

# Risk Forecasting and Evaluation Using the NEWA Platform

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New York State Integrated Pest Management | Cornell CALS

**Feb 18, 2025**

<https://cals.cornell.edu/new-york-state-integrated-pest-management>

## New York State Integrated Pest Management

- RISK ASSESSMENT - RESEARCH & INITIATIVES - OUTREACH & EDUCATION - ECO RESILIENCE - ABOUT US



# NYSIPM

On farms, vineyards, orchards; in schools, nursing homes, playgrounds; in your own home, lawn, or garden –IPM is foundational to sound, careful, economical ways of dealing with pests.



The Network for Environment and Weather Applications (NEWA) is an insect, plant-disease, and crop management risk forecasting platform that is available to all farmers as an open access resource.

NEWA is available free of charge to any farmer in member US States and is made possible through vital state and federal funding partnerships, along with very important regional collaborators with grower associations and Extension programs outside of New York State.

- **United States Department of Agriculture National Institute of Food and Agriculture (Website Platform)**
- **National Oceanic and Atmospheric Administration (Weather Forecasts)**
- **26 Partnerships with other US States via grower associations and land grant institutions (Operations)**
- **New York State Department of Agriculture and Markets (Operations)**

On average, an apple or grape grower enjoys an annual **cost savings of \$30,000** from **avoided crop losses** when NEWA is used (NEWA User Survey, 2017).

