NEWA (Northeast Weather Association)
2000: A Year in Review

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Goals:

1) Keep the NEWA electronic weather network operational for the 2000 season
2) Solicit new members for NEWA from among fruit, vegetable, field crop, and other appropriate growers.
3) Maintain NEWA's ability to contract with a private weather forecaster for forecast information.
4) Acquire wireless phone jacks to protect weather equipment from damaging phone line surges.

Results

1. Keep the NEWA electronic weather network operational.

During the 2000 growing season NEWA was able to maintain the electronic weather network. NEWA's 3 electronic bulletin board sites (BBS) (Geneva, Canandaigua, and Fredonia,) gathered weather data daily from 40 data loggers. In 2000, NEWA maintained several sites through the winter to provide field data for fine-tuning the Stewarts wilt forecast for sweet corn in New York. Five new sites were added this year. NEWA assisted Canandaigua Wine in setting up 4 new sites, Naples, Pultney, Valois and Dresden. Agrilink set up a new site in Western New York (Pavillion). Also for the first time a new site was added to try and service the ornamental audience. This site was established in Brighton, NY near Rochester. Unfortunately, due to the limited places to set up the equipment, data was unreliable from this site in 2000. We hope to correct this problem in 2001 and get input from Broccolo Tree & Lawn Care on information that would be beneficial to ornamental interests. New equipment was purchased by Dr. Don Halseth to monitor weather conditions at the Freeville research facility. NEWA will assist in getting some of this data online for researchers at the college to use in their experiments. The network itself was operational on 100 percent of the days between April 1 and October 31, although individual instruments experienced down time from lightning strikes and other problems. The year 2000 featured some spectacular thunderstorms. Lightning problems were diminished in the 2000 season due in part to the acquisition of wireless phone jacks. The problems were generally remedied within one or two days of occurrence unless damage to the instrument was major, in which case the instrument owner had to ship the instrument off for repairs.

The data were summarized and run through various pest forecast models for potatoes, onions, apples, grapes, sweet corn, and tomatoes daily. Degree-day accumulations were run for different base temperatures using several degree-day models as needed by different crop groups.

New degree-day content was added last year. The 86/50 degree-day calculation was added. Weekly sweet corn pheromone trap catch reports were made available on the BBS. P-day values were added to the potato fax as requested by subscribers.

Information was made available to NEWA members either through a daily FAX or the internet (WWW). Many of NEWA's members accessed the information through this means. NEWA provided technical support for setting up and troubleshooting weather equipment in the field.

NEWA upgraded the computers at the 3 BBS sites. All data was transferred to the new computers. The computers allowed for faster data processing and allowed for more storage space for archived data.

2) Solicit new members for NEWA from among fruit, vegetable, field crop, and other appropriate growers.

NEWA personnel set up demonstrations at trade shows and workshops in an effort to attract new members. Demonstrations were set up at the NYS Vegetable Conference in conjunction with Sensor Instruments. Information was also included on the information table at the conference. A display was set up at the Viticulture 2000 seminar in February. NEWA assisted Empire State Potato Club personnel in the summer in return for a shared booth at the Empire Farm Days. Local Extension offices continued to run stories on NEWA in newsletters and made information available to growers. A NEWA newsletter highlighting weather related stories and information on the content of the NEWA website was also initiated. These newsletters were also made available at the various conferences and shows NEWA attended.

NEWA membership increased in 2000. A proposal was submitted and funded to the Empire State Potato Club to fund NEWA memberships to Cornell Cooperative Extension Agents in attempt to manage late blight. There were new apple, grape, and potato members in 2000. Some of these memberships represented key processing plants such as Motts. Of the NEWA members, there were 17 extension representatives, 18 researchers, 3 processors, and 22 growers.

3) Maintain NEWA's ability to contract with a private weather forecaster for forecast information.

NEWA contracted with AccuWeather, a private meteorological firm, for online weather information for anywhere in the country. The information included maps of all types, real time radar updates, National Weather Service updates, severe weather updates and much more. A special agricultural weather section was also added. AccuWeather also provided 10-day hour-by-hour forecasts. The fax subscribers received comprehensive forecast from the National Weather Service, which included a synopsis, and pertinent county forecast. In these forecast growers had access to max and min temperatures as well as wind speed and wind direction for 3 days. General forecasts went out to days 4 and 5. These forecasts were compiled by NEWA.

4) Acquire and deploy wireless phone jacks to protect weather equipment from damaging phone line surges.

Last year 16 wireless phone jacks were deployed for the 2000 growing season. Of all the sites the units were placed at, 3 pieces of weather equipment were damaged. All three stations only sustained damage to the RS 232 chip. Some sites received damage to the modems but the weather instruments were spared. At one site the wireless unit absorbed the shock and spared the instrument damage. Two sites not protected by the wireless units received more damage. One units RS 232 board had to be replaced. Another unit needed to sent in for service. It is believed that the wireless phone jacks reduced the amount of damage causes by telephone surges. We will continue to use these devices in the future. Another more robust surge unit was tested at two sites. These devices were installed in the Field Monitor. These devices might provide more protection for surges that are traveling down cable to the weather logger. It is believed that these devices precluded serious damage to the weather equipment. Lightning strikes at both locations did cause damage to the modems and in one case to the RS 232 chips but the damage was held in check. More research will be conducted with these units.

Summary

NEWA was able to maintain the electronic weather network in the 2000 growing season with support from NEWA members and with various grants from commodity organizations and other sources. NEWA's membership remained about the same in 2000 but did pick up some new subscribers representing grapes, apples and grapes. NEWA continued to contract with private forecasting firms for agricultural weather products, which interest our members. Wireless phone jacks were purchased for the 2000 growing season and provided relief for phone line surges induced by lightning strikes thus lowering the overall maintenance costs of the network.