

Volunteer

Professional

Volunteer + Professional



Summer Soil Booster

Image Source: Tom Potterfield, "Sorghastrum nutans (Indian grass) mowed path edge." 13 August 2014 CC BY-NC-SA 2.0.



**working
with lots**

A FIELD GUIDE



The Summer Soil Booster is an affordable planting strategy to protect and enrich soil. This design is a temporary strategy that adds value while you decide on the next step for your lot. This lot design provides two planting options, both of which grow rapidly during the summer months.

Farmers use these cover crop type plants to replenish nutrients in the soil. Typically, these cover crops hold farmers' valuable soil in place after annual crops have been harvested. Before planting crops the following spring, the warm season grasses are turned into the soil for an added nutrient boost. In a traditional agricultural practice, this is referred to as 'green manure.'

For more information refer to [DFC-lots.com](https://dfc-lots.com)

What is the lot design likely to cost?

The estimated cost of the Summer Soil Booster is low (\$50 - \$1,000) and based on utilizing volunteer labor and the seed mix. The cost assumes that residents or volunteers have access to basic safety gear and garden tools.

How much upkeep will this lot design require?

The maintenance of this lot design is low and is minimal unless you decide to maintain warm season grasses for longer than one planting season.

Will the installation of this lot design require a professional?

The installation of this lot design should not require professional assistance if you, with the help and support of friends, family, or neighbors, would like to construct it. Please refer to the Step-By-Step section for guidance. If you do not have the required support or feel unable to tackle this lot design, please seek professional assistance.

How long will it take to install this lot design?

While people tackle projects in different ways and at different speeds, the Field Guide estimates installation time of this lot design to be one full weekend with the help of at least three healthy adults or youth. The Field Guide assumes the lot is 'construction ready,' and all equipment and materials required for the lot design have been acquired and are ready to use.

Cost	\$50 - 1,000	\$1,000 - 2,500	\$2,500 - 5,500	\$5,500 +
People	Volunteer	Professional	Volunteer + Professional	
Experience	Beginner	Intermediate	Advanced	
Upkeep	Low	Medium	High	
Stormwater	Good	Better	Best	
Location	Residential Lots in Full Sun or Part Sun			

Summer Soil Booster

Examples of Flowering Cover Crops



1 - Annual Candy Tuft



2 - Coreopsis



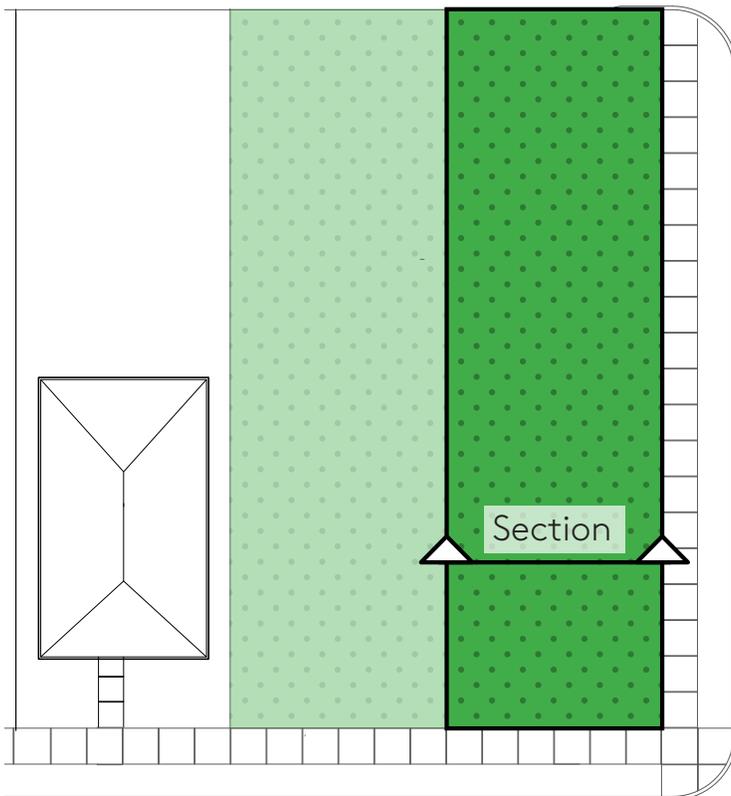
3 - Rocket Larkspur

Section



Warm Season Cover Crop

Where Do I Grow?



The Summer Soil Booster can be installed on single, double, or multiple lots and is suitable for corner properties. The image below shows Warm Season Cover Crop grass fully covering the ground, reducing soil erosion.