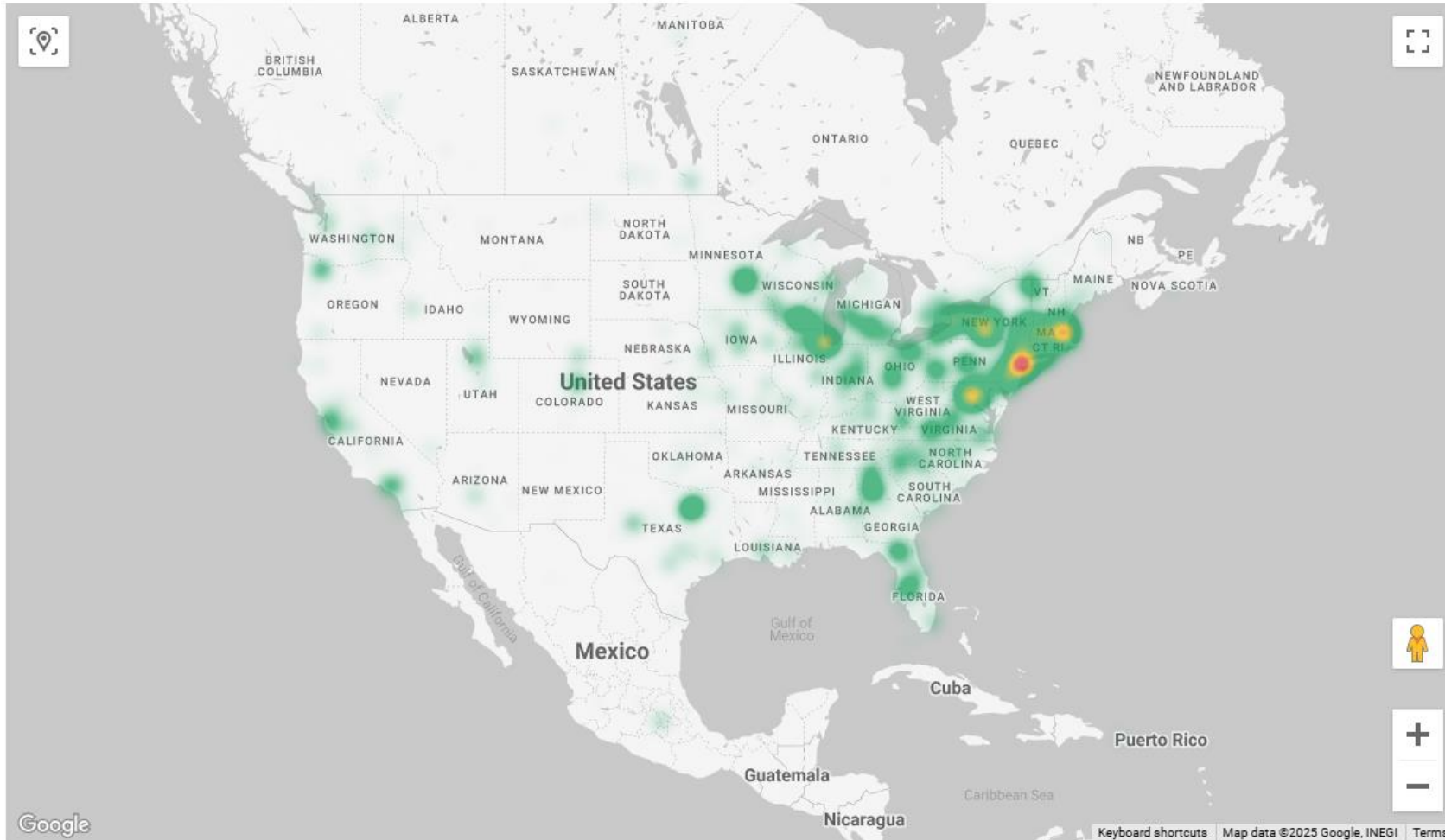
# NEWA regional partnerships

Cornell Cooperative Extension  
Cornell University, CALS  
Enviroweather @ Michigan State University  
Lake Erie Regional Grape Program  
Illinois Grape Growers and Vintners Alliance  
Illinois State University  
Minnesota Apple Growers Association  
New York State Integrated Pest Management Program  
North Carolina Apple Growers  
North Carolina State University  
The Ohio State University  
Penn State University  
Purdue University  
Rutgers, The State University of New Jersey

University of Connecticut  
University of Delaware  
University of Georgia  
**University of Kentucky\***  
University of Maine  
University of Massachusetts  
University of New Hampshire  
University of Vermont  
University of Wisconsin-Madison  
Utah State University  
Virginia Tech  
West Virginia University Extension Service  
Wisconsin Grape Growers Association  
Wisconsin Apple Growers Association

