FAQ

ENERGY OF THE FIELD

What is Nuseed Carinata?

Nuseed Carinata is an independently certified non-food cover crop, grown between main crop rotations, and crushed in standard oilseed processing facilities for its oil to be used for low-carbon biofuel feedstock, and its co-product as a source of traceable non-GMO plant protein.

Nuseed Carinata "covers" or protects soil that is typically exposed between main crop harvest and next season's planting and removes atmospheric carbon while restoring soil carbon as it grows. By replacing fossil fuels Nuseed Carinata also reduces carbon emissions. The Nuseed Carinata production program rewards sustainable farming practices and does not displace primary food crops or require additional farmland.

How does Nuseed Carinata help reduce carbon or greenhouse gases (GHGs)?

In addition to being an independently certified and sustainable low–carbon fuel source that can replace fossil fuel, Nuseed Carinata also effectively removes carbon from the air as it grows and restores soil carbon down through the crop's biomass and extensive roots to regenerate soil health and sequester carbon in the process.

Why is Nuseed Carinata different than other biofuel feedstocks?

Nuseed Carinata is different than other biofuel feedstocks in three main ways:

- Does not displace primary food crops. Nuseed Carinata is inedible/not for human consumption and grown on existing farmland between main/food crop harvest and next season's planting. Plus, its co-product is a source of traceable plant protein.
- Independently certified sustainable production from every field. Nuseed Carinata production is tracked from field to oil and independently audited and certified by the Roundtable on Sustainable Biomaterials (RSB). Growers are rewarded for adopting certified sustainable farming practices.
- Stewards carbon 3-ways. In addition to being a sustainable low-carbon fuel source that can replace fossil fuels and reduce emissions, Nuseed Carinata, also effectively removes atmospheric carbon as it grows above ground and restores soil carbon down through its leaves and extensive roots to regenerate soil health.

How is Nuseed measuring carbon emissions from Carinata?

Nuseed measures carbon emissions based on processes established by global scientific standards (IPCC, DayCENT, and CENTURY), looking at above and below ground carbon sequestration associated with growing Nuseed Carinata in addition to fully quantifying farming practices at the field level, transportation and processing emissions.

NUSEED CARINATA

Who is advancing Nuseed Carinata as a certified sustainable fuel source?

Governments, international organizations and companies worldwide committed to carbon reduction are driving the policy and demand for certified sustainable low-carbon fuel feedstock, including Nuseed Carinata. Because it is an independently certified, non-food cover crop grown sustainably between main crops on existing farmland, Nuseed Carinata is an excellent feedstock for low-carbon fuel to help meet carbon reduction targets.

Nuseed's global work to build a strong Nuseed Value Chain with research, regulatory, farm customers, industry partners, processors and end-use customers is advancing and rewarding certified sustainable production of Nuseed Carinata to help meet the rapidly growing demand for low-carbon fuel feedstock.

Where is the crop grown and processed?

Nuseed Carinata is a resilient crop proven to grow well in both hemispheres between many primary crop rotations, such as corn and soybeans or other crops such as cotton, sorghum and peanuts, as a cover crop. It is grown between harvest and spring planting when weather limits primary crop production and soil is typically exposed to erosion.

Nuseed Carinata is currently commercially grown in Argentina between main crops on existing farmland and processed into oil in Europe. Nuseed Carinata is a proven drop-in feedstock for biofuel processors, making it easily integrated into production at existing facilities as the crop is introduced to new regions.

Currently, commercial program expansion in South America and plans for introduction to the U.S. will increase production to help meet the rapidly growing demand for low-carbon feedstock. Initial research and market development programs are also underway in Europe and Australia.

What is the demand for Nuseed Carinata?

Global demand for sustainable low-carbon fuel is strong and growing rapidly as governments implement and advance existing climate change policies and companies commit to carbon reduction targets. Recent commitments from the International Air Transport Association Net Zero Carbon by 2050 resolution to increase use of Sustainable Aviation Fuel (SAF) from 2% in 2025 to 65% in 2050, demonstrate the growing demand for sustainably scalable solutions that do not compete with primary food crops, like Nuseed Carinata. It provides a ready-to-scale sustainable solution for decarbonizing every major form of transport, including hard to decarbonize sectors like aviation and heavy transport.

Is Nuseed Carinata a suitable feedstock for Sustainable Aviation Fuel (SAF)?

Recently listed by the International Civil Aviation Organization (ICAO) as having similar industry leading greenhouse gas (GHG) savings as waste and residuals like used cooking oil, Nuseed Carinata is already recognized as a SAF feedstock that can help the aviation industry decarbonize, with the added benefit of globally scalable sustainable production.

When will Nuseed Carinata production increase?

