

Elements of IPM for Apples in New York State: Vertebrate Damage Mitigation Practices

Information on Apple IPM Practices for Specific Pests	
Animal Pest	Preferred Practices Under IFP
Beaver	Wire trunk guards, exclusion drift fencing
Birds	Netting; visual scare device (eye-spot balloons, silhouettes, reflective tape); auditory frightening device (recorded alarm calls, pyrotectics, propane cannon).
Rabbits	Exclusion fencing (individual wire guards or 2 ft. (60 cm) high area exclusion fencing); habitat manipulations including removal of brush piles & protective cover within orchards.
Raccoons	Electrified exclusion fencing.
Voles	Wire trunk guards; close mowing of orchard middles; vegetation reductions (<40% ground cover) under trees; removal of dropped apples and prunings; habitat manipulations including elimination of unmowable areas within orchards; monitor to determine the need for rodenticides.
White-Tailed Deer	Exclusion fencing (8 ft. (244 cm) high-tensile woven wire or 5 to 6 ft. (152 to 183 cm) electric exclusion fencing; peanut-butter baited electric fences; invisible fencing with dogs); habitat manipulation including elimination of protective cover within orchards.
Woodchucks	Exclusion fencing (individual wire guards or electrified exclusion fencing); habitat manipulation including removal of brush piles within orchards.
Animal Pest	Practices where Restrictions and Caution Apply*
Beaver	Population reduction through trapping by licensed trapper or licensed nuisance wildlife control agent.
Birds	Population reduction through shooting by licensed hunter of permitted species in appropriate season (crows, turkeys); or unprotected species (European starlings, English sparrows, pigeons).
Rabbits	Population reduction through shooting by licensed hunters or landowners in appropriate seasons; through trapping by landowner or by licensed nuisance wildlife control agent.
Raccoons	Population reduction through shooting by licensed hunters or landowners in appropriate seasons; through trapping by landowner, by licensed trapper, or by licensed nuisance wildlife control agent.
Voles	Population control through trapping by landowner.

White-Tailed Deer	Population reduction through shooting by licensed hunters, landowners or their agents with nuisance deer permits.
Woodchucks	Population reduction through shooting by licensed hunters or landowners; through trapping by landowner or by licensed nuisance wildlife control agent.

* Conduct shooting and trapping only as defined by New York State Department of Environmental Conservation regulations. Shooting for nuisance wildlife control is allowed only when neighboring occupied buildings are >500 ft. distant; shooting when neighboring buildings are less than 500 ft. distant requires neighbor permission. Also check local ordinances, as shooting and trapping are prohibited in some areas.

Consult [Cornell Pest Management Guidelines for Commercial Tree-Fruit Production](#) for further information.