\* ***New in 2025***

# 2024 NEWA Usage



Sessions 0  11,949

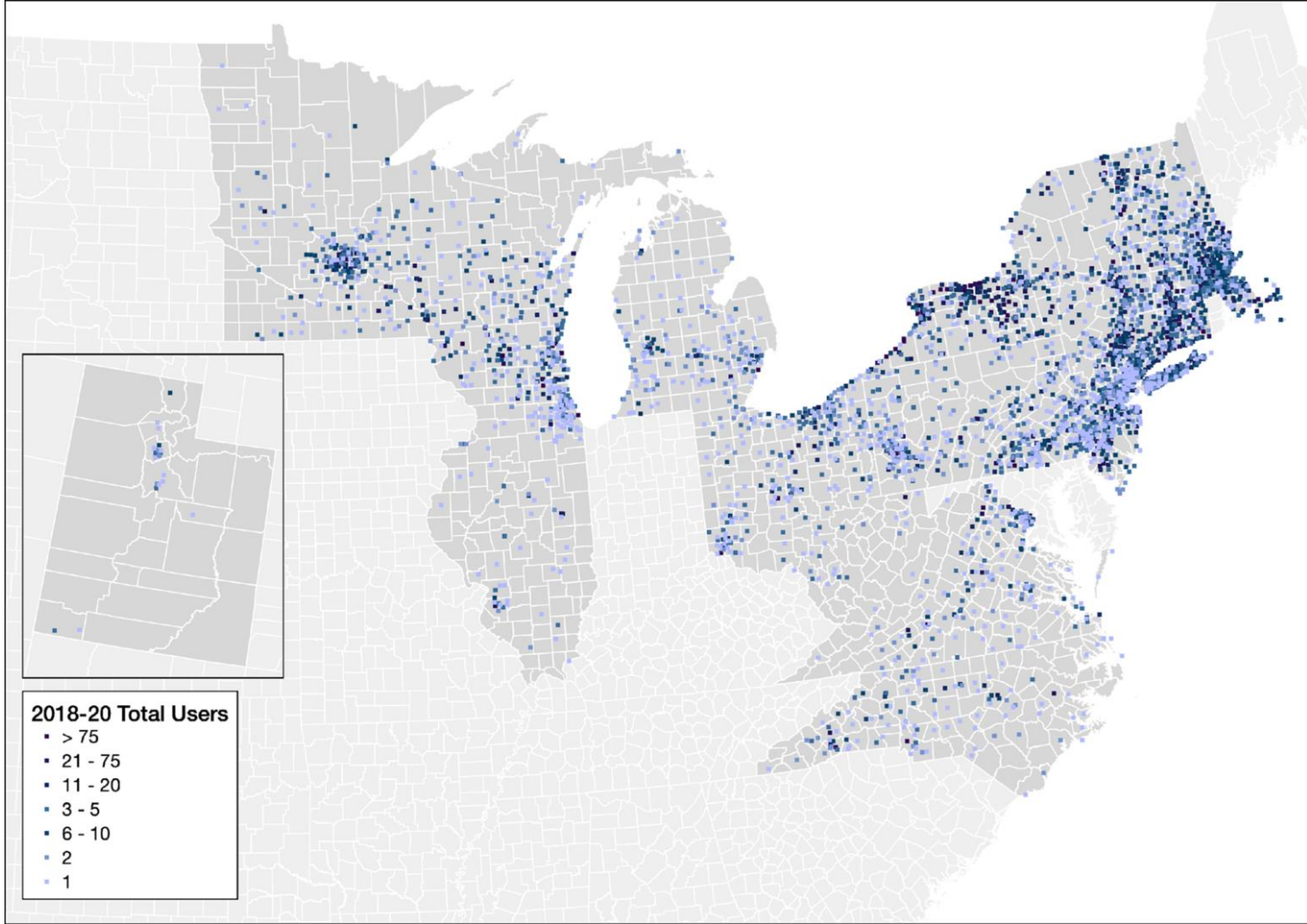
Total users  
**63,197**  
↓ -4.0%

New users  
**22,453**  
↑ 2,992.7%

Sessions  
**159,596**  
↓ -1.3%

Views  
**298,968**  
↓ -2.2%

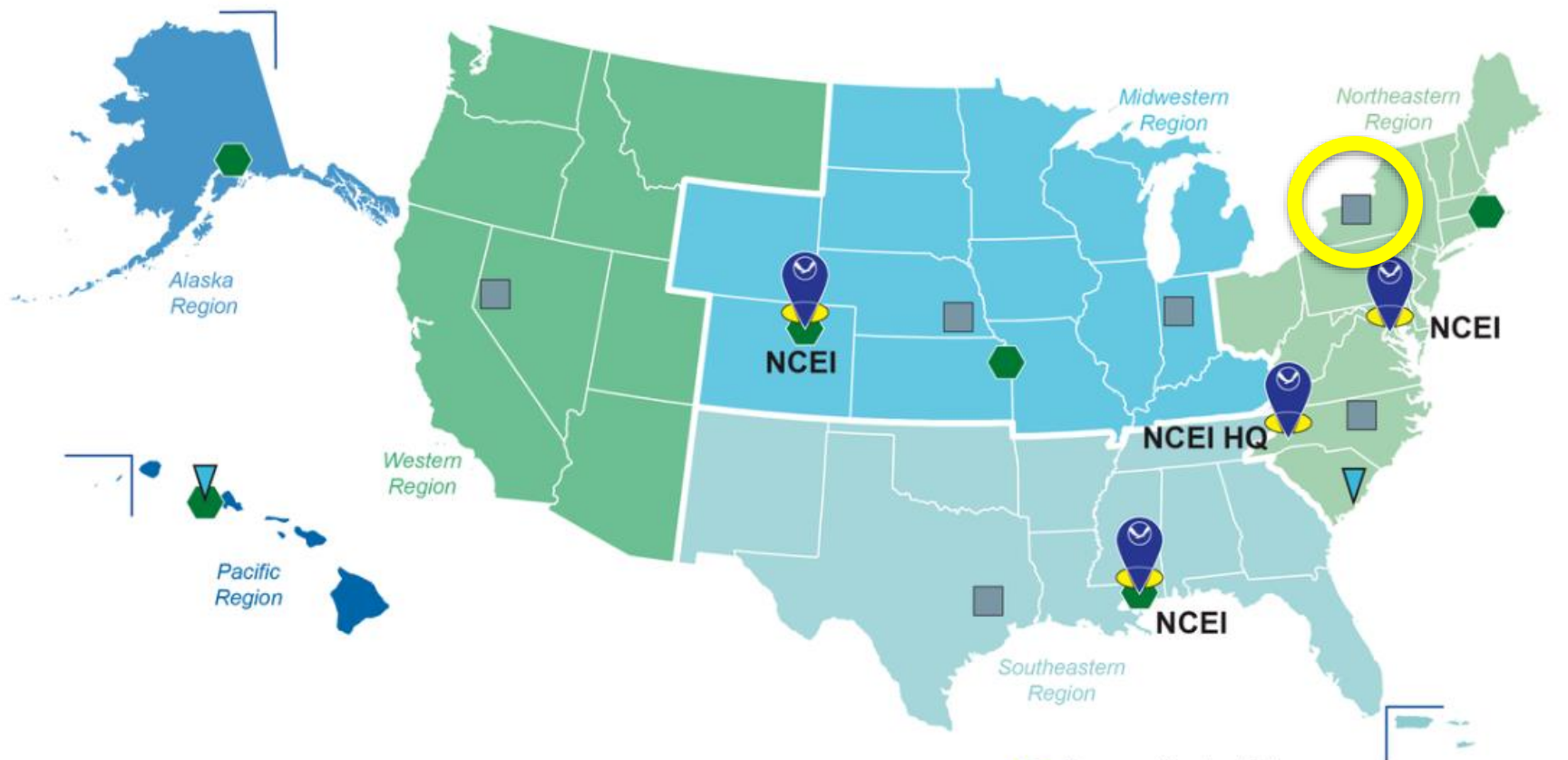
Engagement rate  
**78.80%**  
↑ 154.1%



**2018-20 Total Users**

- > 75
- 21 - 75
- 11 - 20
- 3 - 5
- 6 - 10
- 2
- 1

# National Centers for Environmental Information (NCEI)



- National Centers for Environmental Information (NCEI)**
- Asheville, North Carolina, Headquarters
  - Boulder, Colorado
  - Silver Spring, Maryland
  - Stennis Space Center, Mississippi

- Cooperative Institutes
- Regional Climate Services Directors (RCSD)
- Regional Climate Centers (RCC)
- NCEI Field Locations

May 2021

## NRCC Staff

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# Available Risk Models and Resources

- Alfalfa weevil
- Apple carbohydrate thinning
- Apple irrigation
- Apple maggot
- Apple scab
- Beet Cercospora leaf spot
- Blueberry maggot
- Cabbage maggot
- Codling moth
- Conifer pests
- Fire blight
- Grape berry moth
- Grape diseases
- Obliquebanded leafroller
- Onion diseases
- Onion maggot
- Oriental fruit moth
- Plum curculio
- Pollen tube growth model (apple thinning)
- Potato diseases
- San Jose scale