Commercial production in Argentina is increasing. Expanding commercial programs in South America and U.S. introduction are being planned to increase production to help meet the growing demand for certified low–carbon feedstock. Initial research and market development programs are also underway in Europe and Australia.

nuSEED CARINATA

FAQ QUESTIONS FROM THE FIELD

Where can carinata be grown?

- Carinata is targeted at a broad geographical region covering Georgia, Alabama, Northern Florida, Southern Tennessee and the Carolinas to the East as well as Southern Texas in the West. The general rule of thumb is to avoid areas that receive substantial frost events in the winter months.

When would I plant & harvest typically?

- Carinata is best suited as a crop to be seeded soon after the harvest of the primary spring crop. Typically August until November 1st depending on which crop is grown the previous spring.
- Harvest is dependent on the timing of seeding. Maturity occurs approximately 170-180 days after planting.

Why plant Nuseed Carinata as a cover crop?

- Secondary revenue source for farmers enhancing the returns of annual primary crops.
- Several benefits of Cover Crops:
  - ⇒ Weed management
  - ⇒ Reduction of wind & water erosion
  - ⇒ Soil health improvement through build up of organic matter
  - ⇒ Efficient usage of available and leftover nutrients such as Nitrogen
  - ⇒ Soil tilth and loosening through the Nuseed Carinata extensive root system
  - ⇒ Providing an off-season pollinator food source
  - ⇒ Proven reduction in nematode populations

What do I need to do to participate in Nuseed Carinata contracts?

- Nuseed Carinata seed and contracts from Nuseed directly. Visit Nuseed Carinata for up-to-date information about availability.

Where do I deliver my Nuseed Carinata crop?

- To be determined as contracts are established.

Is Nuseed Carinata insurable?

- Carinata is insurable under the same category as you would find canola or rapeseed.

NUSEED CARINATA

How do I get the best results from Nuseed Carinata?

- **Nutrient Management**
  - ⇒ Fertilize as per soil test recommendations.
  - ⇒ Do not exceed 80 lbs./acre of actual synthetic N
  - ⇒ Nuseed Carinata responds very well to organic fertilizers such as poultry litter and manure.

- **Planting & Crop Establishment**
  - ⇒ Seeding rate of 4-5 lbs. per acre is recommended
  - ⇒ Seed at 0.25 to 0.5 inches of depth
  - ⇒ Row spacing of 8-15 inches is optimum for growth and weed control
  - ⇒ Best establishment is accomplished in min-till or no-till systems
  - ⇒ Nuseed Carinata seed comes treated with an industry leading insecticide & fungicide containing seed treatment to protect against early seedling disease and chewing pests.
  - ⇒ As a small seeded broadleaf crop, Nuseed Carinata can be damaged from carryover herbicide residues. Consider your herbicide usage of previous crops to avoid fields with potential residues of Group 2, Group 14, Group 15 or Group 27 herbicides. Check herbicide labels for manufacturer plant back recommendations.

- **Rotational Crops**
  - ⇒ Nuseed Carinata can be successfully grown between multiple crops such as: corn, soybean, cotton, sorghum, Cereals and Peanuts. Maximize the window to allow for full maturity of the Nuseed Carinata crop. A rotation of corn-carinata-soybean is one example of an acceptable growth window and IPM strategy for yield maximization for all crops.

- **Pest Management**
  - ⇒ Weed control can be accomplished through traditional grassy and broadleaf chemistries. Nuseed Carinata does not carry a herbicide tolerant system. Check website for a list of allowable herbicides.
    - Weed suppression occurs through healthy crop establishment and narrower seed rows where possible.
    - Pre-plant burndown and pre-emergent herbicides are best to control early season weed pressures.
  - ⇒ Disease Management
    - Due to the density of the crop canopy, scouting for in crop sclerotinia is advised. Growers can apply registered fungicides if necessary during the flowering period.
    - The normal flowering window lasts approximately 4-5 weeks.
  - ⇒ Insect management
    - Once the crop is established, minimal insect damage can be incurred. It is suggested for growers to scout for various lepidopteran (worm) pests up until the end of flowering.

- **Harvest**
  - ⇒ Desiccation is possible to ripen the crop faster and more evenly prior to harvest, and for added weed control. Desiccate at 75% seed color change.
  - ⇒ Seed is physically mature at approximately 10% moisture
  - ⇒ Nuseed Carinata can be windrowed or straight combined depending on grower preference. Nuseed Carinata is not prone to shattering and performs well in straight cut situations.
  - ⇒ Cut Nuseed Carinata as high as possible below the lowest area of podding to maximize the biomass left in the field.

- **Storage**
  - ⇒ Store in normal, dry grain storage facilities.