

Kill Your Lawn and Save Colorado

JIM TOLSTRUP - Landscaping With Colorado Native Plants Conference - 2/29/2020

Turf Grass

40 million acres of turf grass lawns in U.S. (equivalent to 10 of our largest national parks combined).

Economy

Water, mowing, and maintenance of turf-type grasses is extremely costly (approximately 10 times the cost of maintenance of native grass once established).

800 million gallons of gas are used to mow lawns in the US every year.

Chemical

Prior to WWII most American lawns included white clover and other flowering plants.

More pesticide and fertilizer is applied to turf grass (per acre) than any other crop.

Nutrient Runoff

Excess nutrients in streams like nitrogen and phosphorus increases algae growth, it can hurt fish and lead to “dead zones.”

Region

Annual Rainfall

- Mobile - 66
- Boston - 47
- Chicago - 38
- Denver – 14

Water Conservation

One square foot of lawn requires 18 gallons of water per year.

The average person in CO uses 150 gallons of water daily; 60% goes to landscaping.

Climate Change

The Colorado River supplies water for about 40 million people.

The river's annual flow declined by 16% 2000-2017.

With each additional 1.8 degrees of warming, the Colorado River's average flow is likely to drop by about 9%.

Rising temperatures will increase irrigation requirements due to increased transpiration.

Population Growth

Colorado's population is expected to grow by roughly 30%, increasing from 5.77 million in 2019 to 7.52 million in 2040.

Planting Methods

Plugs \$1.00

Seed \$0.10

Sod

- Bluegrass \$0.57
- Buffalo \$1.15

Native Grass Management

Weed management is critical in early stages. Annual weeds can be diminished by mowing. Deep rooted perennials will likely need to be sprayed.

After Year One

Mow only once a year in May to remove previous year's growth.

Buffalo Grass

For Buffalo Grass seeding use 2 to 3 lbs. per 1000 sq. feet. Bison, Bowie, Cody, Plains, and Topgun. Texoka and Sharp's Improved varieties are used for mainly pasture and rangeland revegetation, producing a less attractive lawn

Warm and cool season shortgrass mix

Seeded at 2 lbs. PLS/1000 sq. ft. or
86 lbs/acre.

Buffalo grass, Cody or Bowie 40%
Blue grama, Alma or Bad River 20%
Sideoats grama, Vaughn or El Reno 20%
Slender wheatgrass 20%.

Establishing and managing a native meadow requires a high degree of expertise and patience.

Warm season short grasses

Begin to grow in May when soil temperature is above 60 degrees and are tolerant of heat and drought.

- Blue Grama - *Bouteloua gracilis*
- Sideoats Grama - *Bouteloua curtipendula*
- Buffalo Grass - *Buchloe dactyloides*

Warm Season Tall Grass

- Moisture dependent
- Big Bluestem - *Andropogon gerardi*
- Yellow Indian Grass - *Sorghastrum nutans*
- Switchgrass - *Panicum virgatum*

Cool Season Grasses

These grasses begin to grow early in the year which makes them highly competitive.

- Western Wheat Grass- *Pascopyrum smithii*
- Slender Wheat Grass - *Elymus trachycaulus*
- Canada Wild Rye - *Elymus canadensis*

Invasive Cool Season Grasses

- Smooth Brome - *Bromus inermis*
- Crested Wheatgrass - *Agropyron cristatum*
- “Abandon all hope, ye who enter here!”

Results, even in relatively controlled circumstances, are highly unpredictable.

Considerations

- Seed type
- Soil amendments
- Cover crops
- Crimping with straw or hydro-mulch
- Irrigation
- Weather
- Weeds

Typical Year One with precipitation (or irrigation)

Herbicide intended for broadleaf weeds can destroy tender grass seedlings and cannot be used Year One.

Mowing 4 to 5 times in the first season can reduce weed seedlings in future seasons.

Perennial weeds can typically be sprayed by the end of the first growing season.

Cover crops can be beneficial.

Year Two

If grass is establishing well, mowing can be counterproductive because it stresses the grass and allows sunlight and water to become available to weeds.

Unmown grass stores energy, competes with weeds for water and space, and shades out seedlings.

Year Three

Annual weeds should be greatly reduced if grass is not mowed.

Annual weeds in areas of thin vegetation should be spot treated (spray or mow).

Perennial weeds, though reduced, will continue to occur (spot spray).

In many areas it is common to mow along fence lines and trail edges. These mowed edges will, however, generate more weeds.

When natural areas are properly managed herbicides are applied at very low rates per acre, to specific targets, by well-trained applicators who can discern weeds from beneficial natives.

If you must mow...

Not between March 15 and June 15 for ground nesting birds.

Leaving grass tall in winter provides cover for wildlife, and yes, that includes mice but they provide food for hawks and owls.



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