



Site Preparation–Do It Right the First Time



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Introduction

The goal of site preparation is to eliminate weeds and prepare a quality seedbed. **Inadequate site preparation is the cause of most restoration failures.**

In many ways, site preparation is like a chess match. You “make a move” and the site you’re preparing responds. Then, based on the site’s response, you make your next move, and so on. This makes it difficult to provide a precise step by step site prep guide. Nevertheless, guidelines for you to follow are presented below.

There are two general approaches to site preparation, the bare soil approach and the no-till approach. The two approaches are frequently combined. The results of your site analysis and your restoration goals determine which approach is best for you and your site.

The Bare Soil Approach

- Similar to traditional agricultural methods because it relies on plowing, discing, or rototilling the soil to eradicate weeds and create a seedbed.
- Disturbs the soil, which can result in erosion. Therefore, not recommended for erosion prone sites.
- A herbicide free method, although herbicide may be needed to control deep rooted, perennial weeds.
- Allows a greater choice of planting options because it produces loose, bare soil.

Generalized Method

1. Burn during the spring to remove the thatch layer (if present) and to stimulate weed growth. The burn may be done the preceding fall if erosion is not a concern. Mowing may be substituted for a burn, but for best results remove the clippings.
2. Apply a non-selective herbicide such as Roundup after the weeds have grown to 3 to 5 inches, but before they can produce any seeds. If you wish to avoid using a herbicide or if the amount of weed regrowth following the burn is minimal and is mostly annual rather than perennial species you can omit the herbicide application and begin tilling the soil according to the recommendations outlined below.
3. After the vegetation appears dead from the herbicide application (typically 7 to 14 days) the soil should be tilled. However, if some of the weedy vegetation is still alive because the herbicide application was not uniform, you might want to spot spray the still growing areas before tilling.
4. Till the soil to a depth of 4 to 5 inches. A deeper depth may be required if perennial rhizomatous grasses such as brome, quack, or reed canary are present. A shallower depth may be used on relatively weed free sites and on sites without perennial rhizomatous grasses. In

general, the deeper you till the more weed seeds you stimulate to germinate. For the remainder of the growing season, cultivate the soil 1 inch deep, or so, each time the field greens-up. On average, expect to cultivate every 2 to 4 weeks, depending on the weather and the types of weeds present. Waiting too long may allow the weeds to form seeds or allow rhizome fragments to become established. If perennial weeds remain a problem another herbicide application should be substituted for one or more cultivations.

5. Before you plant you need to *pack* the soil if you leave a footprint deeper than an inch, or so. Firm soil prevents the seeds from settling too deep after planting to grow. Seeds deeper than one-half inch are less likely to grow and survive. The soil can be packed using a roller or a farm implement called a culti-packer. If you lack these tools, a rain or two might do the work for you, but may also cause crusting.

The No-till Approach

- Does not disturb the soil, making it the preferred method for erosion prone sites.
- Fewer weed seeds are stimulated to germinate because the soil isn't disturbed.
- Requires herbicide use.
- Planting may require the use of a specialized no-till seed drill because the soil won't be loose.

Generalized Method

1. Burn during the spring to remove the thatch layer (if present) and to stimulate weed growth. The burn may be done the preceding fall if erosion is not a concern. Mowing may be substituted for a burn, but for best results the clippings should be removed.
2. Apply a non-selective herbicide such as Roundup after the weeds have grown to 3 to 6 inches, but before they produce any seeds.
3. Reapply the herbicide throughout the growing season whenever weed regrowth warrants an application. Don't allow any weeds to produce seeds.
4. Soil packing before planting is usually not needed because the soil hasn't been disturbed.

Summary

Never skimp on site preparation unless your goal is to grow weeds. Most plantings fail because of inadequate site preparation: The weeds weren't adequately controlled before the site was planted and they out-compete the species you've planted.