- Seedcorn maggot
- Sooty blotch/Fly speck
- Spotted lanternfly
- Spotted tentiform leafminer
- Strawberry diseases
- Tomato diseases
- Western bean cutworm
- White mold in beans

## NEWA



## State Mesonets



Site Status: ● No Problems Reported

Dashboard



a partnership of IPM & 

Ithaca Airport, NY

Latitude: 42.48  
Longitude: -76.47  
Elevation: 1066 ft

★ My Favorite Stations:

<https://newa.cornell.edu>

Dashboard

Results for Ithaca Airport  
Last download: 2020-07-22 1:00 PM

Airport Overview

Base 50°F Degree Days since January 1  
Relative Humidity  
Wind

1288  
78 %  
68 °F  
0 minutes  
7 mph  
NNE

Chrome



Firefox



Safari



Edge



**Always use the most recent version**

# Desktop experience

**Dashboard** ★ My Favorite Stations: Dresden (FLX TDV2), NY

## Results for Dresden (FLX TDV2), NY

Courtesy of [New York State IPM Program](#) Latitude: 42.71  
Longitude: -76.97  
Elevation: 643 ft  
Last download: 2/6/2022, 10:00 AM

### Dresden (FLX TDV2) Overview

At 10:00 AM today Edit Weather Overview

**18 °F**

Yesterday  
Precipitation: 0 in | High Temp: 19 °F | Low Temp: 6 °F

Today as of 10:00 AM  
Precipitation: 0 in | High Temp: 18 °F | Low Temp: 5 °F

Base 50°F Degree Days since January 1: 0  
Base 55°F Degree Days since January 1: 0  
Relative Humidity: 65 %  
Wind Speed: 14 mph

