

**NEWA (Northeast Weather Association)  
1997: A Year in Review**

Curt Petzoldt, Tim Weigle, John Gibbons, Cheryl TenEyck, NYS IPM Program

## **Goals**

1. Keep the NEWA electronic weather network operational for the 1997 growing season.
2. Add new forecasting models as they become available.
3. Solicit new members for NEWA from among fruit, vegetable, and other growers.
4. Maintain NEWA's ability to contract with a private weather forecaster for forecasted information.
5. To provide support for IPM projects related to weather.

## **Results**

1. Keep the NEWA electronic weather network operational.

During the 1997 growing season NEWA was able to maintain the electronic weather network. NEWA's 4 electronic bulletin board sites (BBS) (Geneva, Canandaigua, Fredonia, and Middletown, Orange County) gathered weather data daily from 57 data loggers. 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. These 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. One site was set up using a cellular phone connection and was powered completely by batteries. While this site was successful more work needs to be done to provide a charge for the batteries and to clean up the cellular phone line. A connection could not be established every time which made it unreliable in the BBS automated routine.

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 bulletin board (BBS). NEWA offered one of its sites (Geneva) access to the World Wide Web(www). 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.

- 2) NEWA provided a variety of new forecasting models on the BBS's this year. Two models were added to the vegetable section. One model was for sweet corn and provided forecasts for European corn borers. The forecasts were run daily and were updated as new weather data was received. A second model, Tomcast, was added to forecast for Early Blight on tomatoes. It

appears that this model could provide significant reductions in fungicide applications for tomato growers.

New degree day models were added. One new calculation was used which used a base of 32F used for calculations in apples. Another new model primarily used by researchers, Baskerville Emin calculation, was also added. Other updates to the BBS included daily logs for the accumulation of severity values in the Blitecast and Tomcast models.

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

An effort was made to recruit new NEWA members through displays at the NYS Vegetable Conference, the NYS Hort Show, and the state grape conferences. A demonstration computer run of many of the features of NEWA was prepared for these shows and was also used at a number of extension meetings throughout the year.

Sixty seven members joined NEWA in the 1997 growing season representing a 56% increase in membership over 1996. See the chart below for the breakdown of FAX and BBS subscribers. Of the NEWA members, there were 14 extension representatives, 6 researchers, 4 consultants, 2 processors, and 37 growers.

<i>Site</i>	<i># FAX subscriptions</i>	<i># BBS subscriptions</i>
Geneva	4	22
Canandaigua	3	8
Fredonia	6	17
Middletown	7	0

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

NEWA contracted with Weather Track, a private meteorological firm, for customized agricultural forecasts updated once daily. These forecasts provided a synopsis, zone forecasts, extended forecasts, confidence level of forecast, and a chart for various forecast parameters for three days. NEWA also contracted with another firm, American Weather Concepts, to supply forecast graphics to the BBS sites. Forecast graphical maps for days 1-3 and precipitation for days 1-2 were provided. (Figure 2). The cost of these forecasts to NEWA rose 35% in 1997. While the forecasts remain a large expense for NEWA, they are also one of the more popular sets of information among members. However, each year NEWA does look at a number of different suppliers in an attempt to keep costs down.

5) To provide support for IPM projects related to weather.

Before NEWA was formed, state IPM dollars were the total support for IPM weather efforts. (Figure 1) Since the formation of NEWA, the IPM contributions supporting IPM weather related projects have decreased and have been replaced by NEWA contributions. NEWA secures its financing from membership subscriptions, grants from various sources and the IPM Program. It is NEWA's goal to be supported totally by membership subscriptions and grants in the near

future. In addition NEWA has obtained \$97,500 used for start up equipment and programming since its formation in 1996.

