

## GROWING FREEDOM™ GIANT MISCANTHUS

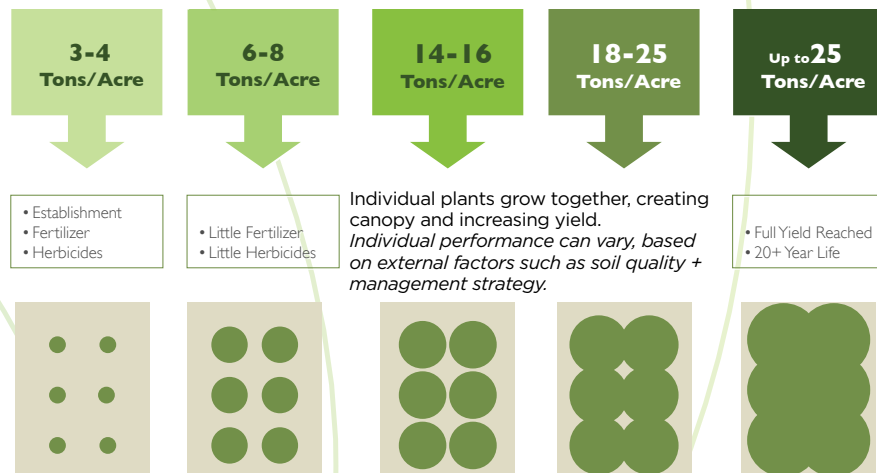
REPVE Renewables is the exclusive supplier of FREEDOM™ giant miscanthus. As a licensed grower of Freedom giant miscanthus you will receive:

- Income and any profits from your sale of harvested material.
- Certified FREEDOM giant miscanthus rhizomes for your certified land.
- A comprehensive Growers Guide for FREEDOM™ Giant Miscanthus, to help growers develop a successful growth plan and realize maximum yield.
- The ability to expand your acreage.
- Locked-in pricing on additional planting material for 24 months.
- A guaranteed supply of additional rhizomes with 60-day notice.

## PERENNIAL. PROFITABLE.

FREEDOM giant miscanthus is a hybrid perennial grass that grows to heights of up to 14 feet. It is a variety of giant miscanthus, a front-runner in renewable energy feedstock and was developed through nearly a dozen years of research at Mississippi State University.

## YIELD MODEL, YEARS 1-5



As a crop specifically bred for the Southeastern United States, FREEDOM outperforms other available varieties of giant miscanthus and surpasses other biomass crops. A stand of FREEDOM reaches full maturity in four years. As the crop matures, it grows larger and more dense, providing greater yields each year until maturity. Based on commercial growing of several varieties in Europe, the life of a stand is expected to be up to 20 years, from establishment.

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## FREEDOM™ GIANT MISCANTHUS OFFERS SEVERAL ADVANTAGES OVER OTHER AVAILABLE ENERGY CROPS

- High yields of cellulose
- Low fertilizer and herbicide input requirements
- Pest and disease resistant
- Non-invasive and easily eliminated
- Mitigates carbon and sequesters it in its deep, extensive root system
- Tolerance of poor soils and wide variations of pH
- Drought tolerance and efficient water use



## PLANTING

### RHIZOMES

As a sterile hybrid, the only way to propagate FREEDOM is through the division and re-planting of rhizomes. The vigor of FREEDOM plants allows Repreve to harvest rhizomes annually, with very high propagation rates. In turn, this allows grower operations to scale up quickly, with REPREEVE providing fresh, vigorous rhizomes.

### PLANTING TIME AND LAND PREP

Rhizomes are planted in the spring once soil has reached the appropriate temperatures. Potential crop land needs to be prepared as you would traditionally prepare land for hay, corn or cotton crops. Additional aspects of REPREEVE's quality control are extensive soil tests and site surveys to ensure your land is geared towards optimum crop performance.

### WEED CONTROL

FREEDOM giant miscanthus has the potential to be in the ground for up to 20 years, so weed control is crucial to the crop's establishment. It is especially critical during the early establishment phase. Herbicide treatments are necessary in the first year and again in certain areas at a lower rate in the second year. As it

matures and gains density, it provides a quick spring-time canopy that prevents weed competition.

### FERTILIZER REQUIREMENTS

While FREEDOM giant miscanthus grows well without fertilizer, it does respond positively to appropriate applications of fertilizer. Pre-planting fertilizer, followed by a low rate of fertilizer approximately 6 weeks after planting is all that is required in the first year. Fertilizer requirements drop significantly after the second year of growth.

### INSECT PESTS AND DISEASES

Ongoing studies are being conducted by Repreve and Mississippi State University to determine the potential effect of insects and diseases, but no issues have currently been identified. No insect pests have been observed in FREEDOM stands at a level that warrant spraying.

## HARVESTING

FREEDOM has a long and very flexible harvest window. At harvest time, the plant will be a mass of dried brown stalks that resembles large hay or thin bamboo. In most areas, the harvest window lasts from late fall through late winter, before the plant begins re-growth in the spring.

For best results, it should be baled. Existing hay-harvesting equipment can be used but specialized biomass harvesting equipment is optimal. Because it is deciduous, the crop does not need to dry in the field. Post-cutting raking of the material should be minimized to avoid introducing dirt and debris in the straw.