



FOR THE POLICYMAKER

FREEDOM™ GIANT MISCANTHUS: EVERYTHING A POLICYMAKER SHOULD KNOW

As energy independence becomes a growing concern both environmentally and economically, our nation must focus on ways to produce energy from our own natural resources. FREEDOM™ giant miscanthus provides a renewable, environmentally-friendly energy source that can be grown from our own natural resources. FREEDOM is a biomass feedstock that can be cost-effectively converted into clean energy to help our country meet its energy independence goals. As a home-grown feedstock, FREEDOM can also be a strong contributor to rural development and a renaissance for the American Farmer and Landowner.

FREEDOM BENEFITS

- FREEDOM giant miscanthus can produce up to 25 harvested tons per acre at maturity. This is over twice the production of current switchgrass varieties, while conventional timber requires more than 5 times the acreage to produce the same dry tonnage of cellulose.
- FREEDOM is easy to grow. Once established, the grass requires little water and out-competes weeds for nutrients.
- It is carbon-negative, taking in more carbon than it releases when converted into energy.[†]
- FREEDOM is a non-invasive sterile hybrid grown from rhizomes that does not produce viable seed and is easily eliminated.
- FREEDOM giant miscanthus is not a food crop like corn used for ethanol production or a forest product like conventional timber, so it does not impact food or lumber prices.
- It can be grown effectively on marginal soils, mitigating the pressure for farmers & landowners to convert existing lands.
- FREEDOM giant miscanthus dries naturally in the field, minimizing energy required for transportation and drying to reach optimum moisture delivery levels.

THE HIGHEST YIELDING ENERGY CROP

FREEDOM is a hybrid, perennial, giant miscanthus grass—a recognized front-runner in renewable energy feedstocks.

This “energy grass” can be used for:

1. Combustion for electricity and heat production in either biomass-dedicated plants or by being co-fired in more traditional coal plants.
2. Conversion to liquid fuels. In cellulosic fuel processes FREEDOM is a stable and cost-effective feedstock.
3. Chemical applications like renewable plastics and additives, in place of petroleum-based ingredients.





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IT'S ABOUT MORE THAN GROWING ENERGY.
IT'S ABOUT GROWING JOBS.

The cultivation of FREEDOM giant miscanthus in rural areas can have immediate positive impacts:

- One biorefinery can generate over 300 direct and indirect jobs.
- FREEDOM giant miscanthus will be grown local to each facility, thereby creating jobs immediately in the area.

GROW GREEN. GO GREEN.

Along with positive potential growth for America's economy, growing FREEDOM giant miscanthus provides many environmental benefits as well.

- FREEDOM giant miscanthus can be grown on marginal land, and there are currently 39 million acres of idle cropland and 67 million acres of pasture that can be dedicated to growing energy crops to meet renewable fuel standards.
- FREEDOM giant miscanthus recycles nutrients into the soil after harvest and requires little to no pesticides or fertilizers to grow.
- FREEDOM giant miscanthus can also absorb runoff from annual crop plantings, causing less soil erosion and compaction and can even provide a natural habitat for migratory birds and for several type of mammals.
- FREEDOM mitigates CO² as it grows and permanently sequesters a portion of it into the ground, making it a carbon-negative[†] energy feedstock.

[†]SOURCE: CLIFTON-BROWN, J. C., BREUER, J. AND JONES, M. B. (2007), CARBON MITIGATION BY THE ENERGY CROP, MISCANTHUS. GLOBAL CHANGE BIOLOGY