

Invasive Agricultural Plants Found In New York State

Wild Chervil *Anthriscus sylvestris*



- Herbaceous biennial or short-lived perennial
- Reproduces by seed and lateral root buds
- Reduces quality of forage and hay for grazers

- Invades hay fields, roadsides, pastures, disturbed areas, meadows, yards and gardens
- Host for virus disease that infects carrots, celery, and parsnip

Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Chinese Lespedeza *Lespedeza cuneata*



- Semi-woody, perennial forb
- Reproduces by seed and lateral root buds
- Invades fields, meadows, pastures, and cultivated crops
- May develop an extensive seed bank in the soil
- Due to a high tannin content, the plant is unpalatable to livestock

- Has an extensive tap root
- A single plant may live for over 20 years

Photo: Chris Evans, Illinois Wildlife Action Plan, Bugwood.org

Kudzu *Pueraria montana*



- Herbaceous to semi-woody perennial vine
- Reproduces by seed, rhizomes, and adventitious roots
- Aggressive, climbing vine that overgrows anything in its path

- Invades abandoned fields, fence rows, and crop areas
- Massive tap root at more than 6 feet in length
- Once established, grows up to one foot a day

Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Mile-a-Minute *Persicaria perfoliata*



- Spiny summer annual vine
- Reproduces by seed
- Invades Christmas tree plantations, landscapes, nursery crops, orchards, clear-cut areas, and drainage ditches

- May restrict access to areas due to spines on the stem

Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Japanese Stiltgrass *Microstegium vimineum*



- Annual grass
- Reproduces by seed
- Alters soil chemistry and shades other plants
- Not preferred by grazers
- Invades fields, lawns, and gardens in addition to other natural areas

Photo: Chris Evans, Illinois Wildlife Action Plan, Bugwood.org

Japanese Barberry *Berberis thunbergii*



- Thorny, perennial shrub
- Reproduces mainly by seed, also by creeping roots
- Invades pastures, fields, roadsides, and fence rows
- May change soil chemistry

- Grazers tend to avoid eating Japanese barberry
- Thorns in large infestations may restrict access to areas

Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Oriental Bittersweet *Celastrus orbiculatus*



- Deciduous, woody, perennial vine
- Reproduces by seed (viable for several years) and creeping roots
- Twines around trees and shrubs girdling them

- Invades roadsides, hedgerows, grasslands, field edges, fencerows, and stands of trees

Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

The Cornell Cooperative Extension Invasive Species Program (CCE ISP)

- Provides high quality science-based invasive species education
- Helps New Yorkers detect, prevent, and control invasive species
- Helps New Yorkers protect our agricultural and natural resources, human and animal health, and economy from invasive species

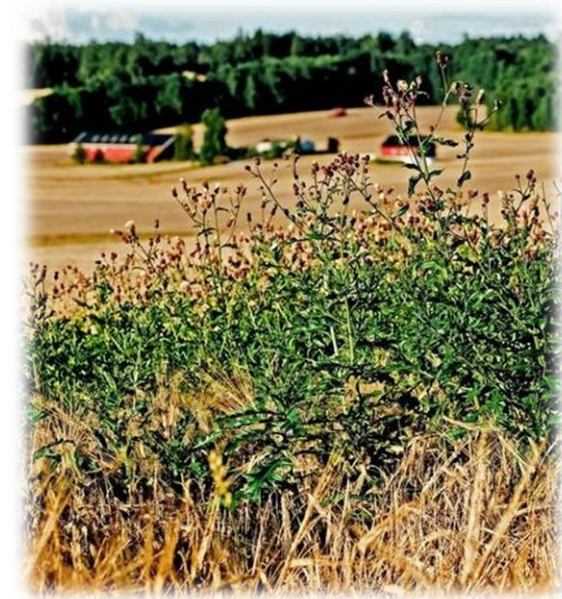
For more information on invasive species in New York visit:
www.nyis.info



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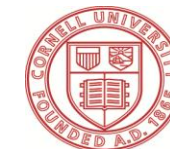


Cover Photo: Bonsak Hammeraas, Bioforsk - Norwegian Institute for Agricultural and Environmental Research, Bugwood.org



Weeds

NEW YORK AGRICULTURAL INVASIVE SPECIES



Cornell University
Cooperative Extension

Agricultural Invasive Plant Species of High Priority to New York State: Why Should Agriculture and Agribusiness Care?

