



Grasses

Native Grasses

Different soil types can affect the success (or failure) of native grass plantings. Since native grass seed can be expensive, do some research on the native species that are present in your area. Also consider the reason for planting it - could be erosion control, reestablishment after construction, outcompeting undesirable plants, etc. Anytime unoccupied growing space is made available, some plant will eventually occupy this space. In ecology, this growing space is called a “niche”. Weeds are the pioneer species of ornamental landscapes and gardens. By anticipating these ecological processes, you can choose desirable plants, like native grasses, that will occupy these niches instead of weeds.

Grasses are usually classified as warm-season or cool-season species. This refers to the season in which they grow most readily. They are also classified into bunch grasses or sod forming species. Bunch grasses are frequently sold as ornamentals and create attractive accents in the landscape. Sod forming grasses spread horizontally through stolons (above ground shoots) and/or rhizomes (below ground shoots) and are preferable for erosion control due to their growth habit. Warm season species are best planted during summer and cool season species are best planted in the fall.

Perennial native grasses are a good choice for erosion control because they have fibrous root systems that bind soil together and will require little or no irrigation once they are established. Leaves and litter from grasses protect the soil from raindrop impact. Perennial grasses also increase soil organic matter and water infiltration rates. As roots die, their decomposition leaves behind organic matter and the empty spaces create voids where water can more easily flow into and through the soil profile.

Individual grass plants of desirable native species can be transplanted to new locations on your property. Provide some irrigation to help them for the first year. It is important to transplant grasses during their season of active growth. You may also collect seed from native grasses. Collect seed heads only after they have cured (dried) on the plant. Shatter the seed heads in your hands and spread the shattered material in areas where you want that grass species to become established and rake the soil to ensure contact with the mineral soil. Supplemental irrigation will promote better germination and establishment. Germination and subsequent growth is slow, but this process works well and the pruning is good for the mature grass plants.

Grasses also make good landscape plants. However, do your research; avoid invasive grasses such as pampas grass (on AZ invasive plant list) and Mexican feather grass (*Stipa tenuissima*) which can be very aggressive.

Invasive Grasses

Non-native annual grasses are increasing across the western United States. In the mid-elevations of northern Arizona, non-native annual grasses are spreading rapidly and invading wildland ecosystems and finding their way into residential landscapes. Some species of concern in our area are: downy brome or cheatgrass (*Bromus tectorum*), red brome or foxtail chess (*Bromus rubens*), Japanese brome (*Bromus japonicus*), ripgut brome (*Bromus rigidus*), and wild oats (*Avena fatua*). Following are potential impacts of and management strategies for these invasive annual grasses.

Like native grasses, invasive cool-season annual grasses often utilize fall precipitation to germinate, establish roots and some leaves during winter months, then accelerate growth and produce seeds in spring. However, if fall moisture is limiting, these species can germinate in the spring and produce seed in a very short time. Cool season annual grasses germinate rapidly if buried in one inch or less of mineral soil. The seeds will usually not emerge if buried in at least four inches. In our area, these grasses often germinate following the monsoon season and can survive through most winter drought periods.

While the grasses mentioned above are not true “foxtails”, they do have barbed seeds that are readily transported by human and animal activity. The seeds can easily attach to people’s clothing, animal fur, off-road vehicles, mowers, tillers, and other equipment. This is one way they are transported to establish themselves in new areas. Pet owners are also acutely aware of the seed’s potential to become lodged in an animal’s nostrils, ears, and even penetrate the skin.

These grasses will also colonize areas following disturbance such as fire, flood, construction, poor grazing management, off-road vehicle use, and other human activities. Some of these species have been important fuels in major wildfires across the west. Once an area has burned, these non-native grasses often become denser and expand their range. Natural resource managers use the term “fire-adapted” to characterize this plant trait. Needless to say, these species should be controlled to reduce fire risk around homes and flammable structures (including fences, decks, and propane tanks).

While it is often difficult to control these non-native grasses on a large scale, it is relatively easy to control them in residential areas. Learning to recognize them may be the most difficult step. Cool season annual grasses are easily pulled from moist soil while perennials are nearly impossible to pull.

The best control method is prevention and rapid removal once detected. After these plants have produced seed on a site, you will likely need to control them for at least two years (usually longer). Hand pulling or hoeing is very effective when done any time prior to the seeds maturing and the sooner the better. In garden or cropped areas, annual plants can be tilled or disked under. Mowing is not a good solution as mowed plants can regrow and produce seed.

Grazing animals will only feed on the annual brome grasses (*Bromus* spp.) before seed formation. The recommendation for these species is to graze the plants twice approximately three weeks apart at least two years in a row. Most people cannot put cattle, sheep, or goats in their yard, but poultry also graze. I have had excellent success in controlling downy and ripgut brome with chickens. They eat the shoots and scratch the roots from soil.

Herbicides can also be effective in controlling cool season annual grasses. Glyphosate will control annual grasses but is non-selective (kills all green plants it contacts). Pre-emergent herbicides are also effective, but must be applied prior to germination. Two selective grass herbicides (kill grasses but not broadleaf plants) are available and effective: sethoxydim and fluazifop-p-butyl. This is not a complete list of effective products, but is a starting point for those that want to use herbicides. Pesticide users should always read and understand the label before applying.

Regardless of the weed control method used, long-term success will only be achieved if the available growing space is occupied by desirable plant species. Weeds are simply a sign that unoccupied soil, excess water, and/or plant nutrients are available for them. Native or drought adapted perennial grasses and wildflowers can often be used to occupy available growing space and displace weeds in landscapes.

Additional Resources:

Yavapai County Cooperative Extension:

[Yavapai County Grasses](#) lists many grasses for our county along with how they can be used.

[How to Establish Native Grasses](#) includes grass seed sources.

July 20, 2024

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