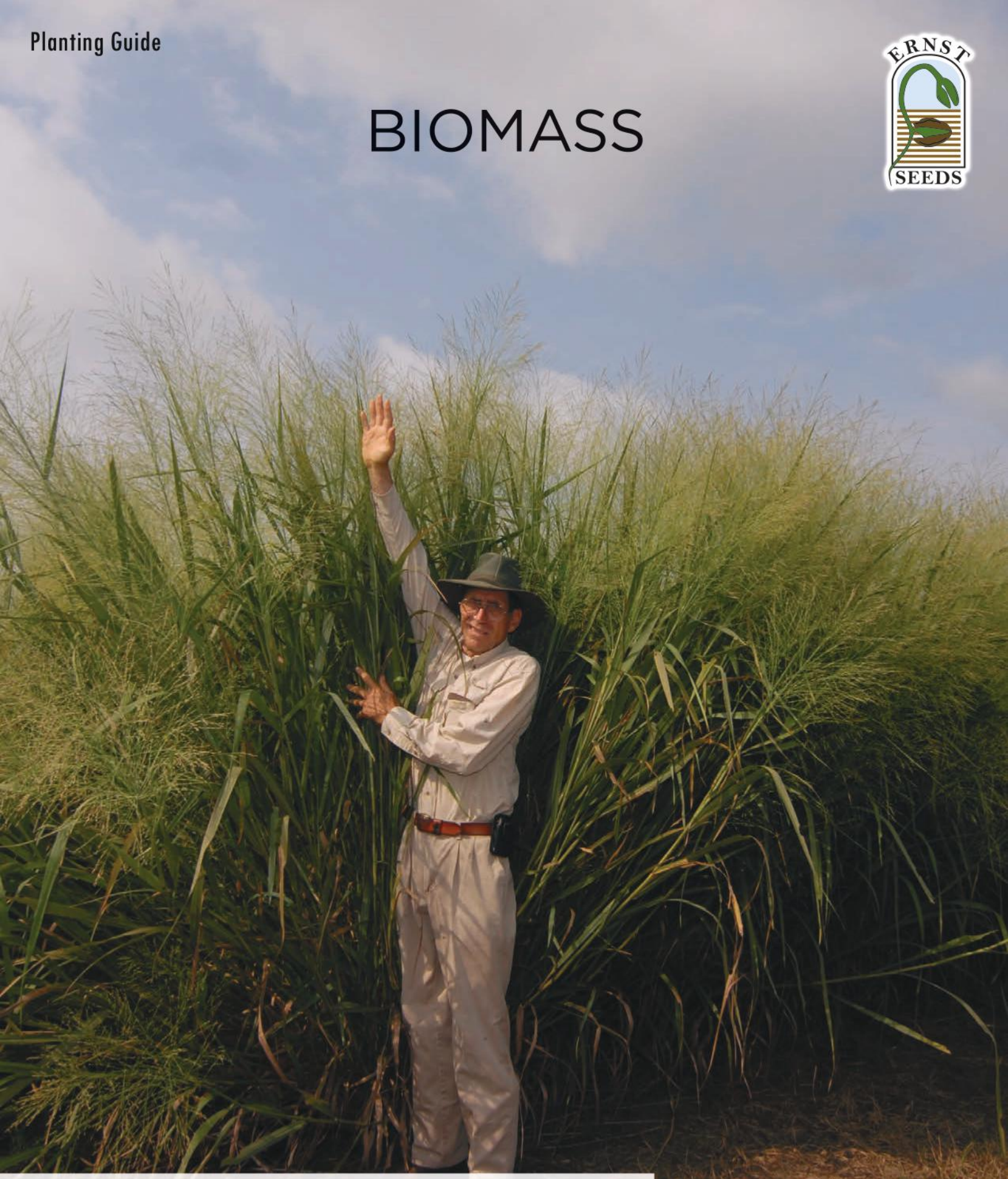
BIOMASS



Calvin Ernst demonstrates the height potential of *Panicum virgatum* (Switchgrass).