Nationwide:

- Invasive species (plants, insects, and pathogens) costs to U.S. agriculture: > \$138 billion per year (USDA-APHIS 2001)

What's at Risk in New York?

- 37,000 ± farms (25% of NY's 7.65 million acres)
- Milk: third highest production in the nation (\$2± billion/year)
- Major industry of field crops supporting dairy: corn, oats, wheat, soybeans
- Human consumption field crops, fruits, and vegetables (\$1 ± billion/year)
- Apple production along southern shore of Lake Ontario, the Hudson Valley, and in upper Lake Champlain Valley is 2nd highest in the nation
- Bedding and garden plants produced under 24 million square feet of glass; 5th largest in nation

What Are the Economic Impacts of Invasive Agricultural Plants to NY?

- Agricultural weeds cause estimated 12% crop losses = \$33 ± billion/year
- \$4 ± billion/year spent on herbicides to control invasive plants

What Segments of Agriculture and Agribusiness are Impacted by Invasive Species?

- Commodity production
- Harvesting impacts
- Price and market effects
- Production sustainability
- Food security and nutrition
- Human and livestock health

Invasive Agricultural Plants Found In New York State

Canada Thistle *Cirsium arvense*



- Rhizomatous perennial forb
- Reproduces by wind-blown seed and creeping rhizomes
- Spiny thickets can restrict access in infested areas

- Extensive, fast growing, horizontal roots, which give rise to additional shoots
- Invades perennial crops, rangeland, riparian areas, and areas of reduced tillage

Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Leafy Spurge *Euphorbia esula*



- Colony-forming perennial
- Reproduces by seeds, buds of lateral roots and root segments
- Mildly toxic to cattle

- Extensive root system may be costly to manage once established
- Invades rangeland, pastures, uncultivated perennial crops, and reduced-tillage crops

Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Spotted Knapweed *Centaurea stoebe*



- Biennial, Short-lived perennial
- Reproduces by seed
- Important invader of rangeland, pastures, low-maintenance turf grass, landscapes, nurseries, and crops
- Reducing livestock forage

- Produces chemical that is toxic to other plants
- Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Giant Hogweed *Heracleum mantegazzianum*



- Herbaceous biennial or perennial
- Reproduces by seed
- Phytophotodermatitis: contact with sap can result in severe burns, blistering, painful sores, and blindness
- Toxic to livestock when mixed in with hay

- Found along roadsides, stream banks, and waste areas

Photo: USDA APHIS PPQ Archive, USDA APHIS PPQ, Bugwood.org

Wild Parsnip *Pastinaca sativa*



- Herbaceous biennial, sometimes perennial
- Reproduces by seed
- Invades unmanaged yards, meadows, fields, and waste places

- Toxic to livestock when mixed in hay
- Phytophotodermatitis: reddened skin in long spots or streaks with blistering and burning

Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Hemp Dogbane *Apocynum cannabinum*



- Herbaceous perennial
- Reproduces by seed, crown buds, and over-wintering rootstocks
- Each flower produced 2 seed pods, each of which produce 80-200 seeds
- Rootstocks grow rapidly

- Problematic in no-till corn, pastures, hay fields, alfalfa, and soybeans
- The milky sap of hemp dogbane is poisonous to cattle, horses, and sheep

Photo: Steve Dewey, Utah State University, Bugwood.org

Pale Swallow-wort *Vincetoxicum rossicum* Black Swallow-wort *Vincetoxicum nigrum*



Pale swallow-wort



Black swallow-wort

- Twining, vine-like perennial
- Reproduces by seed and axillary tillers from root crown if main stem is damaged
- Invasive weed in Christmas tree plantations, nursery crops, fields, pastures, perennial crops, and along fence rows
- May restrict access to infested areas due to extensive twining
- Grazers tend to avoid swallow-wort because it is not as palatable as other plant species

Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Multiflora Rose *Rosa multiflora*



- Perennial shrub
- Reproduces by seeds and stem runners, which form adventitious roots
- Tolerates a variety of soil types

- Thickets restrict human and animal access to areas
- Invades pastures, rangeland, landscapes, fence rows, and uncultivated areas

Photo: James R. Allison, Georgia Department of Natural Resources, Bugwood.org

Japanese Knotweed *Fallopia japonica*



- Herbaceous perennial
- Reproduces mainly by rhizomes, sometimes by seed
- Rhizomes bury under paved areas and are difficult to manage

- Most commonly found near water sources and low-lying areas such as ditches, waste places, and around homes

Photo: Tom Heutte, USDA Forest Service, Bugwood.org