

Ask A Professional

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Landowner questions are addressed by foresters and other natural resources professionals. Landowners should be careful when interpreting answers and applying this general advice to their property because landowner objectives and property conditions will affect specific management options. When in doubt, check with your regional DEC office or other service providers. Landowners are also encouraged to be active participants in Cornell Cooperative Extension and NYFOA programs to gain additional, often site-specific, answers to questions. To submit a question, email to Peter Smallidge at pjs23@cornell.edu with an explicit mention of "Ask a Professional." Additional reading on various topics is available at www.forestconnect.info

Tools To Manage Interfering Plants

Question:

I have learned how to identify some of the plants in my woodlot and I realize that many don't support my objectives and may crowd out desired plants. How can I learn how to manage them to support my objectives?

Answer:

Management of interfering plants has become an increasingly common question. The specifics vary, in terms of the types of plants and the specific owner objectives, but the pattern is consistent... how can owners efficiently and safely limit the abundance of undesirable plants?

Let me clarify some terms. A common focus of attention is to manage against "invasive" species. In NYS law, an "invasive" species is non-native and has fewer benefits than native species with regards to associated economic, ecological, or human well-being problems (www.nyis.info). The interpretation of this definition often emphasizes the non-native quality, and doesn't acknowledge native species that can become problematic. I prefer the more general label "interfering" to focus on the qualities of a plant that interferes with an objective of

an owner. Thus, a species that is interfering in one context may not be interfering in another context. Each owner needs to consider each context where a plant occurs, at the local and landscape scale, and conscious of a short and long time frame. A species that fulfills the definition of "invasive" would be interfering, but so would some native species.

I have heard some arguments that

interfering plants really aren't a problem because they have some redeeming qualities. Although these plants nominally have some favorable traits, those traits are typically not as favorable as found in the desired plants. Also, the interfering plants can, almost by definition, overwhelm a woodlot and exclude all or most other species. The development of a monoculture brings additional potential problems.

There is a strong history of work and an abundance of educational materials that can assist the owner and manager in their efforts to manage interfering plants. This column has previously addressed aspects of this question, but some new resources are available that will help forest owners. I recently learned of an outstanding website developed by Dave Jackson of Penn State Cooperative Extension (<http://extension.psu.edu/fvm>), and will use that web site and the ForestConnect resources (www.ForestConnect.info) for this response. Dave Jackson also gave a webinar on this subject in February 2012, accessible through either of the ForestConnect web links provided here.



Non-native and native species can interfere with objectives that woodlot owners have for timber production, recreation, wildlife habitat and maple syrup production. Success with the management of interfering plants requires an integrated approach. There are few occasions when a "one and done" effort is sufficient.

First, the operational strategy to approach the problem of interfering plants should be one of Integrated Vegetation Management (IVM). IVM has several basic tenets. 1. Scout the area and identify the relative abundance of desirable and interfering plants. You need to know the extent of the problem. 2. Realistically consider the acceptable abundance of the interfering plants relative to your ownership objectives. Full control is seldom possible and often not desirable. 3. Select the variety of management tools that satisfies the owner's ecological and economic criteria. Circumstances will dictate which tools will be effective, and the sequence that tools are applied can increase or decrease their effectiveness. 4. Evaluate the effectiveness of the treatments, reassess your objectives relative to current levels of the interfering plant, and determine if additional or new treatments are necessary.

The types of treatments are often distinguished by the mode and the method of treatment. Mode refers to whether the treatment is focused on individual plants or focused on the area where the plants grow. "Selective" treatments are focused on individual plants while "broadcast" treatments are



The beech sprouts in this picture were treated with a foliar application of a herbicide at a specific concentration of the active ingredient. That same herbicide, when used for a cut-surface or stem injection treatment would be mixed at a different concentration. If an owner chooses to use a herbicide, deliberate attention must be given to aligning the correct product with the target species and application method.

and include: mechanical, chemical or biological.

Discussions of vegetation management often converge on the relative merits of chemical versus mechanical controls. Some owners have a strong preference to avoid the use of chemical treatments. For some vegetation management situations, mechanical or cultural treatments will be effective and efficient. In other situations, the owners might consider an initial mechanical treatment that would significantly reduce the amount of chemical needed to accomplish the management goal. A number of webinars on mechanical forest vegetation control are available at the ForestConnect webinar site, together with discussions at <http://CornellForestConnect.ning.com>

Some specific attention to chemical control is warranted for several reasons: chemical methods are used by many owners, in some cases chemical control is the most effective control technique, misuse of chemicals can compromise human and environmental safety, and because the use of chemicals is regu-

lated by federal and state law. The Penn State website has an abundance of information that will assist owners and managers in these regards. Let me offer a few key points:

1. When owners use an herbicide (herbicides are a category of pesticides that control plants), the herbicide has a label and the label is effectively a contract between the user and the state regulatory authority. It is imperative for the person applying the herbicide to read, understand, and follow the label. The label is the law. The overwhelming majority of information on the PSU website is applicable to NY, but NY has some distinct laws regulating which herbicides can be used. To check on specific NY herbicides, visit this site <http://pims.psur.cornell.edu/> or the Cornell pesticide page at <http://pmep.cce.cornell.edu/>

2. Start by reading the PSU Cooperative Extension bulletin titled *Herbicides and Forest Vegetation Management*. This is available for free on the PSU website. I have a link to the



Every pesticide, which includes all herbicides, have a label that describes the legal applications of the product. Web sites allow users to review labels before purchase to ensure the herbicide is appropriate. Users are expected to read, understand and follow the label. The label is the law.

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publication on the ForestConnect site as well.

3. The PSU web site has a wealth of information on herbicides. Information is available on: herbicide treatment guidelines, common forestry herbicides, herbicides by application method, herbicide applicators & distributors, and trees controlled.

4. Herbicides can be applied through one of several different application methods. These are detailed on the PSU website, and some examples include: stem injection, basal bark, and foliar. The correct method depends on several factors. The formulation of a particular herbicide might be different when that herbicide is used in different application methods. The treatment needs to consider the species, plant form, owner objectives, and the context of the management need.

5. You can narrow down the options of the product to use based on the bulletin listed in #2 above and by talking with people who have experience with multiple products. Once you have some options, review the labels online using the links in #1 above. The labels will specify for NY which products are legal with a particular application method. NY pesticide law requires that the label approves the corresponding use of the product, the application method, and the target species. The label will also give the recipe to mix the chemical to the appropriate concentration. In NY, it is legal for agricultural applications, including forestry, to apply a chemical at less than the specified rate. Some situations may not require a full strength application.

6. Cornell Cooperative Extension and NYFOA often have workshops

that discuss and illustrate examples of herbicide applications. Take advantage of these workshops to learn about equipment and products. Work with your local CCE office or NYFOA chapter if there isn't a workshop scheduled near your home county.

Vegetation management is often not a single event, but requires careful thought, planning, and sustained effort. The adage "a stitch in time saves nine" applies to vegetation management; catching an interfering plant species before it become problematic can save considerable cost and effort. Be alert in your woods, seek assistance when you have questions, and work safely. 🌲

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