

NEWA (Northeast Weather Association) 2001: A Year in Review

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Goals:

- 1) Keep the NEWA electronic weather network operational for the 2001 season.
- 2) Solicit new members for NEWA from among fruit, vegetable, field crop, and other appropriate growers.
- 3) Consolidate the 3 web sites into one central site.
- 4) Create a new home page with more links and information and add new crop and weather forecast information.

Results

1. Keep the NEWA electronic weather network operational.

During the 2001 growing season NEWA was able to maintain the electronic weather network. NEWA's three data gathering electronic bulletin board sites (BBS) (Geneva, Canandaigua, and Fredonia) were consolidated into two sites (Geneva and Canandaigua). These two sites gathered weather data daily from 36 data loggers. In 2001, NEWA maintained several sites through the winter to provide field data for fine-tuning the Stewart's wilt forecast for sweet corn in New York. One new site was added this year. NEWA assisted Tim Martinson from Cornell Cooperative Extension in setting up 1 new site in Barrington just south of Penn Yan. One logger was upgraded to do soil temperature and that logger was installed at the NY Crop Research facility in Batavia to assist in providing weather data to researchers and growers in Western New York. 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 2001 featured fewer thunderstorms than in 2000. Lightning problems were diminished in the 2001 season due in part to the acquisition and implementation of wireless phone jacks at more sites. 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. Specifically a cabbage maggot degree day calculator created by A. M. Shelton and J. L. Jyoiti was added for predicting the occurrence of cabbage maggot. A Michigan model to forecast the occurrence of downy mildew in onions was added in 2001. Since this is a new model research is ongoing as to whether it will be applicable in New York. After 2 years of data it is looking promising. The model is designed to predict 65

days after planting whether mildew is likely to occur during the remainder of the growing season.

The National Weather Service provided forecast information. In the past NEWA provided AccuWeather premium accounts to subscribers for access to real time radar. With the new policy of the National Weather Service, real time radar can now be provided from that office. The NWS is also providing many more products which can be useful to growers and which can be found on the NEWA site. Links to new products will be added as they become available. Some new products added last year include tabular forecast and the revised digital forecast. Links were still available to AccuWeather so growers wanting to still use the service could get there quickly.

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.

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. 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 continued. These newsletters were also made available at the various conferences and shows NEWA attended.

One new membership came as a result of an unfunded demonstration project. The project goal was to demonstrate the use of onion forecasts in adjusting spray schedules in commercial onion production. Carol MacNeil, CCE educator, and John Gibbons conducted the project. A similar type of project was attempted in 1997 on this farm in the past by using the NEWA fax but failed partly due to the lack of one-on-one communication. In return for scouting, the grower, Ken Datthyn, agreed to buy a NEWA membership and try using a computer to access NEWA. CCE provided the grower with a computer and internet access for the season plus training on how to use the equipment to get the forecast information. Ken quickly learned how to use the computer and was looking at the onion forecast. He consulted with Carol about the use of the forecasts and how he could use the information to help manage his spray schedule. He printed out the forecasts and brought them down to the field for further interpretation by the scout. This way Ken had the opportunity to visualize what the numbers were telling him based on what was being seen in the field. This project was successful because the grower had the support of Extension personnel assisting him in the use of the forecast products. Ken has agreed to speak about his experiences at various meetings. He also has purchased a computer and internet service and plans on renewing his NEWA subscription in future years.

NEWA membership increased from 50 in 2000 to 59 in 2001 – up 18%. A proposal from the potato industry was submitted and funded by the Empire State Potato Club to fund NEWA memberships to Cornell Cooperative Extension Agents who work on potatoes. There were new members from the apple and onion industries in 2001. Some of these memberships represented

key processing plants such as Motts and AgriLink. Of the NEWA members, there were 18 extension representatives, 21 researchers, 3 processors, and 17 growers. The number of people being serviced by this membership is much greater since information from NEWA is used in CCE telephone crop updates and newsletters with several thousand subscribers.

3) Consolidate the three web sites into one central site.

In 2001 NEWA consolidated the three web display sites into one main site. The Geneva site became the central site. The Fredonia site activities were taken over by the Geneva site and the Fredonia web site was all merged with Geneva so users logged into one site. The Canandaigua site still called loggers and the files are sent over to Geneva early in the morning. This arrangement worked well for a second year. All historical data on the Fredonia site will be added to the Geneva site.

4) Create a new home page.

In 2001, NEWA unveiled a new home page on the web that provided much more information and easier access to data. The site now has individual pages for each logger, which provides a quick interface for current season forecast which is accessible from the home page via a drop down menu or a map of N.Y. Other pertinent information about the site such as latitude, longitude, elevation, as well as parameters measured is provided. Quick links to current National Weather Service forecasts and radar are also provided. More links on the home page provide users with a wealth of information including the Vegetable Guidelines, Vegetable MD Online, various crop related updates, many different forecast products including long range forecast and surface maps and historical weather data for different stations. More links will be added in the future to provide information on drought and other new forecast products from the National Weather Service.

A trend to higher use of NEWA through website contact (as opposed to fax) has been observed over the last three years. In 1999 an average of about 3 users per day logged onto the NEWA website while in 2001 the average was up to about 12 users per day. NEWA access is now nearly 6,000 hits on the website per season. This may have happened for three reasons: 1) the revamped website has made access simpler and a better experience for the user, 2) many more weather related products are available to website users than to fax subscribers, and 3) internet connectivity among farmers continues to increase.

Summary

NEWA was able to maintain the electronic weather network in the 2001 growing season with support from NEWA members and the New York State IPM Program. NEWA's membership increased 18% in 2001. The number of people being serviced by this membership is much greater since information from NEWA is used in crop updates and Extension newsletters. Website access by NEWA subscribers has increased by approximately 400% in the past 3 years. A new web home page was developed that provided an easier interface and access to much more information. Through the reformatted and updated website, NEWA provided weather forecasts and radar information from the National Weather Service. NEWA consolidated the web site of

Fredonia with the Geneva site allowing growers to log into one site and cutting back on troubleshooting problems.