### 5-Day Weather Forecast

Day	Date	Icon	High	Low
Sunday	2/6/2022		30	5
Monday	2/7/2022		38	21
Tuesday	2/8/2022		31	18
Wednesday	2/9/2022		35	14
Thursday	2/10/2022		36	24
Friday	2/11/2022		30	19

### NEWA Weather Tools

- [Degree Day Calculator](#)
- [Hourly Data](#)
- [Daily Summary](#)
- [Regional Radar](#)

# Mobile experience

**Cornell Apple Carbohydrate Thinning Model**

Menu icon (circled in yellow)

Newa Blog Get Help Profile Logout

Dresden (FLX TDV2), NY  
Courtesy of [New York State IPM Program](#)  
Last download: 12/31/2021, 12:00 AM

### Green Tip & Bloom Dates

Green tip and bloom dates below are estimated from growing degree day accumulations. Enter your orchard's dates to fine-tune results.

Green Tip Date: **03/26/2021**

Bloom Date: **04/29/2021**

Percent Flowering Spurs: 51-75%

Note from the model developer (May 7, 2021): The apple carbohydrate model simulates the response to weather of trees that are healthy with normal vigor and bloom, no significant water, nutrient or winter or spring freeze stress.

Dashboard Weather Tools Crop & IPM Tools

WATCH TUTORIAL

Dresden (FLX TDV2), NY

### Date of Interest

May 2021

Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Show/Hide

Station Selection Map

Results Table

Yellow arrow pointing up and down on the right side of the calendar.



WATCH TUTORIAL [↗](#)

All Stations

Haverford, PA

Year of Interest

2022

Show/Hide

Station Selection Map



Management Guide



Adult Emergence and Flights



Post-hatch Life Stage Details



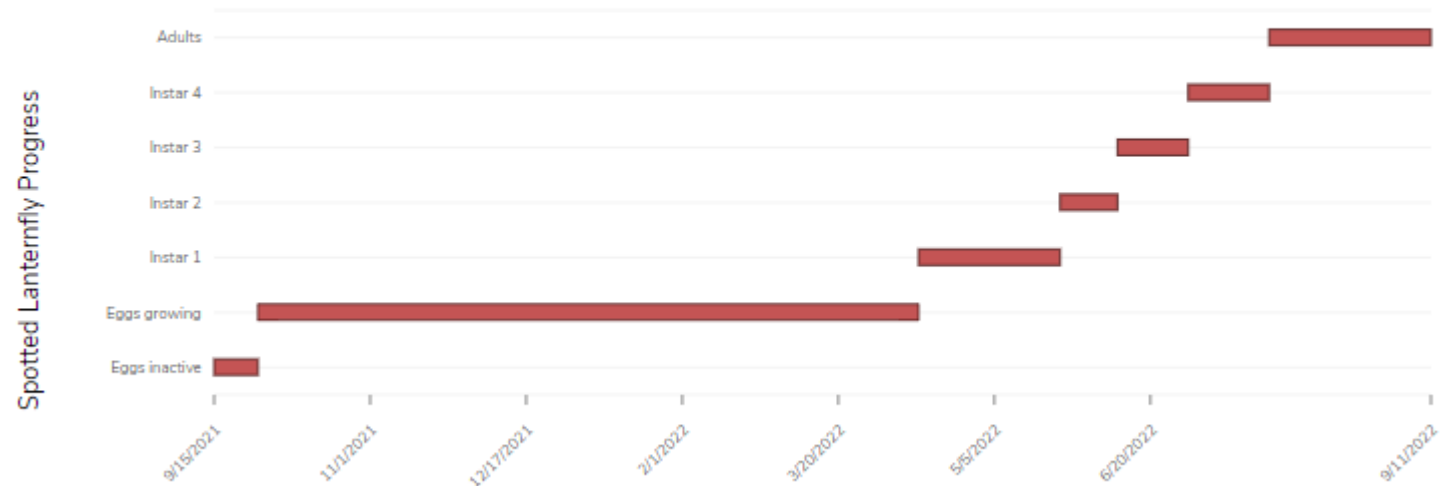
Egg Diapause and Development



<https://newa.cornell.edu/spotted-lanternfly>

Development Status

Download PNG



# https://newa.cornell.edu/grape-cold-hardiness

## Grape Cold Hardiness Risk Assessment

Based on research at [Cornell University](#) and [University of Wisconsin-Madison](#), with funding from [USDA National Institute of Food and Agriculture Grant #2023-68008-39274](#). Web app developed by [NYSIPM](#) and [NRCC](#).