4 - Warm Season Cover Crop

● Warm Season Cover Crop

Before You Start

'Construction Ready'

This lot design assumes that you have prepared the lot to a 'construction ready' state.

'Construction Ready' refers to a lot that is clean and clear of trash, hazardous objects, unwanted trees, brush and vegetation, fences, and other unwanted structures.

It may be necessary to remove grass in preparation for your lot design. Refer to the Remove Your Grass box located on the right hand side of this page for more information.

Is there an available water source near your lot? Consider how and where you will access water during and after construction to ensure that your plants can establish.

If your lot is not ready for construction, refer to the [Clean + Green](#) lot design.

You can find the lot design at DFC-lots.com.

Call Before You Dig

Locate underground utilities before beginning your lot design. MISS DIG provides a free service to Michigan residents by locating and marking utilities on requested properties. Call (800) 482-7171 or 811 at least three days before you plan to start digging on your lot.

Test Your Soil

Harmful pollutants have made their way into many urban soils. To proceed with awareness, consider having your soil tested before construction. Two great options are available:

Soil testing is free to members of Keep Growing Detroit's Garden Resource Program. Call (313) 757-2635 for more information or visit detroitagriculture.net.

If you are not yet a member, you can work directly with Michigan State University's (MSU) Extension Program. They have a Home Lawn and Garden Soil Test Mailer for \$25. For more information call (888) 678-3464 or visit msusoiltest.com.

If you are concerned about the presence of lead or other contaminants in your soil, call the Michigan Department of Health and Human Services at (866) 691-5323 or (800) 424-LEAD.

Remove Your Grass

Need to remove grass in areas where you are constructing your lot design?

There are many ways to remove unwanted grass. The first is to remove the grass and its root system by digging up the grass. Another option is to cover your lot with cardboard or a plastic tarp to smother your grass in darkness. It will take several weeks, but after being covered, the dead grass will be easier to remove.

Till Safely

Before you till, inspect your lot for signs of buried concrete or rubble that was not removed during the cleanup stage. Large debris can ruin tiller blades.

When tilling, wear appropriate safety gear, such as covered boots with socks, long pants, safety glasses, dust mask, and ear protection. Make sure you understand the safe operating procedures of your tiller. Refer to the user's manual.

What You Need: Shopping List

Shopping List

The shopping list provides a breakdown of potential materials, tools, and resources required to construct this lot design.

This shopping list is designed for a single lot (30 by 100 feet).

Tools + Resources

Suggested Tools

- **Marking Paint and Tape Measure**
- **Safety Gear:** Gloves, heavy work boots, tall socks, pants, long sleeve shirts, dust masks, protective eye wear, ear plugs, and hard hats (if using heavy machinery)
- **Garden Tools:** Spades, shovels, rakes, trash bags, and wheelbarrows
- **Tiller**, 6 inch depth (optional)

Potential Water Sources

- Garden Hose with potential extension hose
- Sprinkler
- Rain Barrel in addition to other water source

Field Guide Resources

Resources are available on the Field Guide's web site.

- **Clean + Green**

Materials List

Materials

- **Germination Blankets**, 4 rolls (8 by 112.5 feet), used for the cover crop area

Cover Crop Options

- **Flowering Annuals Cover Crop**, 15 ounces of seed

OR

- **Native Warm Season Grass Mix**, 3 pounds of seed

Summer Soil Booster Step-By-Step

Let's Start

Want to create the Summer Soil Booster but don't want to hire a professional? Here are a few guiding principles to help you construct your lot design.

Check off tasks as you go along.

Lot Design Steps

Volunteer:

- Prepare Your Lot
- Select Cover Crop
- Sow Cover Crop
- Maintain Your Lot Design

Prepare Your Lot

Decide on the best location for Summer Soil Booster. **The Field Guide recommends using the full 30 by 100 foot lot.**

This lot design is well suited for lots with exposed soil and is a good solution if you are preparing your lot for another design in the future.

Select Cover Crop

There are multiple suppliers of cover crop seed mixes suitable for Summer Soil Booster. Flowering Annuals Cover Crop or Native Warm Season Grass Mix can be purchased through Michigan Wildflower Farm.

Flowering Annuals Cover Crop: The non-native flowering annuals provide one season of year-long vibrant color. This type of mix is used by the Michigan Department of Transportation as a temporary groundcover to reduce soil erosion and exposed soil. This seed mix will not survive Michigan's winter. Cover crop will need to be replanted the following year, or you may decide to select a different groundcover or lot design.

