## Many factors affect corn emergence

farmers expressed amazement at the ability of early-planted corn to survive the cold, wet environment of late April and early May. Seedling emergence, which can be defined as the germination of seed and growth of the new seedling through the soil surface, is affected by many factors. Most of these are. to some degree, controlled by the farmer's management.

Soil temperature plays a key role in emergence. Corn seed requires a minimum of 50°F while soybean and sorghum seed requires 60°F for successful germination. Once germinated, the rate of growth of the seedling toward the soil surface is controlled by soil temperature.

The calendar and tradition are helpful in determining when to begin planting a certain crop. However, five to ten day weather forecasts are becoming more accurate and should be considered when early planting is anticipated. Soil temperature is affected by soil color, moisture, texture, orientation to the sun (south slopes warm up quicker), and depth. Thus, a daily log of soil tem-perature readings at planting depth will be extremely useful.

Soil moisture – too much or too little – is the next most important factor in seedling emergence. Since the seed and seedling are living organisms, they require adequate moisture and oxygen to

DeKALB, II. — Last year many survive after germination begins. armers expressed amazement at Sometimes there is excess moisture in the soil and the seed and seedling may literally suffocate before emergence. Adequate drainage and minimizing compaction are ways to reduce the risk of excess moisture and lack of oxygen. Inadequate soil moisture will prevent seed germination, tool.

Planting depth varies according to the crop being seeded. Alfalfa and other small-seeded crops require no more than good seedsoil contact. Sorghum should be planted no deeper than 11/2 inches, soybeans no more than 2 inches. and corn no more than 21/2 to 3 inches. With adequate moisture, one-half the above maximum depths should give excellent emergence.

Other controllable factors that affect seedling emergence are insects and chemicals. Depending on the area and preceding crops, various insects can destroy the seed and/or the seedling. Nearly all these insects can be adequately controlled by chemicals or cultural practices.

Occasionally chemicals used to protect the crop can injure it. Herbicides and insecticides vary in level of crop safety. Additionally, their level of safety is affected by rate, method and timing of application. When choosing chemicals, be sure to determine their compatibility with each

other, crop safety, as well as how well they control target pests.

One situation that can seriously affect emergence is uncontrollable, but correctable. Heavy rainfall followed by bright, sunny days can cause crusting of soils that contain moderate to high amounts of clay. When this occurs, a rotary hoe often makes the difference between success and disaster. The rotary hoe is particularly useful for saving a field of corn, soybeans, or sorghum that has crusted before emergence. Soybeans and sorghum are less able to push through a crust than are corn seedlings.



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DE FOREST, Wisc. - A young Holstein bull, Browncroft Format-ET, bred by William Brown, of Rome, Pa., has been selected by American Breeders Service to enter their Progeny Testing Program.

He has been moved to that company's facilities at DeForest. Wisc., where he will join approximately 170 other bulls being tested this year. Format-ET's Browncroft pedigree includes, as his sire, Sunny-Craft Chief Spirit, +\$142, +793M and +53BF, and as his dam, Browncroft King Jet Flop-Twin. His dam has production records to 29,380 lbs. of milk. She is classified VG-87 and is sired by Arlinda Jet Stream-Twin.



## **Records winner cited**

MEADVILLE - Annually, thePennsylvania Farm Credit Associations sponsor the Future Farmers of America Record-Keeping Contest. It is judged in February at Penn State.

Judging is done on three levels: (A.) The best record in the state; ' (B.) The best record book in the district; (C.) The best record book in each county.

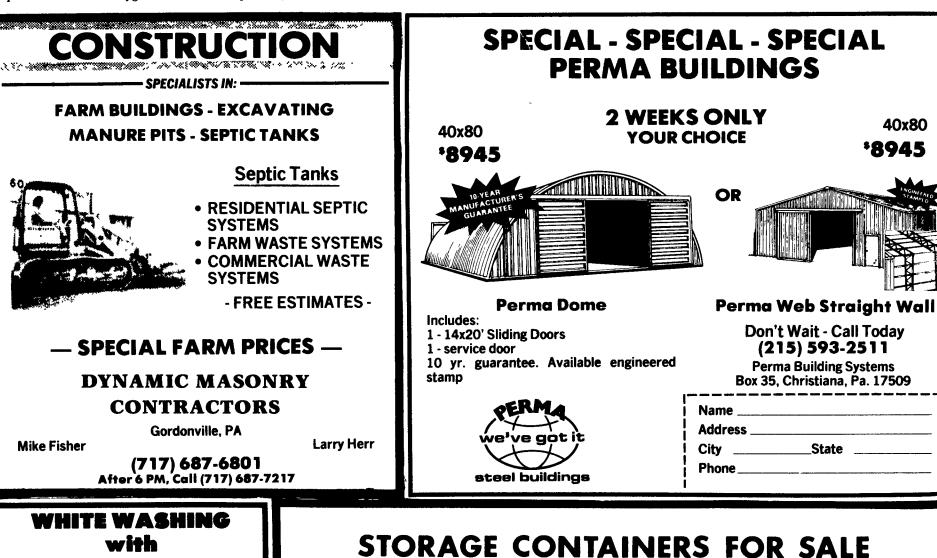
The state winner this year was David B. Reese, a student at Cochranton High School. He is the son of Mr. and Mrs. Jon B. Reese, R2, Box 184, Guys Mills, who operate an 80-cow dairy/cash grain farm.

His winning project book included two dairy calves, three dairy heifers, five dairy cows, and a field corn enterprise.

Reese was awarded a plaque and a \$300 United States savings bond by Blair P. McCurdy, Associate Manager-Operations of the Meadville Farm Credit office, at a recent Annual FFA Banquet.

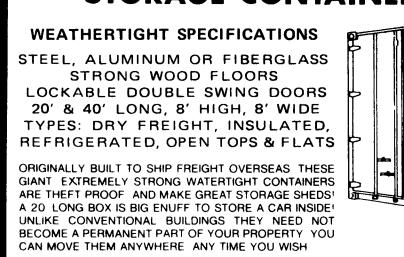
This is the second year in a row that Meadville Associations have had a state winner. Last year, John Greene, Jr., of Conneautville, was state winner.

40x80



## Brown bull goes to ABS





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