

# FRUIT IPM UPDATE #10

July 15, 2026

## *What's New?*

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## Heat and Smoke

*Thaddeus McCamant, Agriculture Consultant*

Once again, much of Minnesota is being covered with smoke from forest fires to our north, causing warnings over much of the state. While many people will avoid the smoke, your trees and shrubs are in the elements. I have spent hours over the past year trying to find out how forest fire smoke will affect your crops but have reached few conclusions. The major studies concluded that smoke caused no crop losses or even increased yields, but those studies were done on agronomic crops that were hundreds of miles from the fires with smoke that was in the atmosphere rather than ground level. I have found few studies on smoke and crop yields done in places where the smoke was at ground level and so thick that it caused peoples' eyes to sting.

I do have several anecdotes that mention photosynthesis stopping for a few days or blueberries falling off the bushes. The studies I read were not on fruiting crops that are susceptible to ethylene. Ethylene gas is a hormone that can influence fruit ripening and flower bud production. Plants produce ethylene gas, but smoke can also contain enough ethylene to influence plant growth. I haven't found studies measuring ethylene gas in wildfire smoke, because when smoke reaches

ground level, authorities are understandably more concerned about how smoke will hurt humans than plants.

Apple scab pressure is low this year due to dry weather during the primary scab season, but other diseases can be a problem as growers across Minnesota experience major heat waves and periodic rain. The current heat wave has been accompanied by high humidity and dewpoints in the 70's, which provides perfect conditions for sooty blotch and flyspeck.

Sooty blotch and flyspeck refer to several species of fungi that live in the waxy layer on skins of apples. The fungi do not destroy the fruit, but the dirty look of apples with sooty blotch deter consumers and shorten the storage life of apples. Sooty blotch doesn't show up until August or September, which means now is the time to control it.



*Figure 1. Sooty blotch on the shady side of an underripe Haralson.*

Sooty blotch is found across Minnesota, but the intensity of the disease varies from north to south. In southern Minnesota, sooty blotch can cause a Honeygold to turn gray, but in central and northern Minnesota, the Honeygold will be yellow with a few gray patches. Many northern

Minnesota apple producers can get by without controlling the diseases. This past week, the most severe heat warnings were in the northern half of the state, which means that sooty blotch could cause problems further north than usual.

Minor amounts of sooty blotch are of little concern to growers. Small amounts can be washed off during packing. Growers with several acres of apples will struggle to wipe every apple they sell, and one beginning grower I worked with switched to fungicides after washing his apples one growing season.

There are disease models to predict when sooty blotch will start to infect apple fruit, and the NEWA models for Minnesota are saying we are at high pressure right now, which is not surprising to anyone who has walked slowly through an orchard and became soaked with sweat.

As with all fungal diseases, sooty blotch will be less severe on apples that receive adequate air flow. Proper pruning and thinning will help control sooty blotch but not eliminate it.

### Apple Insect Pests: Weekly Trap Counts for 2026

| County     | Location        | 2026 Degree Days (Dates)* | Dates Traps were Out in Orchard | CM      | DWB | LAW | OBLR | RBLR | STLM | AM      |
|------------|-----------------|---------------------------|---------------------------------|---------|-----|-----|------|------|------|---------|
| Chisago    | Shafer          | 1244.0 (01-01 to 07-14)   | 07-08 to 07-14                  | 1,3,0,2 | 9   | 13  | 2    | 82   | 380  | 0,0,0   |
| Fillmore   | Preston         | ---                       | 07-07 to 07-14                  | 0       | 60  | -   | -    | 62   | -    | 2       |
| Morrison   | Little Falls    | ---                       | 07-08 to 07-14                  | 1       | 1   | 28  | 6    | 42   | 180  | 14,14,1 |
| Nobles     | Worthington     | 1421.5 (04-01 to 07-15)   | 07-09 to 07-15                  | 0       | 1   | 0   | 3    | 28   | 0    | 1,0,0   |
| Scott      | Veseli          | 1294.9 (04-16 to 07-15)   | 07-08 to 07-15                  | 9       | 66  | 30  | 15   | 93   | 252  | 0,0,2   |
| Wabasha    | Elgin           | 1334.0 (04-01 to 07-14)   | 07-08 to 07-14                  | 3       | 6   | 1   | 0    | 3    | 150  | 3,3,2   |
| 3Wabasha   | Elgin Ridge     | 1334.0 (04-01 to 07-14)   | 07-08 to 07-14                  | 3       | 6   | 2   | 0    | 2    | 100  | 2,3,3   |
| Wabasha    | Lake City       | 1380.0 (04-01 to 07-13)   | 07-06 to 07-13                  | 0,0,3   | 50  | 50  | 3    | 40   | 60   | 0,0,0   |
| Washington | Afton           | 1495.0 (04-01 to 07-14)   | 07-08 to 07-14                  | 7       | 32  | 6   | 7    | 31   | 65   | 0       |
| Washington | Afton North     | 1493.0 (04-01 to 07-14)   | 07-08 to 07-14                  | 4       | 6   | 6   | 12   | 42   | 80   | 5       |
| Washington | Hastings        | 1412.0 (01-01 to 07-15)   | 07-09 to 07-15                  | 0,3,0,0 | 42  | 8   | 0    | 110  | 66   | 8,2,0   |
| Washington | Hugo            | 1284.0 (01-01 to 07-14)   | 07-08 to 07-14                  | 13      | 44  | 10  | 3    | 46   | 185  | 4,3,0   |
| Washington | White Bear Lake | ---                       | 07-08 to 07-16                  | 3       | 40  | 14  | 20   | 160  | 250  | 7,14,3  |

**KEY:** AM = apple maggot, CM = codling moth, DWB = dogwood borer, LAW = lesser apple worm, OBLR = obliquebanded leafroller, RBLR = redbanded leafroller, STLM = spotted tentiform leafminer, AM = apple maggot --- = no data provided.

\* Degree days using Spec 7 Pro or Spec 8 Pro = cumulative or integral degree days (uses hourly temperatures), with calculation parameters of Base Temp = 50°F and Upper Limit = 86°F.

## 2026 Apple Scab Infections (Cornell Model)

Produced using Spec 7 Pro or Spec 8 Pro (Spectrum Technologies, Inc.)

(Parameters: Base temp. = 33 degrees F, Upper limit temp. = 78 degrees F, Wetness threshold = 6)

| Orchard  | # of Infection Periods | Infection Period Dates | Overall Hours of Wetness | 2026 Dates       |
|----------|------------------------|------------------------|--------------------------|------------------|
| Hastings | 0                      | -                      | 0                        | 07-09 thru 07-15 |
| Shafer   | 0                      | -                      | 0                        | 07-08 thru 07-14 |
| Veseli   | 0                      | -                      | 0                        | 07-08 thru 07-15 |

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[www.mda.state.mn.us/ipm](http://www.mda.state.mn.us/ipm)

Apple Pest Update #10, July 15, 2026