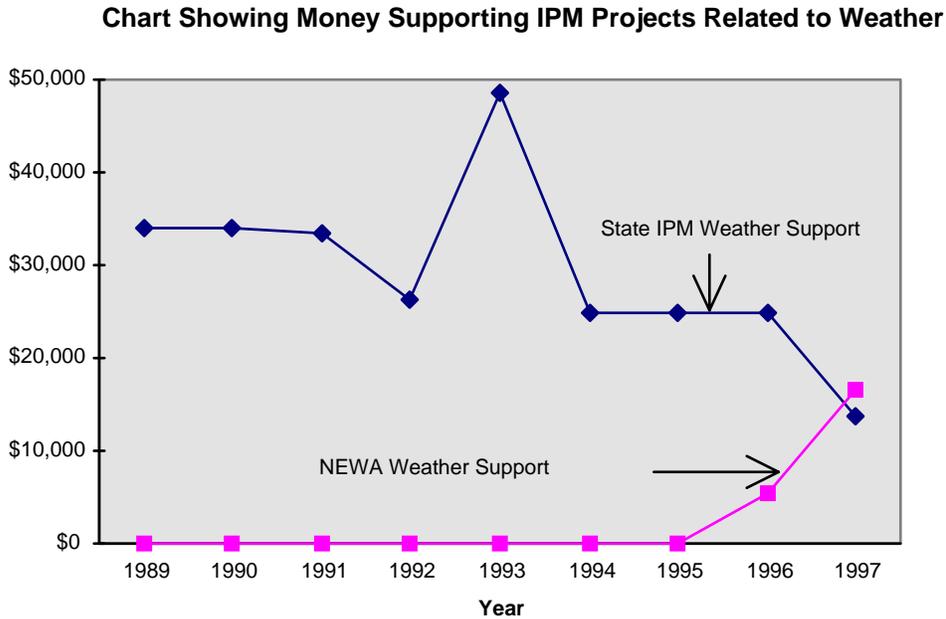


Figure 1.

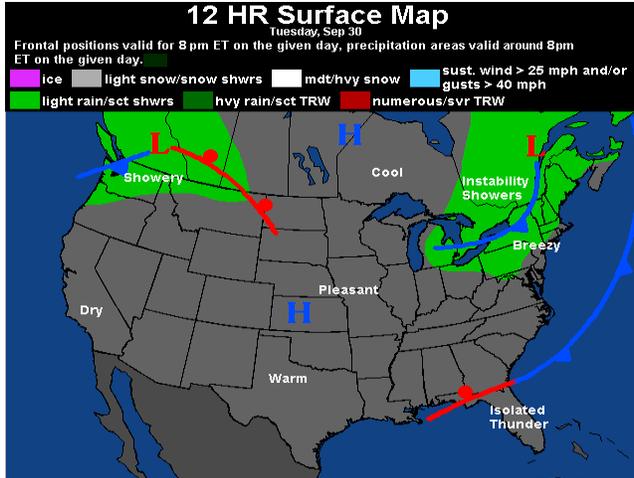
## Summary

NEWA was able to maintain the electronic weather network in the 1997 growing season with increasing support from NEWA members and with various grants from commodity organizations and other sources. NEWA attracted 67 members in 1997, a 56% increase over 1996. NEWA continued to contract with private forecasting firms for agricultural weather products which interest our members.

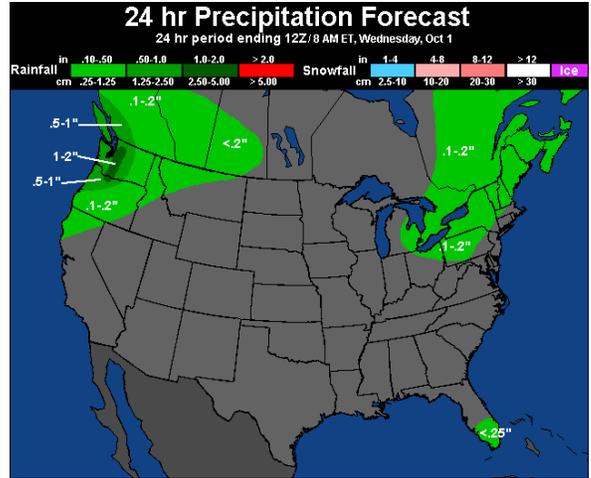
Figure 2.

## New Forecast Graphics Provided by American Weather Concepts

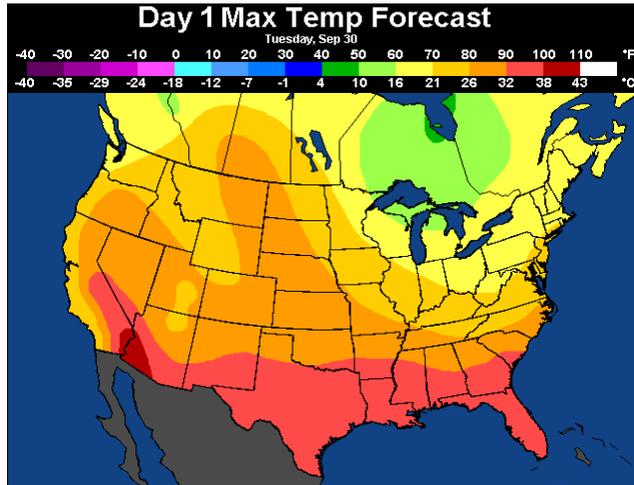
Forecast for day 1-3



Precipitation outlooks for days 1-2



Maximum temperature profiles maps for days 1-3



Minimum temperature profile maps for days 2-3

