to any modification of the two.

Farmers can check for various site

compaction areas using a pene-

trometer or simply a welded T-bar

of using the right tool for the job

you have to do. Work at the proper

depth to maximize the efficiency

According to Ron Matason,

senior producer/director of the

conferences, satellite teleconfer-

ences are scheduled for the follow-

• Feb. 15 — Grain Crop Estab-

lishment and Pest Management.

Participants include Jefferson,

Lackawanna, Schuylkill, Some-

rset, Susquehanna, Wayne, and

Participants include Beaver, Blair,

Cambria, Huntingdon, Jefferson,

Lackawanna, Lehigh, Lycoming,

Perry, Tioga, Wayne, Somerset,

Schuylkill, and Wyoming

contact your local extension

For dates, locations, and times,

• Feb. 25 — Pest Management.

Wyoming counties.

Hoffman said he was "in favor

with a pointed end.

of the tool," he said.

ing dates:

counties.

Forage Establishment

(Continued from Page A23) viewers at the Lancaster Crops Day.

Steve Fales, associate professor, crop management from Penn State, introduced the forage conference via satellite uplink. Various forage experts, including Marvin Hall, Penn State forage specialist; Dr. Ray Shipp, Penn State associate professor, agronomy; Dr. Douglas Beegle, Penn State associate professor, agronomy; and Hoffman, participated.

According to the teleconference members, farmers must first understand their site and soil characteristics before attempting to grow forages. Adequate moisture, good stand management, fertilizer/ lime applications, regular soil testing, and good weed control — "and all things being equal," according to Shipp — will determine the yields.

According to Shipp, soil depth and drainage are two characteristics affecting potential yield. A good soil profile, with at least 2-3 feet of good soil to bedrock, that provides adequate nutrient retention and moisture drainage, is essential.

Hall, who spoke about seed selection, said that three factors include species (to obtain expected yields), the needs of the animal, and selecting the seed for the right production from time of planting, are critical.

According to Hall, the Pa. Agronomy Guide and Pa. Forage Trials Report will aid in species and variety selection.

Before planting, Beegle emphasized the importance of obtaining a regular soil test to determine if the phosphorous and potash levels, in

addition to pH, are adequate for the type of species planted. (According to Shipp, in the question and answer period following, he said that the soil test has an accuracy of about 85 percent.) The "bottom line" in establishing forages is to "plan ahead," said Beegle. Grasses and legumes differ in nitrogen use — a predominance of grasses require regular nitrogen applications, where a predominance of legumes require no additional nitrogen applications.

Various seed coatings, according to Hall, to help establish the stand are available. Hall emphasized reading the labels "and know what you're buying."

Several seed treatments, including those with nutrient-quality materials coating them, will increase the volume of seed in a given package. There are different varieties of coating to help protect against fungus and to help in seed establishment.

After soil and seed management has taken place, the next step is choosing the planting method. Whether using no-till or minimum tillage, the experts emphasized the importance of preparing a fine seedbed for adequate seed-to-soil contact and germination, according to Hall.

According to Hall, before planting, inoculate the seeds adequately by stirring the inoculant in the seed hopper. Fales, via satellite, later posed the question of what if the seed was planted and no inoculation was used. At that time, it is too late.

Fertilizer should be banded in 1 inch below the seed location. A good phosphorous starter, such as 10-20-20 or 10-20-10, is useful.

Most forages need to be planted at ¼ inch, and no deeper than ¼ inch. Hall said cultipacking before and after insertion of the seed may be essential to allow adequate germination.

In the state, many farmers tend to plant excessive amounts of seed. This is not necessary, according to Hall, if using quality seed and observing application.

Using good quality seed and management of the germination helps in yield, according to Hoffman. While there might not be a "best" time to plant, a good time to establish a stand is March and April. Late August and early September is also good, depending on conditions of the soil and weather.

Proper drill calibration, if using no-till, is essential. If dropping in row, a firm seedbed is necessary.

Whatever method is used, according to Hoffman, the important thing is to make sure that the equipment is used and adjusted accordingly. Critical is proper seeding depth (alfalfa no more than $\frac{1}{10}$ inch and no less than $\frac{1}{10}$ inch). Hoffman said it's important to recognize that you cannot see what the seed depth is from the tractor seat. "Get off the tractor to look," he said.

In the afternoon at the Crops Day, Beegle spoke about soil fertility management decisions. Feruility management is a "continuous process" and begins in the rotation, when the field is in corn. Overall, it's important to know that legumes fix nitrogen, and don't need nitrogen as much as the grasses. Beegle examined the different rates of nitrogen and other fertilizer uses, compared to quantity of yield, depending on type of forage.

But the best way to see how a

plant uses nutrients, and to examine possible nutrient deficiencies, is to take a plant sample. A lot of the times, when a mer sees alfalfa yellowing, the problem could be boron deficiency or drought stress.

Also, compaction may be the culprit, according to Hoffman. Compaction is more likely to occur on some soils than others, and if a farm has a high clay content, there are greater chances of compaction \neq if you're doing something wrong,'' said Hoffman.

Many times, the farmer goes into the field with heavy equipment while the soil is too moist, further complicating existing compaction. Although causes such as adverse soil conditions ("getting on the soil when we should find something else to do," he said), tillage tools, and heavy loads contribute to compaction, farmers should try to prevent it rather than fix the problems.

Hoffman examined various ways to try to correct compaction, including using crop choice and rotation, and tillage. Tillage tools vary from paraplows, to V-rippers,

office. Outreach Luncheon Set

WESTMINSTER, Md. — The sixth annual Fellowship of Christian Farmers (FCF) Outreach Luncheon will be held March 6, 12 p.m.-2:30 p.m. at Wilhelm Ltd. Caterers (formerly Friendly Farms), Route 140, Westminster.

The featured speaker is Steve Yoder, president of the American Soybean Association and a farmer from northern Florida. Yoder operates a 2,000-acre farm. His wife and their five children are actively involved in the farming operation. Yoder raises soybeans, wheat, corn and peanuts, and runs 100 dairy cows and a 300 head beef cow/calf operation. He also serves on the executive committee of the Florida Dairy Co-op.

Special music will be provided by Catherine Fair Hall. She is a familiar voice to FCF because she has provided special music for two of the previous outreach luncheons.

For ticket information, call Dave Sparks at (410) 239-8480 or Wilson Lippy at (410) 374-2975. Buffet luncheon tickets are \$7.

