Recommendations for Controlling Invasives in Natural Areas

# Reed Canary Grass

Most folks use 2% Roundup (or Rodeo in wetter areas). Buy the generic form of these herbicides (Razor Pro and Aquaneat respectively). These generics are just as effective and are cheaper. Remember that if you are using Aquaneat (or Rodeo) in wetland areas, you will be more effective if you use a surfactant (such as Liberate) that is made for use over water. Use 1 ounce of surfactant per gallon of mixed herbicide. Also use of an additive like Weathermaster will decrease drying time and increase uptake of the herbicide. 1 ounce per 3 gallons is usually enough.

Usually the best time to control reed canary grass is early spring or late fall. In spring, reed canary grass is one of the first plants to come up and grows vigorously. This is a good time to treat it before other plants start to emerge. You can be even more effective if you apply it after a burn. After a fall burn, especially an early fall burn, you can have one last growth spurt of reed canary grass before it goes dormant.

# Canada Thistle, Bull Thistle

In controlling thistle species, use an herbicide called Transline (also goes under the name Stinger). This is an extremely expensive herbicide but fortunately it is mixed at very low concentrations. Wait until the thistle is up about 6” in the spring and then spray it with a .5% mix. That means that for three gallons, you will only use 1.8 ounces. This herbicide works on all thistles and also on other invasive species such as crown vetch and teasel. It will have some effect on Silphiums such as Prairie Dock and Compass Plant, but will not kill them.

The best time to spray thistle is early spring, summer and early fall. It is important to keep after this species because there isusually a substantial seed bank. If you are burning brush piles, these burn scar areas usually contain thistle during the next growing season. Also after a spring burn, you will see thistle come up quickly. Wait until it has some growth (4”-6” height) on it and then you can herbicide it.

# Teasel

Both species of teasel can be controlled with either Transline (see above) or Roundup. I usually use 2% Roundup because it is cheaper but in areas where there are good species that I don’t want to kill, I use .5% Transline. Since teasel is a biennial, the best time to control it is when it is in the first year rosette stage. This usually occurs mid-spring and runs through the summer and fall. This is another species that after you have sprayed it thoroughly, it is important to keep coming back to the areas to see if anything is coming up from the seed bank.

If teasel does mature in the second year and produces a seed head, remove it immediately to reduce the amount of seed in the seed bank.

# Garlic Mustard

Garlic mustard is also a biennial species that is best controlled at the rosette stage. 2% Roundup controls it easily. Garlic mustard thrives in shade so any trees or brush that can be removed and provide more sunlight will aid in reducing this species. This species also can be controlled to some extend by fire. Usually a spring burn will knock back some of the rosettes and mature plants. This species also produces numerous seeds and controlling it early in the spring is essential. Also, late fall applications of herbicide can kill some of the rosettes before they mature in the upcoming spring season.

If seed heads begin to mature, this species can be hand pulled as a last resort. If bagging and removing the seed heads off-site is not an option, cut the plant and stack it in an area that is heavily infested with garlic mustard. This will concentrate the seed in a smaller area.

**Burdock**

Controlling burdock is in some ways very similar to controlling garlic mustard. Use a 5% Roundup solution to herbicide burdock because it has a deeper taproot and is overall a larger plant than garlic mustard. Again, controlling the plant in the early spring is important. Make sure to cover all the leaves in the rosette because if a few of the larger leaves are missed it can still mature and produce seed. If seed heads are produced, remove immediately.

**Buckthorn/Honeysuckle/Dogwood**

Since these are three species of woody plants, treatments to control them are similar. Cut stumps can be treated with 20-25% Garlon 4 in crop oil. This is best done during late fall and winter while all other species are dormant. Remember to place brush piles in low quality areas (I often stack it in the area with highest concentration of cut stems). It is best to make a large brush pile rather than several smaller ones. This is because when you burn the brush piles you will sterilize the soil in that area.

In the spring, summer and fall you can do foliar spraying of these species. The best time is during fall when many species are going dormant, but this technique can be done in spring and summer. Use a 5% Garlon 3A for spraying but be careful with this herbicide since it can cause problems if it gets in your eyes. You can also use 5% Garlon 4 mixed with 10% crop oil (with the remainder being water) for foliar treatments. Do not apply this in early spring because it will kill off many species just as they are emerging. Another option is a 5-10% Roundup mixture for foliar spray. This also must be used cautiously because any over spray will kill all species in the area.

In general, I would recommend the above options of foliar spraying only in areas that are very degraded and with many resprouts or seedlings. These areas have greater foliar surface area and can be treated without worrying about too much accidental kill offs.

**Bird’s Foot Trefoil/Crown Vetch**

I have often treated these species in higher quality areas and have therefore used a more selective herbicide such as Transline at .5 to .75%. For bird’s foot trefoil in a degraded area, there is no need for selectivity and you can use Garlon 3A at 2% or Crossbow at 1.5%. Spring is a good time to treat these species and summer. By late summer these species are starting to go dormant and can go dormant during extremely hot summers. It is very important to frequently check these areas during the growing season to ensure that you have treated all the plants

**Tall Goldenrod**

In low quality areas (especially monocultures) tall goldenrod can be treated using 2% Garlon 3A. Higher quality areas require Transline at .75%. This can be applied in the late spring to early fall but late fall applications may require increasing the concentration of Garlon 3A up to 5% and Transline up to 3%. Be very careful at these higher concentrations because any overspray can damage native plants.

**Phragmites**

Controlling phragmites can be done with 5% Aquaneat or 1.25% Habitat. I prefer to use Habitat because the treatment window is wider – Habitat can be used as soon as the leaves are extended. For Aquaneat, wait until mid-summer or so to begin treatment. For both of these, treatment should end around early to mid-fall. Both of these will affect a large number of plants, so be careful with overspray. Habitat takes a long time to see results, but it will stop the plant from growing as soon as it is sprayed. Do not cut or burn until the following spring for best results.

**General info about Herbicides and Equivalents**

In this compilation I have often referred to certain herbicides such as Roundup and Garlon 4. I recommend using generics for these herbicides. The generic equivalents are as follows:

* Garlon 4 = Tahoe 4e or Element 4
* Garlon 3A= Tahoe 3Ae or Element 3A
* Roundup Pro = Razor Pro (Be sure to use the “Pro” formula or any formula that has 15% surfactant that is a part of the mix)
* Rodeo = Aquaneat
* Stinger = Transline
* Crossbow is a combination of Garlon 3A and 2-4 D.

With Aquaneat, be sure to use a non-ionic surfactant, such as Liberate, to protect fish and amphibians. For all herbicides, use an appropriate dye so you can see where you have sprayed or what cut stumps you have treated.