

Farm and Weather Summary, Ag Engineering Farm

Richard VanDePol, ag specialist

Farm Comments

The Agricultural Engineering Research Center, commonly called the Ag Engineering Farm, is located on U.S. Highway 30 approximately 6 miles west of Ames, Iowa. It has been at this location since 1964. It was formerly a “Departmental” farm, part of the Agricultural and Biosystems Engineering (ABE) Department, but became part of the Research and Demonstration Farms in July 2003. Its main functions fall into one of two categories: Teaching or Research. The farm provides field space and/or environments for professors in ABE as well as other departments to conduct research projects. Additionally, both shop and field equipment, as well as personnel, provide assistance in the teaching of undergraduate courses in the ABE curriculum. The farm also provides assistance to both the Ag Systems Technology (AST) club and the Ag Engineering (AE) student branch club.

Research subjects involve studies concerning water quality, long-term tillages, pesticide use, harvesting, planting, and other equipment efficiencies. The weed science group also has a long-term study. Equipment modification and experimentation is also a common activity at the farm.

One of the most recent studies at the farm is the composting of large animal carcasses. This is done above ground, to evaluate disposal in the event of a large disease outbreak requiring the disposal of large numbers of carcasses.

Although the farm is a recent addition to the Research and Demonstration Farms, it has been a part of the agricultural research program at ISU since the early 1900s. A history of the Ag Engineering department shows that fieldwork in the early 1900s was done in the open field

across the road to the north, where the Communication (formerly WOI) and the Molecular Biology buildings now are located on campus. In the early 1930s the first farm was established on south State Street, across the road to the west from where the current poultry farm is located. A farm report from 1935 lists a field day on October 25, 1935, “Corn Production Machinery Research Project carried on in cooperation by the Iowa Agricultural Experiment Station and the Bureau of Agricultural Engineering, U.S. Department of Agriculture.” The first farm manager was Don Langerbacher, although it is not clear when he became manager, as he also is referred to as a student. In the fall of 1964, the farm was moved to its present location at 1308 U Avenue, Boone, Iowa. The Agronomy Farm also was moved to this location at the same time. In 1963, Robert Fish became the second manager of the farm. Fish retired in 1987, and at that time, Richard VanDePol became the third manager. The farm’s mission remains much the same: to provide equipment and facilities for the teaching of agricultural engineering students. A second curriculum was introduced in the mid-1970s, now known as Ag Systems Technology. In addition, field areas, field equipment, shop equipment, support, and labor for departments at ISU also are provided.

Crop Season Comments

Oat planting occurred on April 1. Harvest was completed on July 24 with an average yield of 113 bushels/acre. Oats planted at the farm are for a combined study. One study is the rotation in a strip crop water quality and the other study is to provide a place to spread composted cattle carcasses in the middle of summer.

Corn planting began on April 24 and was completed on May 22. Harvest began on September 27 and was completed on November 6. Corn yields ranged from a low of 35

bushels/acre (continuous corn, no fertilizer plot) to 224 bushels/acre in the chiseled plowed plots with more intense management strategies. Average corn yield was approximately 151 bushels/acre. Corn plots are planted with a five-row, 30-inch corn planter, with tractors and other equipment with wheel tracks of 90-inch centers to provide a row that never gets a wheel track on either side of the row. This system has been in place since 1985.

Soybean planting began May 19 and was completed May 27. Harvest began September 27 and was completed October 6 with an average yield of 40 bushels/acre. Soybean plots are planted in both 30-inch rows and drilled in 7-inch rows.

Weather Comments

Weather data for all farms in this progress report are shown in Table 1 in the Agronomy Farm article, page 5.