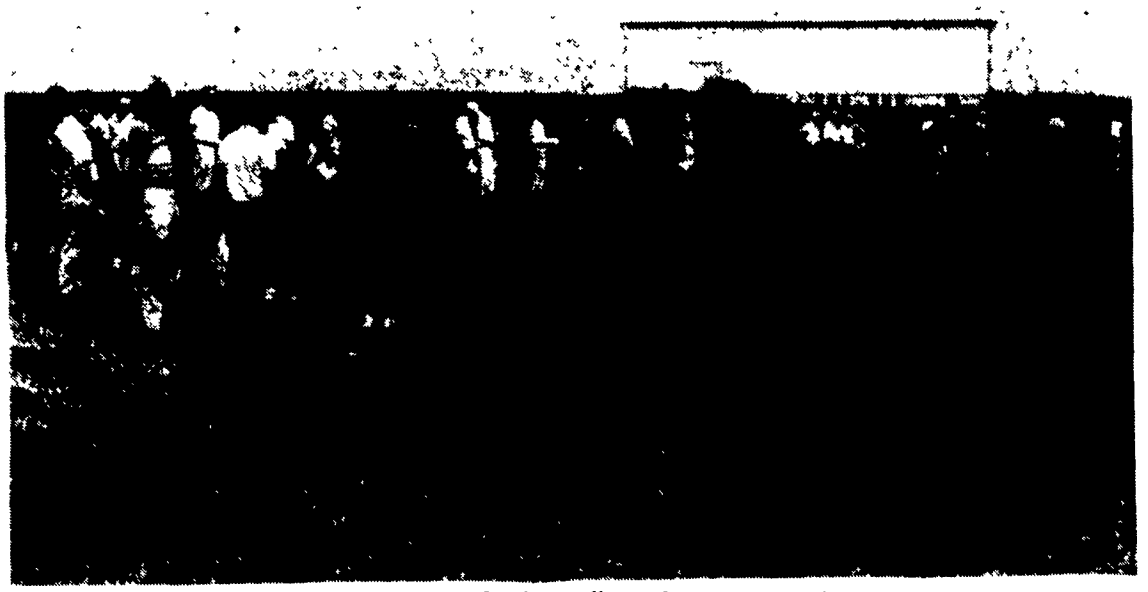

Those attending had a chance to look at a "weed screen" to show the effects of different herbicide treatments on a wide variety of weeds.

In the study, alfalfa was band-seeded at 15 pounds per acre into a tilled seedbed in 1991 at the research facility and in 1991 and 1992 at the Russell E. Larson Agriculture Research Center at Rockspring at four times during the growing season. In addition, various weed control practices were used.

Researchers observed the weed severity and control at both locations, using various herbicides at different application types and times. Weeds observed included lambsquarters, pigweed, foxtail, chickweed, and others, in a range of 10 percent to 70 percent of total dry matter harvested.

The question facing the researchers: do weed control practices in the study increase forage yield and/or quality?

The research concluded, said Hall, that "the answer is no, we didn't see an increase in yield or quality," despite the various chemical applications and under a range of weed pressures. Even late summer seeding showed no improvement in forage quantity or quality.

The key, according to Hall, may be to plant and harvest early. Hall indicated that alfalfa is very competitive against weeds early on in the growing season and can recover from a cutting 60 days after emergence.

This also applies to late summer seeding. To compete against late summer weeds, Hall suggests planting in August versus September.

But if alfalfa is to be seeded in fields that lay fallow or were in another crop, and the weed density is "horrendous," the question remains: will using weed control practices increase net economic return per acre?

Hall said, "economically, can we do it? That is the question."

The conclusion: different seeding dates and weed control practices did not result in consistent differences in net economic return/acre during the seeding year, first-production year, or for both years combined. Early summer seedings had similar economic returns per acre in the year after seeding as no weed control.

When alfalfa is either spring- or summer-seeded and weed infestations are light to moderate, weed control practices are not economically beneficial and may slightly

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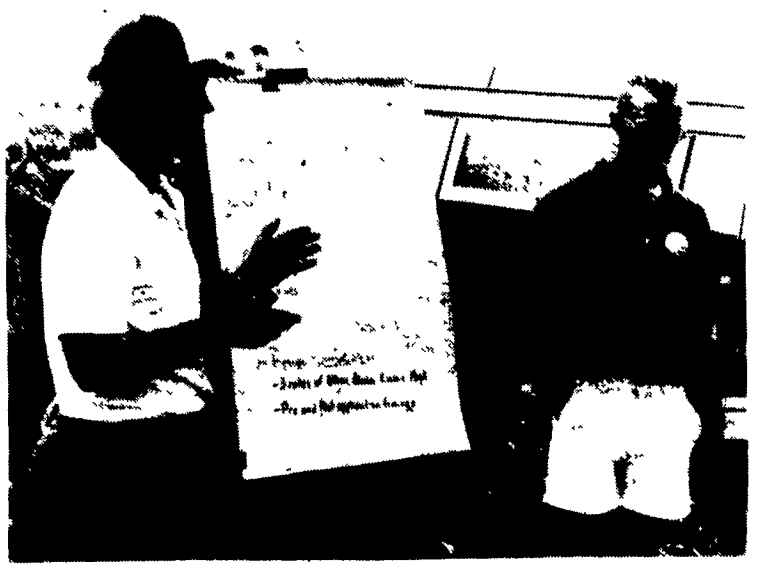
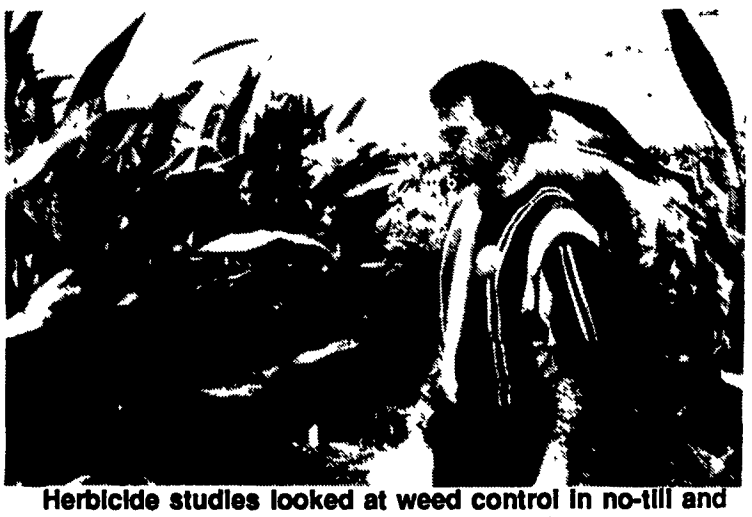


Dave Messersmith, graduate research assistant in the department of agronomy, right, provided some detail on the bur cucumber study at Penn State. At left is Bill Curran, Penn State weed specialist.

Also at the field day, Dr. Greg Roth, Penn State assistant agronomy professor, indicated that he has received many reports from around the state that there has been "lousy stands in corn." According to Roth, this could be the result of insect and fungi damage to the seed.



Herbicide studies looked at weed control in no-till and conventional till corn. Steve Cain, operations manager, Agway in Pleasant Gap, inspects weed emergence.

Ed Werner, research tech agronomist and master's candidate at Penn State, right, provided information on an ongoing study of economic threshold study of velvetleaf in corn. At left is Bill Curran, Penn State weed specialist.