



Invasive Plants and Chemical Controls

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Invasive Plant Definition from USDA

- “Invasive plants are introduced species that can thrive in areas beyond their natural range of dispersal. These plants are characteristically adaptable, aggressive, and have high reproductive capacity. Their vigor combined with a lack of natural enemies often leads to outbreak populations.”

How Have Plants Become Invasive in Pennsylvania?

- Accidental Introduction
- Purposeful Introduction without knowing the full capability of the plant to become invasive
 - Wildlife Value
 - Ornamental Value
 - Pretty Flowers
 - Erosion Control
- Bird dispersal by seed

What makes the Invasive Plants so prolific?

- Seed and Vegetative Reproduction
- Fast growth
- Growth before natives in the spring and after natives in the fall
- Rapid Reproduction
- Tolerance to wide range of environmental conditions
- High dispersal ability

Application Methods

- Low Volume Basal





Low Volume Foliar



High Volume Foliar



Japanese Barberry



Japanese Barberry



- Introduced as an ornamental in 1875 in the form of seeds sent from Russia to Boston.
- Invasive in 20 states including PA.
- Birds spread seed readily.
- Branches can re-root and start new plants.
- European Barberry is a new potential invasive in the Northeast.

Japanese Barberry

- Herbicide Control Measures:

HVF: Garlon 3a 2 qts and Escort XP 1 oz. + Cleancut 1qt./100 Gallons of Water

LVF: Garlon 3a 3 oz. and Escort XP 1 Gram + Cleancut ½ oz. per gallon of Water

Accord XRT & Escort XP make a fine combination for Barberry control.

VASTLAN-New Option for Garlon 3a

Japanese Stiltgrass





Japanese Stiltgrass

- Native of Japan and other Asian countries.
- Annual Grass that grows in many habitats. Upland to wetland.
- Threatens native plants and can compete with natural tree regeneration.
- Spread throughout the Mid Atlantic and partially in the Mid West.
- Individual plants may produce between 100 to 1,000 seeds and remain viable for more than 5 years.



Japanese Stiltgrass



- Herbicide Control Measures:
- Backpack App:
- Rodeo at 2% solution with approved surfactant (either Clean cut or Chemsurf 90).

Broadcast:

Assure II 6-10 oz/acre + approved surfactant.

Proclipse 2 lbs. & Plateau 1 oz. per acre make a good pre-emergent combination.

Oust XP 2-4 ozs per acre

Airblast:

Residual activity can gotten from Oust XP. Control the seed source. 2-4 oz. per acre. Add Glyphosate after substantial grass emergence.

New potential products=Esplanade

- ***Not Labeled yet for this.

Autumn Olive



Autumn Olive

- Introduced in 1830's.
- Used as re-vegetation in strip mine areas.
- It thrives in disturbed areas (roadsides and old field succession).
- Forms dense thickets.
- PA Game Commission introduced for wildlife food and cover.
- Distinctive silvery scales on leaves, stem, and fruit.



Autumn Olive

- Herbicide Control Measures

- HVF: Garlon 3a 3qts. +
Cleancut at 1 qt./100 gallons

Or Garlon 3a 2qts., Rodeo or
Accord XRT II 3qts., and
Cleancut 1qt.(Rodeo)/100
gallons(Shrub Complex)

*Again Vastlan 2.5 qts. can be
substituted for Garlon 3a

LVF: Viewpoint .5 oz/Gallon
and Cleancut ½ oz./Gallon

Basal: Garlon 4 Ultra 25% and
Arborchem Basal Oil 75%



Ailanthus





Ailanthus



- Introduced in Philadelphia(1784).
- Then introduced to California during the Gold Rush.
- In 42 states today.
- Fast growing(6-8' per yr.), allelopathic tree.
- Prolific Seeder & Extreme Vegetative Growth Pattern.
- Extremely difficult species for right-of-way managers to stay ahead of.
- Verticillium Wilt—Please Spread Readily!

Ailanthus



- Herbicide Control Measures:
- HVF: Escort XP 1 oz. and Clean Cut at 1-2qts/100 Gallons.- Understory
or Streamline 4.75 oz and Clean Cut at 1-2 qts/100 Gallons-Field Invasion- Also Accord/Escort great combo
- LVF: Escort XP 1-2 Grams per 1 Gallon of Water + Clean cut or Streamline at .4 oz/Gallon + Surfactant (addition of Glyphosate won't hurt)
Thinvert could be substituted.
Stronger mix.
- BASAL: Garlon 4 Ultra 25%, and Arborchem Low Odor Basal Oil 75% Timing is important. Late Summer
- Hack N Squirt: Glyphosate 50/50 with water. Later Summer timing



*Multiflora Rose



*Multiflora Rose



- Introduced to United States from Japan in 1866 as rootstock for ornamental rose.
- Extremely prolific throughout US.
- Grows in old fields, woods, roadsides, and farms.
- Tremendous living fence, impenetrable thickets.
- State wildlife agencies utilized for cover and food.
- Birds disperse seed readily.
- Thorns are extremely painful and bent back like barbs on a hook.