Michigan Wildflower Farm suggests 7.5 ounces of mixed per 1,500 square feet. **The Field Guide recommends 15 ounces of Flowering Annuals Cover Crop for a full lot (30 by 100 feet).**

Native Warm Season Grass Mix: This seed mix can be used for one to five seasons and provides a grassy, naturalized appearance. This seed mix is 70% oats and 30% native warm season grasses.

This seed mix can be used as an annual or short-term groundcover as the warm season grasses will return the following year if you decide to keep the cover crop for a second season. This seed mix is tolerant of most soils and grows well in full sun to partial shade.

Summer Soil Booster Step-By-Step

Ernst Conversation Seeds suggests one pound of seed mix per 1,000 square feet. **Three pounds of Native Warm Season Grass Mix (ERNMX-117) should be used for a full lot (30 by 100 feet).**

○ Sow Cover Crop

The soil should be prepared for seeding by scarifying, raking, or tilling the soil four to six inches deep to loosen any compaction, allowing for easier seed germination and better water infiltration.

Seeding should take place in spring (mid-May to mid-June). There are multiple suppliers of cover crop seed mixes; however, if you decide to select one of the Summer Soil Booster mixes, use the seed mix amounts provided in above sections (Flowering Annuals Cover Crop and Native Warm Season Grass Mix).

Spread seeds across the entire lot. You can do this by hand or with a hand-cranked whirlwind seeder. You may need to do this several times to get even coverage. Water daily until seedlings are four to six inches in height.

Place a thin layer of straw or a germination blanket over seeded areas to help ensure that your seed establishes. **Four rolls of 8 by 112.5 foot single net germination blankets will cover the meadow area.** Germination blankets or straw can be purchased at most nurseries and garden stores, including Detroit Farm and Garden.

○ Maintain Your Lot Design

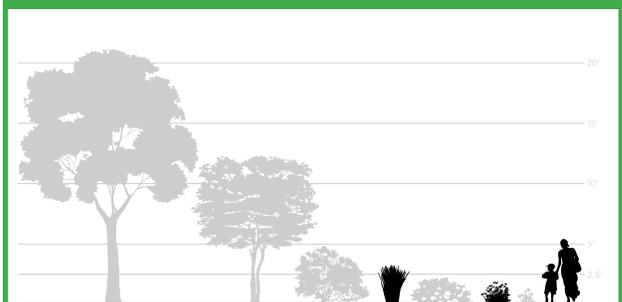
The recommended Summer Soil Booster seed mixes will require watering, especially as seeds germinate.

The Flowering Annual Cover Crop will require minimal maintenance. If Native Warm Season Grass Mix is used for two to five years, cut grasses back to four to six inches whenever they reach above ten inches in height. After the first year, continue weeding, and mow your meadow in late fall or early spring to keep grasses looking their best.



Visit the Resources page on the Field Guide's web site (DFC-lots.com) to discover other vendors and places to purchase plants.

Average Height of Plants



Grasses and Perennials

Planting: Full Sun to Part Sun

Flowering Annuals Cover Crop

15 ounces of Flowering Annuals Cover Crop is recommended for the Summer Soil Booster lot design.

This mix can be assembled by Michigan Wildflower Farm.

Annual Candy Tuft, *Iberis umbellata* (31.25% of mix)

Rocket Larkspur, *Delphinium consolida* 'Rocket' (25.02% of mix)

Annual Baby's Breath, *Gypsophila elegans* (25.01% of mix)

Plains Coreopsis, *Coreopsis tinctoria* (6.24% of mix)

Dwarf Spurred Snapdragon, *Linaria maroccana* (6.24% of mix)

Catchly, *Silene species* (6.24% of mix)



1 - Catchly

Native Warm Season Grass Mix

Three pounds of Warm Season Grass Mix (ERNMX-111) is recommended for the Summer Soil Booster lot design.

This mix can be assembled by Ernst Conservation Seeds.

Oats, *Avena sativa* (70% of mix)

Indiangrass, *Sorghastrum nutans* (10% of mix)

Little Bluestem 'Camper', *Schizachyrium scoparium* 'Camper' (10% of mix)

Big Bluestem 'Southlow', *Andropogon gerardii* 'Southlow' (5% of mix)

Switchgrass 'Cave-In-Rock', *Aster novae-angliae* (0.04% of mix)

Showy Tick Trefoil, *Desmodium canadense* (0.02% of mix)



2 - Native Warm Season Grasses

Plant Sizes



Seeds: All plants can be purchased in seed form.

Did You Know?

Professionals Can Help!

