

## Weed Management for Tobacco Barns and Other Farm Buildings

Effectively controlling unwanted vegetation and weeds surrounding agricultural barns and buildings is an important component of building maintenance. Many tobacco barns sit idle, where they succumb to weedy growth and eventual decay. This fact sheet provides information on how to control and manage vegetation surrounding barns using a variety of strategies.

### Reason for Control

A well cared for barn free of weedy growth is not only an attractive addition to the farmstead, but also prolongs the life of the structure. Weeds increase humidity and decrease air circulation around buildings, which can result in rust, rot, and decay. If left unchecked, vegetation, especially trees and vine-type weeds, can impact the structural integrity of the building. Weeds harbor rodents, snakes, and other undesirable animals. Many weeds, such as poison ivy, pose a health hazard and may prevent access to the building. Spending time, energy and money to properly control weeds now will help preserve your structure for use and enjoyment in the years to come. The cost of replacing the structure is substantial and maintenance is far less expensive.



Tobacco barn with decay and damage to structural integrity from trees and vines.

### Natural Cycle of Weed Growth

Neglected buildings can be quickly overtaken by vegetation. If left unchecked, a mixture of annual and perennial weeds will quickly germinate around the barn. In the next few years, many annuals will be replaced with soft herbaceous perennials followed by woody



**Barn with extensive growth of trumpetvine and poison ivy.**

perennials such as trees and vines. The ample supply of water from roof runoff spurs plant growth. The vertical facade provides an optimal environment for vine plants. Eventually, many woody, fast-growing perennial weeds will become established. In Maryland, common perennial weeds surrounding barns include:

- **Woody and Vine-type Perennials:** Poison Ivy, Poison Oak, Honeysuckle, Wild Grape, Greenbrier, and Multiflora Rose
- **Trees:** Wild Cherry, Sweet Gum, Tree of Heaven, Bradford Pear, and Locust
- **Herbaceous Perennials:** Johnsongrass, Canada Thistle, and Common Pokeweed

## Strategies to Control and Manage Unwanted Vegetation

### **Nonchemical Control: Cutting and Mowing**

One approach to control vegetation is to keep the area surrounding farm buildings mowed. Most of the common woody plants will not tolerate repetitive close mowing. The establishment of a competitive turf border will prevent any other plants from germinating and growing. A turf or other vegetative border will also prevent soil loss from erosion, which can be a major concern with bare soil and large amounts of water from roof runoff.

## Guidelines for Establishing a Turf Border

- The ideal time window for seeding turfgrass in Maryland is late summer, generally from late August through mid October. A spring seeding may also be made from mid-February through April.
- Mechanically remove any woody plant material such as vines and trees.
- Apply Round-Up or other glyphosate product at least 3 weeks before establishing turf to kill unwanted vegetation.
- Till or cultivate the border area, then lightly roll the area to create a firm seedbed. If unable to till, closely mow and remove as much of the existing vegetation as possible. Good seed-to-soil contact is important.
- Spread seed over the area at a rate of 8 lbs. per 1000 sq. feet with KY-31 tall fescue or other turf-type fescue. Lightly

rake in seed. Do not cover more than 1/8 inch.

- If available, irrigate as needed until grass is established.

## Nonchemical Control: Weed Barriers and Water-Permeable Borders

A second nonchemical approach is the use of a permanent weed barrier surrounding the building. This method consists of installing a 3-4 foot water-permeable geotextile fabric cloth around the perimeter of the building. The fabric cloth is then covered with a 3-inch layer of small stone, oyster shells, pea gravel, or other coarse material. The gravel slows water runoff from the roof and protects the fabric cloth from degradation. Once installed, this system will last for many years and is easy to maintain. Non-permeable plastic sheeting is not recommended. Organic wood mulch may also be used, but is not highly recommended as the mulch must be



A barn being overtaken by woody trees. Without control, this barn will be permanently damaged in less than 5 years.