**Use with caution. This model is for demonstration and testing purposes.** Check with your local extension or university specialist before making management decisions. Updated 1/9/2025.

### Location details

Choose a Data Source

Highland HVL, NY

**Highland HVL, NY**  
Courtesy of [Hudson Valley Research Laboratory](#)  
Data last received February 05 2025 13:00  
In service since 2021

### Model details

Select a Unit of Temperature

Choose the Current Date

02/05/2025

Model Start Date

7/1/2024

Select a Grape Cultivar

Cabernet Sauvignon

NYUS1 ColdSnap Model is used for this cultivar

Download this dataset

### Visual results

Temperature (°F)

2025-02-05

LT50 (°F) Min T (°F) Max T (°F)

### Freeze risk assessment

**Cabernet Sauvignon**  
NYUS1 ColdSnap Model

**February 5, 2025**  
Forecast

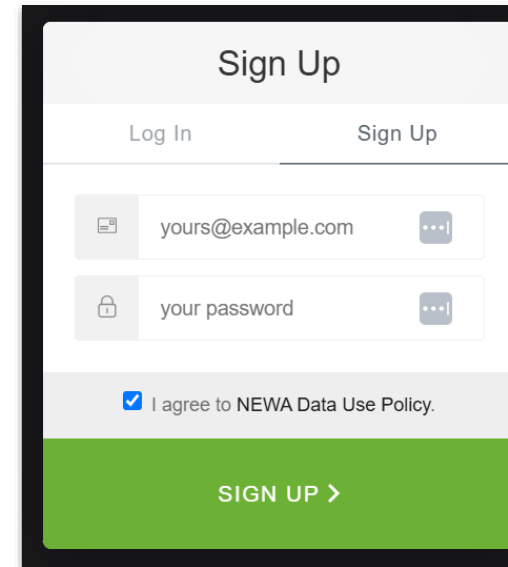
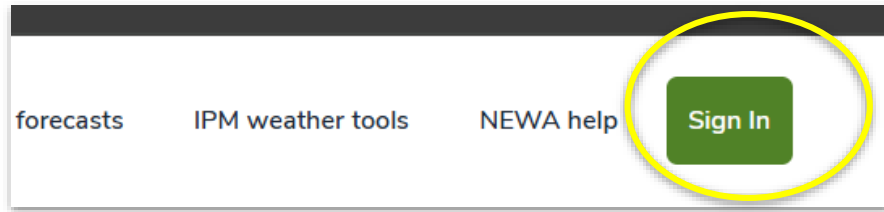
**LOW FREEZE RISK**

LT50*	Daily low temperature	Daily high temperature
-9.8 °F	18.9 °F	29.8 °F

\*Predicted temperature at which 50% of buds will be damaged.

**Disclaimer.** The information provided by NEWA is intended as a reference and should **never** be used as a standalone product for making critical decisions. Users are advised to consult multiple sources of information, including their own experience and professional guidance from extension experts, consultants, or other qualified professionals. Always verify NEWA guidelines in the context of your specific situation before taking any action.

# Action item - create a NEWA account

A screenshot of a mobile 'Sign Up' form. The form has a title 'Sign Up' and two tabs: 'Log In' and 'Sign Up'. Below the tabs are two input fields: one for an email address (containing 'yours@example.com') and one for a password (containing 'your password'). Below the input fields is a checkbox labeled 'I agree to NEWA Data Use Policy.' which is checked. At the bottom of the form is a large green button labeled 'SIGN UP >'. The entire form is enclosed in a black border.

- Provide an email address. No other personally identifiable information is collected. We work to follow industry standard security best practices.
- Make a list of your favorite stations.
- Make a list of your favorite models.
- Enjoy a customized online experience.
- Receive timely updates and notifications about the NEWA platform.