Speakers discuss challenges in alfalfa production

HERSHEY — To insure that alfalfa continues to be a major factor in animal agriculture in the 1980's, it will be important to eliminate the use of low-yielding, obsolete varieties and insure genetic diversity

This was reported by A. A. Hanson, director of research for W-L Research, Inc., Highland, Md., at the Pennsylvania Forage and Grassland Council's 20th Anniversary Forage Conference held this week.

"It is imperative that we reduce damage from plant pests through advances in developing multiple pest-resistant varieties and by the effective application of improved pest management programs," he emphasized.

The research agronomist also noted that we must maintain balanced research programs designed to increase the value and total contribution of this important crop.

Andy Bell, ranch manager for J.G. Boswell Company, Corcoran, California, also a conference speaker, said that complete weed is absolutely necessary for continual production of certified alfalfa seed.

"To achieve control, we must think in terms of rotation first, and then the use of chemicals, cultivation, and hand weeding where necessary," he points out.

The ranch manager also emphasized that the future price the farmer has to receive for his production, and the price the hay farmer pays for his seed will depend on our ability to combat the many insect problems we have while at the same time insuring crop pollenation.

"An exciting aspect of research on any crop is the part of the results that is totally unpredictable. Unforeseen breakthroughs in breeding, growth modeling, pesticides, and forage utilization could drastically change the way alfalfa is grown," noted R.R. Hill, Jr., USDA research agronomist at Penn State's Pasture Research Laboratory.

Another unpredictable aspect of alfalfa research in the next decade is our reaction to the unknown, new pests that may develop, he noted.

A prime justification for continual support of alfalfa research is to maintain an ability to react to the unknowns of the future.

Theme of the conference was "Forages in the 80's."

Solar hay drying saves energy, quality

HERSHEY — Solar hay drying not only saves energy but also increases hay quality, points out Vernon Vahlkamp, a commercial hay grower from R2, Carlyle, Illinois.

Vahlkamp, who dries 500 tons of alfalfa annually, figures his solar drying system costs $8.10 per ton for high moisture hay. And, by harvesting at between 25 and 40 percent moisture, the leaves are saved, thus, improving quality

He noted that he installed solar collectors on the north and south walls of his drying shed. Drying the hay bales is accomplished by turning the bales up on one end forcing air up through them.

"The solar collector is working better than anticipated," he said. "Of the 18 million BTU energy available for 10 hours of collection in mid-July with nine fans running, 7.9 million BTU of energy are being used to dry the hay."

The Vahlkamp operation is cash hay. The market is local dairymen. The solar dried hay is sold at a premium of $15 a ton which more than pays for drying and the investment Saving hay from the weather is hard to figure, but $10 a ton is used. But, an $8.10 per ton drying expense will return $25 worth of hay for each ton.

The commercial hay grower points out that dairymen feeding solar dried hay are noting increases of 2 to 4 pounds of milk per cow each day. This means a profit of $56.80 per cow when feeding the solar dried hay.

"Moisture levels can be reduced to 10 percent with this solar drying system. This makes it possible to pellet, cube, or high density bale even in humid areas," Vahlkamp added.

How to produce top alfalfa yields

HERSHEY — How do you produce top alfalfa yields?

This question was answered by farmers who kept records as part of the Alfalfa Growers Program sponsored by Pennsylvania State University's extension service.

"Perhaps the best measure leading to high yields is a summary of production practices of top growers," said John Baylor, Penn State Extension agronomist.

In 1978, the top 10 growers used a total of six known high-yielding varieties, and in 1979, a total of five varieties.

All growers both years planted alfalfa on well-drained soils. Lime and fertility programs for establishment and maintenance were based on soil tests. High application of manure in the rotation before alfalfa resulted in generally high levels of potassium.

Baylor noted that each of the top 10 growers in 1978 made four cuttings. One grower in 1979 cut five times, the others harvested four times.

The average cutting interval was 36, 39, and 45 days between cuts one and two, two and three, and three and four, respectively in 1978.

Mother Nature was more of a factor in 1979 The respective cutting intervals were 39, 36, and 46 days, respectively.

All top growers in 1978 sprayed for leafhoppers and other insects at least once. Seven growers sprayed two or more times.

In 1979, the frequency of spraying for insects was less, with three growers reporting almost no insect damage.

"We now that leafhopper populations in 1979 were down slightly in some areas. But we also know that the insect management program set up by Extension entomologists has helped top producers keep a closer eye on the build-up of insects in their fields," the agronomist emphasized.

New technology to give instant ration

HERSHEY — Instant forage analysis and ration formulation are being taken directly to farmers through near infrared reflectance (NIR) technology, it was reported by John Shenk, professor of plant breeding at Penn State.

Shenk, a speaker at the Forage Conference held Monday and Tuesday in Hershey, noted that a nonochromater-based NIR instrument placed in a van along with a dryer, grinder, and computer software, can not only tell the farmer instantly how to supplement his forage for a given level of animal production, but also provide information on the cost-effectiveness of feeding different forages.

"The formulation from the van computer lists not ony the recommended ration for each hay but also lists the cost of supplementing the mixture with corn grain, soybean meal, calcium, and phosophrus," the Penn State specialist emphasized.

"The NIR van provides the unique opportunity to interact with farmers," Shenk points out.

"The operator can help the farmer interpret the analytical results and apply them to his particular operation."

High moisture forage and feeds can be analyzed in seven to 10 minutes. Two minutes are required to analyze low moisture hay and grains.

"We believe that an NIR van serving the needs of livestock feeders in a community will be a necessity in the 1980's to keep pace with rising feed costs and low profit margins," he said.