*Multiflora Rose



- Herbicide Control Measures:

- HVF: Streamline 4.75 oz. +
Cleancut 1 qt./100 Gallons of
Water

Or Escort XP 1 oz. Per 100
gallons of water + Cleancut 1
qt./100 gallons of water

Under canopy

Good all around forestry mix is
Accord XRT II and Escort XP

LVF: Streamline .4 oz +Cleancut
½ oz/1 Gallon of Water or

Escort XP 1 gram per gallons +
Cleancut ½ oz per gallon

Thinvert can be used in the LV
technique as well.

Escort can be used at 1 oz and
1 Gram respectively.

Invasive Bush Honeysuckle



Amur vs. Morrow's



Invasive Bush Honeysuckle



- Amur, Morrow's, Tartarian, and quite a few others fall in this group.
- Generally hollow pith in the stem compared to solid stem on natives.
- Red or Orange berries.
- Introduced for bird forage and erosion control.
- Old field succession plants many times found with Autumn Olive and Multiflora Rose.
- Competes with Native Honeysuckle for pollinators.
- Morrow's Honeysuckle can inhabit wetlands, bogs, and lakeshores.
- Seed spread prolifically by birds.

Invasive Bush Honeysuckle



- Herbicide Control Measures:
- HVF: Glyphosate is a must. Garlon has no killing effect.

Accord or Rodeo @ 3qts and Garlon 3a @ 2qts. +Cleancut @ 1 qt./100 gallons. (Mix will get both Honeysuckle and Autumn Olive). Garlon 3 and Streamline is a new option. Higher rates of 2,4-D are showing 80% control rates.

LVF: Rodeo @ 5% + Cleancut at ½ oz/Gal. •

Japanese Knotweed



Tough To Manage?



Japanese Knotweed



- Introduced from Japan in the late 1800's
- Found in the east from Newfoundland to North Carolina.
- Lines banks of creeks and rivers, strip mined areas and other disturbed sites(RR Yards & Roadsides).
- Destroys biodiversity where it exists.
- Grows by seed, but need male and female plants.
- Grows intensely by vegetative growth. (Flooding can lead to new colonies).
- False Bamboo
- Infamous invasive amongst many I encounter.
- Actually beneficial in its home range of Japan.

Japanese Knotweed



- Herbicide Control Measures:

- HVF:

Rodeo at 2qts, Polaris at 4 ozs., and Chemsurf 90 at 1 qt./100 gallons of water. Spray the Knotweed at 200 gallons per acre.(Fire Hose)

Late summer (August/Sept.)

Additional mechanical activities can assist in management.

Cutting in June.

- ULV Thinvert:

Accord Concentrate or Rodeo 7%

Polaris 1% + Thinvert RTU

Late season application

- LVF: Accord or Rodeo 5% and Polaris ½ % + Chemsurf 90 @ ½ oz. per gallon



1 year later results



*Mile-a-Minute





*Mile-a-Minute



- Native of Eastern Asia and China.
- Introduced by accident in the 1930's in nursery stock in York County, PA.
- It has moved 300 miles in each direction since then.
- Annual vine that grows over desirable vegetation including trees and shrubs.
- Colonizes open and disturbed areas.
- Seed set begins in early August, its best to treat before then.

*Mile-a-Minute



- Herbicide Control measures:
- Foliar Treatments:
- Rodeo or Accord XRTII work great. Add surfactant to Rodeo. LVF 2-3 oz + 1 oz surf.
- HVF- 2 qts. per acre or 100 gallons
- Seed source remains.
- Pre-emergent Treatments:
- Oust XP 2 oz. per acre. + Accord XRT II or Garlon 3a if emerged.
- Plateau 1 oz per and Proclipse 65WDG 2 lbs. per acre.

Other Problematic Invasives

- Porcelain Berry
- Japanese Angelica
- Bamboo
- Garlic Mustard
- Crown Vetch
- Wild Parsnip
- Reed Canary Grass
- Burning Bush
- Buckthorn
- Privet
- Norway Maple
- Japanese angelica-tree
- Callery pear(bradford)
- Japanese Hops
- Eurasian water-milfoil

Thanks! And God Bless!

Email me to get 2017
Herbicides and Equipment
Pricing

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