The **Field Guide to Working With Lots** provides a **Construction Package** for each lot design. The **Construction Package** includes information and details required for a professional to construct this design. On the Field Guide web site, use the **Construction Package** link located near the top of this lot design page to download and print. Your selected professional will then be able to provide a cost estimate and schedule based on the condition of your lot and the design you select.

Want to Hire Locally?

DFC-lots.com has a growing list of Detroit-based professionals and suppliers of landscape materials and services.

Still unsure of where to start?

Call (313) 294-LOTS or email fieldguide@detroitfuturecity.com for assistance.

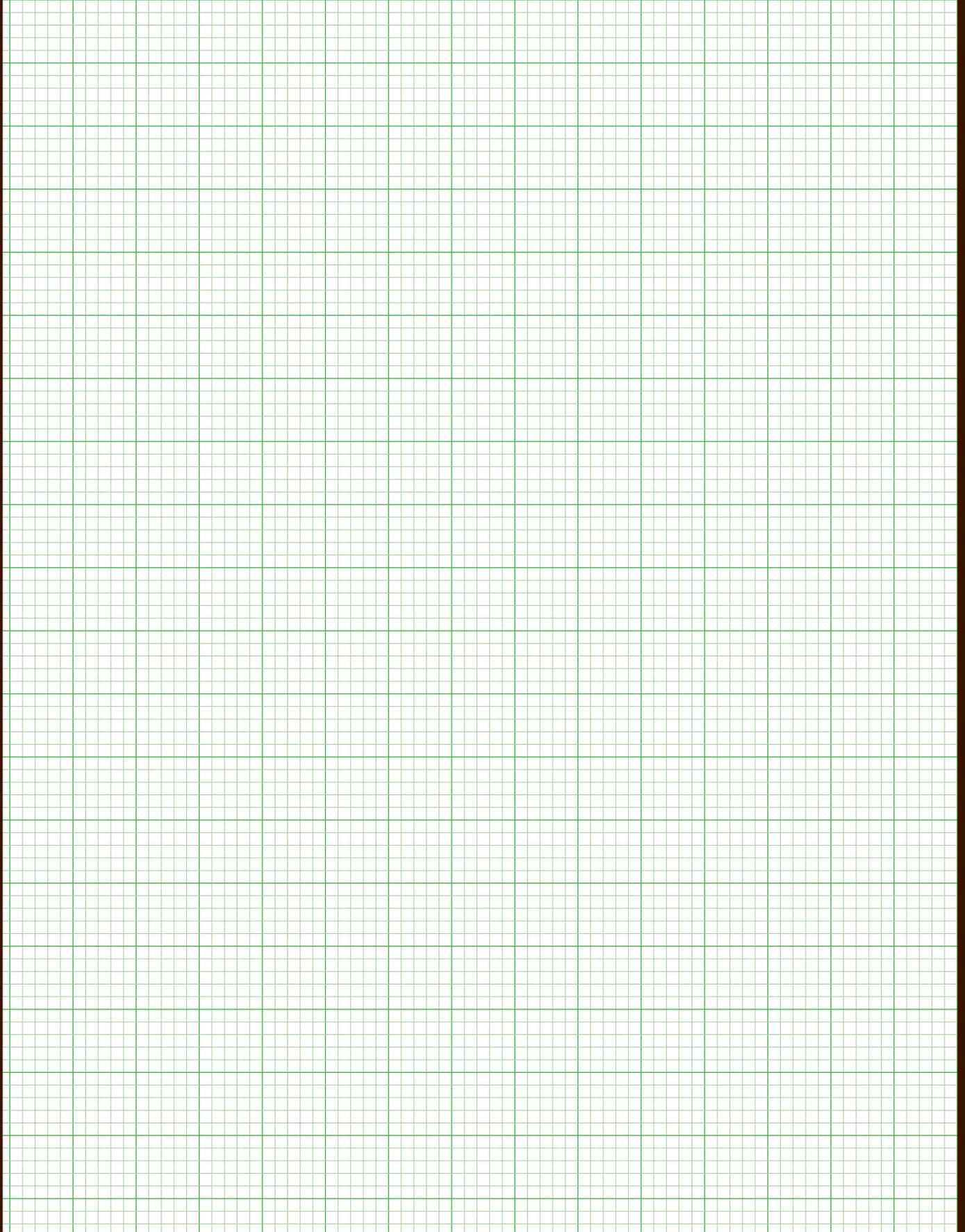
Helpful Facts

- The Summer Soil Booster is a great use for temporary groundcover.
- The Summer Soil Booster plants can take time to germinate but will grow quickly once they sprout.
- Warm season plantings have multiple uses and benefits, including biomass creation and conservation cover.

