

14. Pre-Planting Weed Control

John Kelsey - - - 2024 May - - - Rev 2

I will have to confess that the weeds won the war here on our tree farm for the first 20 years. For the first 10 years it was huge weeds like horseweed and pokeweed that shaded out our little seedlings. I finally won that battle by crawling in on my hands and knees with a corn knife, hunting for the little guys, and giving them some daylight. So, after ten years I had killed the weeds to get our black walnut plants growing, but I was too dumb to know the toxic effect of tall fescue and Johnson grass.



Figure 1. Our dwarf black walnuts being starved out by tall fescue – not much chance for veneer quality stems. They weren't only small. They had horrible form. Their stratagem was to spread out and try to shade the fescue to death.

These sod-forming grasses create such a mass of roots just below to surface that they block off the tree's feeder roots. After another 10 years I saw companion-crop demonstration plots at the Walnut Council meeting in Nebraska. The tall fescue experimental blocks had dwarf trees like ours. I came

home, killed the tall fescue, and the next year our trees took off so fast that some broke over from the weight of the new growth.

I can confidently predict failure (and repeated failure) if such weeds are ignored.

I am far far from a herbicide expert, but I have some advice anyway. I have tried to get advice from experts. After they name about 5 foreign sounding brands and unpronounceable chemicals, my eyes glaze over and I'm wondering if the fish are biting. Then I go to the farm supply and all the names on the jugs are different yet again. So here is my advice:

My advice is to ask a non-selling expert, but first be sure to have a paper and pencil in hand. Tell the expert that you don't have an applicator's license. Then ask for the best low-cost product to do your particular job. Write down the first thing that come out of their mouth – both the brand name and the active ingredient. Then halt the flow a second and ask about the spelling of what you have written. Now you've got your answer. The logic here is based on the premise that you'll soon forget all the names and the best product will come into the expert's mind first, and you can ignore all the rest. You are not going to buy 5 brands anyway.

I did know enough to use glyphosate (there are many brands) with AMS water treatment to kill the tall fescue. The problem is, killing long established tall fescue clears the way for thousands of weed seeds of every sort just waiting for a chance. We soon had magnificent patches of new annual weeds sucking up water and nutrients. What was needed was follow-up applications or a pre-emergent to frustrate the weed seeds waiting in the seed-bank. Hopefully with glyphosate and a pre-emergent together, one application would last the summer.



Figure 2. I asked an expert what would be a good low-cost pre-emergent for a new tree planting. The first thing mentioned was Pendulum Aqua-cap. We're going with glyphosate/Pendulum mix, but you are welcome to get paper and pencil and find your own expert.

Now we know that we need to control weeds and we know how to control weeds, but this can still be screwed up with bad timing. My older brother was a good farmer. One day I asked him if he ever used the County Agent. He said that he already knew how to farm a lot better than what he was actually doing. I have always been interested why some of our farmer neighbors succeed and others fail. All the neighbors seem to know how to farm, but one obvious difference with the successful neighbors, is that they do things exactly on time. It is not enough just to know what to do, or even when to do. So it is with weed control. Success requires knowing what to do, when to do, **being prepared**, and **doing**.

1. We don't want to injure the new plants, so first plan the planting time, then plan the herbicide timing. Traditionally bare rooted seedlings have been planted while still dormant in March. It would be good to kill the grasses beforehand, but in March, the grasses are dormant too. The work needs to be done while the grasses are actively growing the season before.



Figure 3. The weed control needs to be done in late summer of the previous year. Bye bye Fescue!

2. Some nurseries have cold storage facilities and plants can be held in dormancy into April and May. If cold storage plants are available, be ready to kill the weeds as soon as the perennial grasses start growing (the first time the lawn needs mowing) – early April for us in zone 6b. Then wait 3 weeks for the fescue to turn a nice dead-fescue-brown and plant the still-dormant seedlings. Check the pre-emergent label for when it's safe to use before or after planting.
3. If the pre-planting control window is missed, weeds can still be killed while using a hand shield or tree tubes to protect the new plants.

Johnsongrass is harder to control than tall fescue. After the tops are killed back, it often makes a comeback from its juicy rhizomes. In a heavy Johnsongrass site, I would suggest using all 3 methods above. It will eventually give up.

Applying wood chip mulch soon after planting can provide control of less aggressive weeds. We like to get woodchips from a tree service during the winter (no leaves, no conifers). We have used woodchip mulch around new trees, but haven't tried it on a heavy sod. Mulch is great to hold moisture and feed future mycorrhizae. The mulch stops or slows down many weed species. In our asparagus patch we have used 3 layers of newspaper under mulch which improved the weed control. Only a couple of weed species managed to poke through.

**Production Ornamentals
Instructions and Restrictions¹**

Site	Application Instructions and Restrictions
Newly transplanted field-grown nursery stock ^{2,3}	<ol style="list-style-type: none"> 1. DO NOT make over-the-top applications at time of field transplanting. Use shielded sprayer until plantings have been established for one (1) year or more in the field. 2. DO NOT apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Take care to ensure there are no cracks in the soil where Pendulum® AquaCap™ herbicide could come into contact with the roots. 3. DO NOT apply during bud swell, bud break, or at time of first flush of new growth. 4. Direct sprays away from grafted or budded tissue on transplants at all times.

Figure 4. An excerpt from the Pendulum label: