Delta Agricultural Weather, MSPB Project 29-2020

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Annual Report/Activity and Accomplishments:

Objective 1: Weather data is used for research to indicate the amount of rainfall the crop receives throughout the growing season. This info is beneficial in making management decisions, such as when to schedule irrigations to supplement the lack of rainfall the crop might need in order to achieve maximum yields. Also, it can be helpful in justifying harvest dates that might be later than the norm, due to heavy rains late in the season that might have delayed harvest. Also, at a location that has both irrigated and non-irrigated tests, this rainfall data is important to show the crops yield potential when compared to one that was only rain-fed vs. rainfall in addition to supplemental irrigations.

Objective 2: To Expand our Weather Network. The Center added 6 new stationary stations to their Weather Network.in 2020. These additions gave the Center a total of 26 stationary stations to the network. Each station is equipped with the following Instrumentation: Temperature/Humidity, Wind Speed/Wind Direction, Solar Radiation, Soil Temperatures at 2 and 4 inches, and Precipitation. All 6 stations were added to the Centers website and can be viewed in real time every fifteen minutes. Hourly and Daily readings are archived and can also be viewed.

Objective 3: The website has enhanced agricultural research as well as help growers make more efficient and timely management decisions.

Data from each soybean variety trial will be available on the centers new website for the 2020 growing season. Each Stationary Weather Station is equipped with a 05103 R.M. Young Wind Monitor. The 05103 Wind Monitor measures wind speed with a helicoid-shaped, four blade propellers. Rotation of the propeller produces a wave that has a frequency directly proportional to wind speed. The ac signal is induced in a transducer coil by a six-pole magnet mounted on the propeller shaft. Wind direction is sensed by the orientation of the fuselage-shaped sensor body, which is connected to an internal potentiometer. The data logger applies a known precision excitation voltage to the potentiometer element. The output is an analog voltage signal directly proportional to the azimuth angle. This ensures that each station is up to date on the latest technology for measuring wind speed and direction. Wind Speed and Direction is available in real time every 15 fifteen minutes on the Centers Website.