

**Table 1 – Apple Pest Management Calendar**

**December to March**

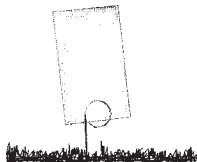


Maintain deer fence, check for deer and rabbit damage.  
Check deer repellents and move or replace if necessary.  
Check for vole damage or activity; re-bait if necessary.  
Review pest management activities of the past year. Plan insect, disease, vertebrate and groundcover management strategy for the coming season.  
Set up pesticide record-keeping system.  
Inventory pesticides in storage.  
Order early season pesticides and pest monitoring supplies.  
Attend winter fruit meetings to share and learn information. Earn pesticide applicator license recertification credits.  
Consider pest management while pruning (open canopies, remove dead and diseased wood and mummified fruit, prune out fire blight cankers).  
Remove unsprayed apple, pear, plum and hawthorn trees within 50 meters (100 meters if possible) of the orchard.  
Remove windbreaks that interfere with air drainage during the summer.  
Remove and store tree bands for *T. pyri* inoculation.

**March to bud break**

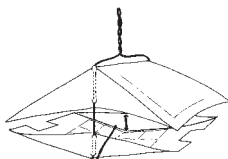
Maintain fences for deer exclusion, check vole guards.  
As soon as snow cover is gone, flail-mow as a sanitation practice for scab.  
Check tractor(s) and make needed repairs. Clean and check sprayer(s) for leaks. Replace worn nozzles, weak hoses, and inaccurate pressure gauges.  
Calibrate sprayers, test spray pattern with water sensitive paper. Test water pH.  
As needed, set sticky traps for leafminers and tarnished plant bug to detect emergence timing and as general indication of abundance.  
Remove prunings from orchard. Burn or compost any prunings.

**Green tip to petal fall**



Pest monitoring as needed, such as:  
Leafminers, Tarnished plant bug — set traps at silver tip, check canopies and traps from half-inch green to pink.  
Scab – At McIntosh 50% green tip, begin recording scab degree days for use in estimating scab ascospore maturity. Begin checking for scab lesions 9–17 days after first infection period (see Table 4).  
Rosy apple aphid, Green fruitworm, Obliquebanded leafroller, Mullein bug – check foliage at pink and during bloom. Set codling moth traps in bloom.  
Early season weed control.  
Avoid disturbing adjacent fields of clover, alfalfa or broadleaf weeds until after fruit set to prevent driving TPB into the orchard. If adjacent fields must be disturbed, try to time it just after an insecticide application.  
During bloom is the best time to identify wild/unsprayed apple and native hawthorne trees near the orchard as they will bloom about the same time as the orchard. These trees harbor apple maggot, plum curculio, codling moth, apple scab, fire blight, and other pests. The herbicide injection lance is an effective and quick way to kill alternate host trees to reduce pest immigration.

**Petal fall through June**



Pest monitoring at appropriate time (scab lesions, mites, plum curculio, sap-feeding leafminers, white apple leafhopper, mullein bug).  
If using pheromone traps to time scouting and treatment for 2nd generation spotted tentiform leafminer, and/or obliquebanded leafroller, set traps shortly after petal fall.  
Check sprayer calibration and adjust for summer applications. Retest water pH.  
Identify summer weed problems. Prune out water sprouts.  
Intensive scab check before extending intervals between fungicide sprays.

**Table 1 – Apple Pest Management Calendar (cont.)**

**July and August**



Adjust fungicide interval to weather and disease pressure.

Pest monitoring, such as:

July — foliar monitoring for mites, leafminer sap-feeding mines, leafrollers, rose leafhopper, aphids, scab. Traps for apple maggot.

August — mites, apple maggot, white apple leafhopper, aphids, scab.

Summer pruning (in addition to affects on coloring, etc.) contributes to pest management via better drying conditions, better spray penetration and less aphid/leafhopper habitat. Prune out water sprouts.

Leaf samples for nutrient analysis (excess nitrogen contributes to mite and aphid populations and increases susceptibility to fire blight).

Mowing tall grass increases air circulation and reduces humidity in canopies, making conditions less suitable for disease development. Short grass also discourages voles.

If practical in small orchard, weekly drop removal after mid-August to interrupt lifecycle of apple maggot, codling moth, and leafrollers.

Time to apply tree bands in block with abundant *T. pyri* to inoculate other blocks.

**September**

As pest damage is observed during harvest, make notes to help evaluate this year's actions and to help in preseason planning for next season.

**October**

After harvest and before leaf fall, estimate the orchard's level of "scab risk" by using the sequential sampling procedure described in the apple scab section.

Check trunks (especially of small diameter trees) for signs of borers.

Vole monitoring to identify areas of high activity. Mow grass to discourage vole invasion. Apply poison bait where needed.

Where pine voles are a threat, trapping to detect their presence.

Remove or mow drops to disrupt insect pest life cycles, and to remove food for voles and competition for poison bait.

Treat brambles and other tough-to-control perennials.

Removing broad leaf weed hosts (such as mullein, pigweed, golden rod) in and around the orchard decreases the overwintering tarnished plant bug population. The significance of this decrease depends on the abundance of other tarnished plant bug host plants near the orchard.

**November**

Mow before poison-baiting voles after harvest. Monitor vole activity to see if re-treatment is necessary.

Check placement and condition of tree guards to prevent vole and rabbit feeding.

Trunk painting to protect against sudden temperature changes or rabbits.

If deer repellents will be used, set them before deer establish a feeding habit. Inspect and make repairs to deer fence.

Perform scab sanitation practices.

Clean, service and properly store equipment and leftover materials.

Remove old trees for orchard sanitation.