## Soil-Applied Herbicides with Residual Activity

Herbicide Product	Rate/Acre	Comments
Prometon  Pramitol 25E  or  Pramitol 5 PS	1–3 pts./1000 sq. ft. in 2–3 gallons water. Liquid application.   5–20 lbs./1000 sq ft. Dry granular application.	Controls both annual and perennial broadleaf and grass weeds and woody plants. Product will result in control to all vegetation (bare soil) for one or more years. Do not use near root zone of desirable plants or injury will occur. Use higher rates for hard to kill weeds and perennials. Apply before or shortly after weeds emerge.
Diuron  Karmex 80DF	2–6 ozs./1000 sq. ft. in 4 gallons water. Liquid application.	Controls both annual and perennial broadleaf and grass weeds and woody plants. Product will result in control to all vegetation (bare soil) for one or more years. The addition of non-ionic surfactant at 1-2 quarts per 100 gallons spray material will increase control. Apply before or shortly after weed growth begins.
Tebuthiuron  Spike 80DF    Spike 20P	2 ozs./1000 sq. ft. in 1–3 gallons of water. Liquid Application.   4–11 ozs./1000 sq. ft. Dry granular application.	Controls both annual and perennial broadleaf and grass weeds and woody plants. Warm-season perennial grasses are generally tolerant to Spike, but some injury may occur. Product will result in control to all vegetation (bare soil) for one or more years. Do not use near the root zone of desirable plants or injury will occur. Use higher rates for hard-to-kill weeds and perennials. Spike may be applied at any time, however dormant applications minimize damage to perennial grasses.
Imazapyr  +  Diuron   Topsite 2.5 G	5–7 lbs./1000 sq. ft. Dry granular application.	Controls both annual and perennial broadleaf weeds and grasses. Product will result in control to all vegetation (bare soil) for one or more years. Do not use near root zone of desirable plants or injury will occur. Use higher rates for hard-to-kill weeds and perennials. Apply before or shortly after weeds emerge.

Conversion Tips: One fluid ounce equals 30 milliliters; 1 acre equals 43,560 sq. ft.

## Foliar-Applied Herbicides

Herbicide Product	Rate/Acre	Comments
<p>Glyphosate</p> <p>Various Brand Names</p> <p>Round-Up</p> <p>Touchdown</p> <p>Glyphos Extra</p>	<p>1–5 lbs. active ingredient per acre. Consult label for suggested rates based on brand and formulation.</p>	<p>Glyphosate herbicides will provide non-selective systemic post-emergent control of most annual and perennial weeds and grasses. Glyphosate has no residual soil activity and will not control weeds that are not actively growing. Complete and uniform spray coverage is essential. Repeat applications may be needed for hard-to-kill woody and vine weeds. The addition of non-ionic surfactant at 1-2 quarts per 100 gallons of spray material will increase control. Avoid drift to desirable plants or damage may occur.</p>
<p>Triclopyr</p> <p>Garlon 3A</p>	<p>9 fl. ozs./1000 sq. ft. in 2–3 gallons of water. Liquid application.</p>	<p>Selective post-emergence foliar-applied herbicide. Controls many herbaceous broadleaf plants and some woody broadleaf plants. For large or hard to control woody plants, consider the use of Crossbow. Will not harm most grasses. May also be used as cut surface treatment to kill freshly cut trees. Triclopyr has little residual soil activity. Avoid drift to desirable plants or damage may occur. Volatility drift is a concern with this product.</p>
<p>Triclopyr</p> <p>+</p> <p>2,4-D Ester</p> <p>Crossbow</p>	<p>4–6 fl. ozs. in 3–4 gallons of water and spray to thoroughly wet all foliage.</p>	<p>Crossbow will provide selective post-emergent control of most annual and perennial weeds. Will control most vines and woody plants. Crossbow has little soil residual activity. Avoid drift to desirable plants or damage may occur. Volatility drift is a concern with this product. Not recommended for application in summer months. May also be used as a cut stump or basal treatment.</p>
<p>Clopyralid</p> <p>Stinger</p>	<p>1/8–1/2 fl. ozs./1000 sq. ft. in 1 gallon water. Liquid application.</p>	<p>Stinger will provide selective post-emergent control of many annual and some perennial herbaceous broadleaf weeds and some woody plants. Will not control grasses or weeds in the mustard family. Complete spray coverage of actively growing weeds is required. Stinger will provide residual control of many broadleaf plants. The addition of non-ionic surfactant at 1–2 quarts per 100 gallons of spray material will increase control. Avoid drift to desirable plants or damage may occur.</p>