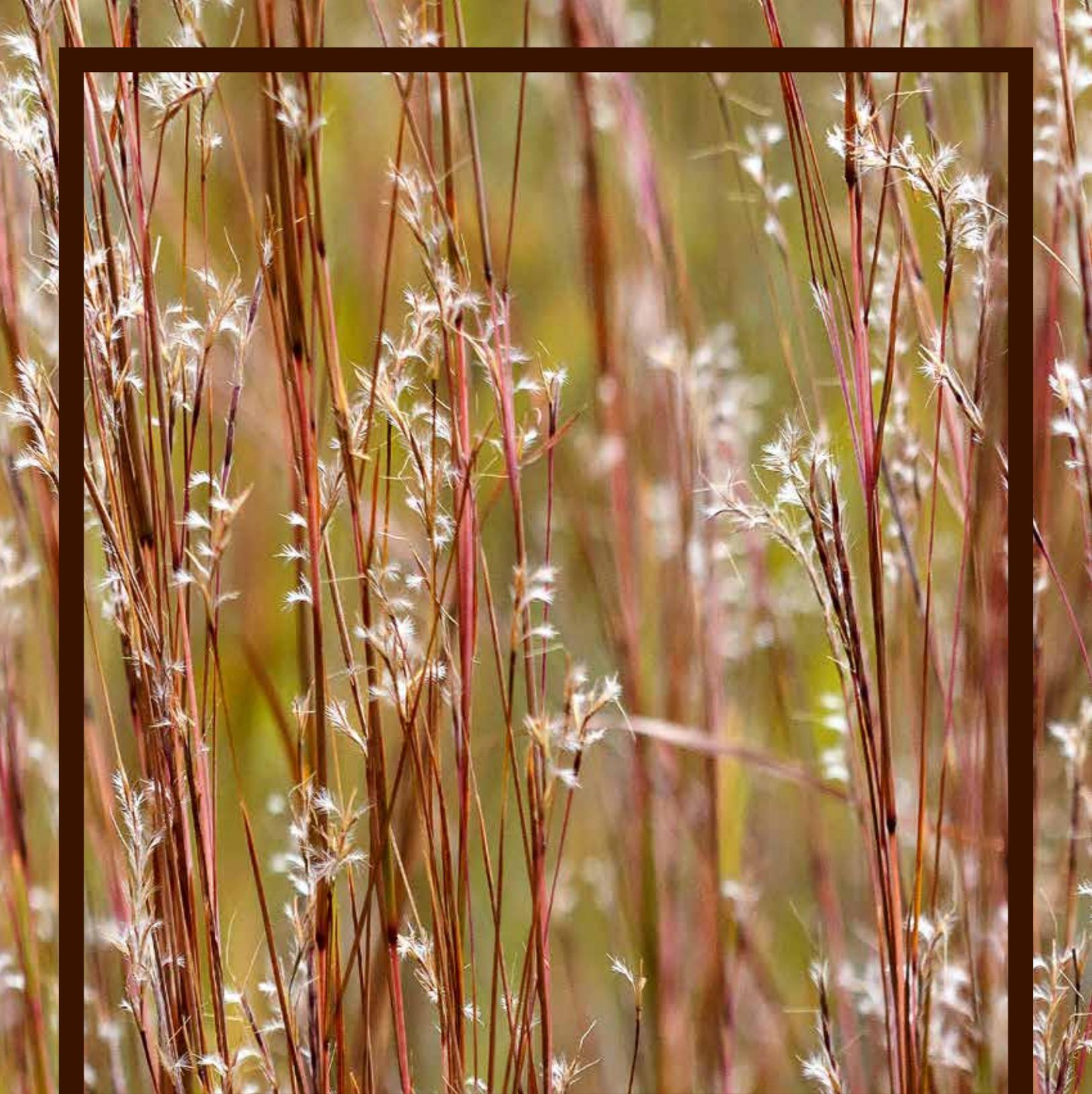
Planting Tips

- Call ahead to be sure the nursery or garden store has the plants you need for your lot design.
- The best time to plant is spring or fall.
- Do not plant in extreme heat. Water after planting and as needed.
- Weed weekly or as needed.
- Nitrogen fertilizers should not be applied to warm season plantings.

Draw Your Lot



Summer Soil Booster Field Notes



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**Visit DFC-lots.com
#DFClots**

Image Source: Tom Potterfield, "Sorghastrum nutans (indian grass) in flower." 14 September 2013 CC BY-NC-SA 2.0.