

NEWA (Northeast Weather Association) 1999: A Year in Review

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Goals:

- 1) Keep the NEWA electronic weather network operational for the 1999 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 1999 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 45 data loggers. Since the Canandaigua site did not have access to the internet the files were uploaded to the Geneva site so they were available via the internet. 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. Lightning problems decreased in the 1999 season due in part to the acquisition of wireless phone jacks. (See the 4th goal for more information.) 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. Weekly sweet corn pheromone trap catch reports were made available on the BBS.

Information was made available to NEWA members either through a daily FAX or the BBS (Bulletin Board). NEWA offered internet access at the Geneva site for the third year and the Fredonia site for a second year. Many of NEWA's BBS members accessed the information through this means. NEWA provided technical support for setting up and using the BBS software and provided support and troubleshooting to members for the weather equipment in the field.

NEWA continues to add new content to the web site. A new format was adopted for onion growers that allowed them to access all forecast information on one page rather than on separate pages. An information page was added for ornamental crop users to allow them to review degree day thresholds for various pest in the landscape. The web site was redesigned in Geneva to provide speedier access to information.

- 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 for apple growers at the apple workshop in March. Two talks were also given at this workshop detailing information available to NEWA members. Another talk was also given at the Horticultural Show held in February. Brochures were also distributed at the annual grape show in Fredonia. Local Extension offices continued to run stories on NEWA in newsletters and made information available to growers.

NEWA maintained about the same number of members as it did in 1998. There were new apple, grape, field crops and potato members in 1999. See the chart below for the breakdown of FAX and BBS subscribers. Of the NEWA members, there were 17 extension representatives, 9 researchers, 3 processors, and 25 growers. It is expected that the Canandaigua Wine Co. will become a member in the 2000 season as they acquired 4 new instruments that they hope will help them manage their grape acreage. In the chart below some of the BBS subscribers share accounts between Geneva and Fredonia. There are also researchers from Penn State University using the system.

<i>Site</i>	<i># FAX subscriptions</i>	<i># BBS subscriptions</i>
Geneva	2	36
Canandaigua	4	0
Fredonia	0	18

- 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 that included a synopsis and pertinent county forecast. In these forecasts, compiled by NEWA, 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.

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

Last year wireless phone jacks were tested at a few locations to see if lightning damage could be minimized. The results proved favorable and as a result 16 wireless units were purchased and deployed for the 1999 growing season. Of all the sites where the units were placed, 3 pieces of weather equipment were damaged. One weather station was damaged extensively as a result of a major strike to the building. There was extensive damage to other equipment in the building as

well. A second instrument was damaged but the damage was confined to the RS232 board. This damage could have been caused by current going through the cable that did not originate from the phone line. Another instrument was damaged and that instrument sustained chip damage. It is believed that the wireless phone jacks reduced the amount of damage caused by telephone surges. We will continue to use these devices in the future. In addition Sensor Instruments had NEWA test more lightning protection devices which can be installed in the Field Monitor. These devices might provide more protection for surges that are traveling down cable to the weather logger.

Summary

NEWA was able to maintain the electronic weather network in the 1999 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 1999 but did pick up some new subscribers representing apples and grapes. NEWA continued to contract with private forecasting firms for agricultural weather products that interest our members. Wireless phone jacks were purchased for the 1999 growing season and provided relief for phone line surges induced by lightning strikes thus lowering the overall maintenance costs of the network.