**Example of a permanent weed barrier strip. The grass escape weeds that grew through the barrier have been killed with glyphosate.**

reapplied each year and weeds removed. One potential downside to the use of any weed barrier is it may provide a moist area for termites, so the border should not touch any wood from the building.

## **Chemical Control Options**

Herbicides are another useful tool to control vegetation around farm buildings and noncropland areas. The use of herbicides to control all vegetation over long periods of time will often require repeated applications and expense. The use of residual herbicides that result in bare ground may increase erosion. The use of residual herbicides may damage desirable plants with root zones near the treated area. Note that the root zone of many trees will extend beyond the drip line. It is recommended to use herbicides as one method in an overall strategy of vegetation control. For example, herbicides may be used for 2 to 3 years to obtain control of woody growth followed by the installment of a weed barrier border.

## **How Herbicides Work**

Herbicides can be classified into many groups. The following is a summary of different herbicide classifications:



**Honeysuckle beginning to climb a tobacco barn.**

## **Residual vs. Nonresidual**

Residual-type herbicides have soil activity and will provide ongoing control after they are applied. Residual herbicides with long periods of soil activity are often referred to as soil sterilants and will result in bare ground for several months to years. Nonresidual herbicides have no soil activity and do not provide any lasting control after the initial application.

## **Selective vs. Nonselective**

Selective herbicides only provide control of certain types of plants. For example, some selective herbicides will only control grasses, while other selective herbicides only control broadleaf plants. Nonselective herbicides control both broadleaf and grass plants. For example, both glyphosate (Round-Up) and paraquat (Gramaxone) are nonselective herbicides.

## **Systemic vs. Contact**

Systemic herbicides are absorbed by the plant and translocated to other plant parts such as the roots and vascular system. Systemic herbicides will often take several days before any noticeable

effect is observed. Systemic herbicides are generally more effective in killing perennial weeds because they affect the plant roots as well as foliage. Non-systemic contact herbicides are not translocated within the plant. They primarily affect the foliage of the plant and can be thought of as “chemical lawnmowers.”

### **Pre-Emergent vs. Post-Emergent**

Pre-emergent herbicides are applied to the soil before plants germinate. They prevent plant germination. It is important to apply pre-emergent herbicide before the plants have germinated for proper effectiveness. Post-emergent herbicides are applied to actively growing foliage of plants and are absorbed primarily by the foliage. It is important to apply post-emergent foliar herbicides to green tissue on actively growing plants for effective control.

### **Preventing Injury to Nontarget Vegetation**

The movement of herbicides away from the intended target vegetation is referred

to as drift. Drift can be caused by particle drift where the droplets are carried by the wind to other plants or volatility drift where the liquid vaporizes to form a gas and is carried in the airstream. Do not apply herbicides in windy conditions. Do not apply herbicides prone to volatility drift, such as 2,4-D or Banvel when temperatures exceed 85° Fahrenheit. Some herbicides are also prone to leaching (moving through soil to groundwater). Sandy soils with low organic matter and a high water table are especially prone to leaching. Leaching of herbicides may cause contamination of the groundwater. Always read the label and follow label directions to minimize the possibility of drift. When using long-lasting residual soil-applied herbicides, adjacent trees and plants may be damaged when their root systems come in contact with the herbicide(s).

*Use of trade names does not constitute an endorsement by the University of Maryland Cooperative Extension.*

*Always read and follow the pesticide label. Use pesticides only in accordance with the directions on the label.*

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and Other Farm Buildings**

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