Ground switchgrass is gaining popularity as an effective, readily accessible, and inexpensive livestock and poultry bedding material.

BIOMASS PRODUCTION

Ernst Conservation Seeds is one of the largest switchgrass seed producers in the country, having more than 30 years' experience in the establishment, management, and harvest of native warm season grass seed and biomass.

Switchgrass, as well as other native warm season grasses, has attracted much attention as a potential source of alternative energy and sustainable fiber due to the following:

- Native warm season grasses are perennial.
- Native warm season grasses thrive in marginal soil conditions too wet or dry for traditional crops.
- Native warm season grasses require minimal nutrient input.
- Native warm season grasses are efficient in converting sunlight to useable biomass.
- Native warm season grasses have proven soil, water, air, and wildlife benefits.

Switchgrass biomass production can vary greatly from one region to another. It is important to select switchgrass varieties well-suited to the growing conditions of your area. Please contact us and we will be happy to make recommendations.

A mix of switchgrass varieties adapted to your area can better acclimate to seasonal variation and soil conditions than a single variety. Diverse genetic material will allow the overall stand to thrive in a wider range of moistures, soil types, disease pressures, and weather.

Commonly, mixes that include other native grasses, such as *Andropogon gerardii* (Big Bluestem), *Sorghastrum nutans* (Indiangrass), *Schizachyrium scoparium* (Little Bluestem), *Panicum amarum* (Coastal Panicgrass), and *Spartina spp.* (Cordgrass spp.), may create a biomass product that will satisfy many conservation program requirements while also being able to be marketed.

Switchgrass makes a highly effective livestock forage and is increasingly used as a stand-alone grazing stock and in diverse native grazing seed mixes.

SELECTING THE RIGHT BIOMASS VARIETIES

Our supply of switchgrass seed comes from various sources, including our licensing of the varieties produced by intensive breeding programs at numerous institutions and regional populations made available from USDA plant materials centers. The regional populations have minimal genetic improvement for general physical characteristics and have been adequate for decades for erosion control, wildlife plantings, and in the Conservation Reserve Program (CRP). The new varieties, including 'Colony', 'Performer', 'BoMaster', 'Timber', 'Liberty', 'Independence', 'Shawnee', and RC Chippewa, have significant yield improvements and were bred with a focus on forage and biomass production.

FORAGE

As with several other native warm season grasses, switchgrass can produce high-quality forage. Used in a system of rotational grazing, switchgrass allows for robust growth during hot summer months. University of Tennessee findings suggest that the nutrient content of this forage can be as high as 16%-17% crude protein.

Ground switchgrass straw is experiencing increased use as a forage extender in livestock feeds in that it works to increase bulk and dilute protein in operations with sources of high-protein feed.

NUTRIENT RUN-OFF PREVENTION

Switchgrass has extensive roots, growing as deep as 5'-6'. In addition to serving as a superior soil stabilizer in erosion control, switchgrass and its root system form a tremendous ecological filter, soaking up such nutrients as nitrogen and sequestering carbon dioxide. Use of switchgrass as a buffer or part of a riparian system between agricultural activity and watersheds is seen by many as one of the best methods for protecting these priceless resources.

POULTRY AND DAIRY BEDDING

Numerous studies have shown that ground switchgrass is easy on the pads of chicken feet, highly absorbent, and may

As a riparian buffer, the extensive root system and nutrient filtering qualities of switchgrass make it a powerful option.

represent a benefit over other beddings in the reduction of ammonia. From a cost perspective, producers can grow switchgrass on their own marginal ground, then harvest and process it for their own bedding uses. In addition to helping with noise, site, and water pollution control, switchgrass can aid in making areas of marginal ground productive by supplying sustainable bedding.

For information on preparing a field for the establishment and production of native biomass, please visit p. 52-54.

For more information, please consult the Native Biomass FAQs at **www.ernstseed.com**.

Switchgrass biomass can be harvested with traditional forage equipment which is readily available.