



Technology Available for License

Increased Oil Yield in Oilseed Crops to Enhance Biodiesel Production

Technology

Biodiesel is produced from a wide variety of oilseed crops. In Europe, canola is the major biodiesel crop while in the U.S. soybeans dominates. Montana State University and USDA researchers have developed a protein that can be expressed in a variety of oilseed crops to increase the oil yield by as much as 40%. The technology has been demonstrated in camelina, corn and soybeans and is expected to work for a broad range of oilseed plants including biodiesel and cereal crops.

Increased oil in the seed is induced by puroindoline genes that promote increased seed size and weight. The puroindolines represent a new way to increase the oil content compared with approaches that increase or modify oil content by manipulation of the oil biosynthetic pathway. Puroindolines are effective transgenes useful in increasing oil content in cereal and oilseed crops. An added benefit is provided by enhancing seed resistance to fungal diseases from the effect puroindolines have in controlling foliar and seed borne pathogens.

Application

- Increase seed oil content of oilseed crops used for biodiesel and cereals

Benefits

- Increase oil yield for existing oilseed crops
- Expected to work on a broad range of oilseed crops
- Provides enhanced seed resistance to fungal diseases

Technology Transfer and Development Status

Several US patents (6596930, 6600090, 7425669) have been issued for this technology.

Contact for licensing or further details

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