

EDN FUMIGAS[®] for soil.

Eco-friendly, effective fumigation solution backed by professional services.

As the world's population grows, so too does the need to increase the quantity, quality and sustainability of the world's food supplies. Experts predict that crop production will have to increase by between 70 and 100% by 2050 to meet growing demand for human food and animal feed. However, climate change and variability, water shortages and biosecurity risks mean this is becoming an increasingly daunting challenge. Already it is estimated that insects alone cause a loss of food sufficient to sustain about one billion people – roughly the number of people who are currently undernourished worldwide.¹

Meeting today's food challenges

To secure and increase the world's food supplies, the agricultural industry needs effective fumigants capable of protecting valuable crops against pests and diseases both before and after they have been harvested. More specifically, the market needs viable alternatives to conventional fumigation gases such as methyl bromide – which is being phased out globally as it is destroying the ozone layer.

At Linde, we believe in innovative crop science technologies, equipment and services that balance the need for effective fumigation with environmental awareness. Underpinned by a strong sense of product stewardship, our pest control solutions present a more sustainable way to secure tomorrow's food chains.





Protection matters

EDN FUMIGAS® is a non-ozone-depleting answer to today's fumigation challenges. Its active ingredient – ethanedinitrile – is an ozone-friendly substance. EDN FUMIGAS limits the impact of pests and disease in agriculture. It can be used to disinfect soil and control insects, diseases, nematodes, weeds and other parasites before planting fruit, vegetables and ornamental crops. The broad spectrum of EDN FUMIGAS makes it an ideal drop-in replacement for methyl bromide. With no known insect resistance, EDN FUMIGAS overcomes the problems associated with growing resistance among insects and pests to traditional chemicals and fumigants.

Performance gains

Comparable to methyl bromide in terms of efficiency, EDN FUMIGAS has a shorter fumigation period (within 24 hours) with improved penetration characteristics, and enables faster plant-back times (14 days). All of which combines to increase your productivity and profitability.

Benefits at a glance

- Viable alternative to ozone-depleting methyl bromide
- Drop-in replacement for methyl bromide
- Pre-plant solution to manage risks and protect investments
- Low environmental impact
- Ease of use with dedicated, innovative dispensing solution
- Shorter plant-back period than methyl bromide for easier planning and greater productivity
- Backed by our extensive consulting, installation, safety training and support services

Complementary services

We combine our innovative EDN FUMIGAS solution with professional expertise, services and reliable safety support to ensure you enjoy the best possible results. Inspired by a strong and active sense of product stewardship, our broad service offering extends from initial evaluations through dosing equipment customisation and field trials to registration support. For your added safety, we also offer personal protective equipment, safety training, installation support and waste gas management. Talk to us today to see how we can help you.

Typical examples of products, dosing rates and treatment times

Application technique	Commodities	Pest/insect	Dose rate
Shank Injection (injected into the soil through a tractor tynes), Chemigation (Mixed with water and injected into the soil through pre-laid drip tape)	Fruit: Strawberry (including nursery stock), peppers, cucurbits, watermelon, tomatoe Other: Ginger, Cut flowers	Soil borne Pathogens: <i>Pythium ultimum, Phytophthora cactorum, Fusarium oxysporum, Rhizoctonia fragariae, Schlerotium rolfsi, Pythium sulcatum, Rhizoctonia solani, Fusarium acuminatum, Phytophthora cactorum, Phytophthora cryptogea, Bipolaris soroikiniana</i> Weeds: <i>Poa annua, Spregula arvensis, Agrostis tenuis, Raphanus raphanistrum Conyza Canadensis, Lolium sp. Solanum nigrum, Amaranthus retroflexus, Portulaca oleracea, Orobanche aegyptiaca, Cyperus rotundus</i> Nematodes: <i>Meloidogyne spp., Steinernema spp.</i>	150-500kg/ha depending on the pest of concern and level of infestation

EDN FUMIGAS is currently being trialled in a number of countries with registration expected in 2014. Contact your local Linde representative for more information.

For more information about our fumigation solutions and details of current or pending regulatory tests and approvals, visit cropscience.linde-gas.com or contact:

Linde AG

Linde Gases Division, Seitnerstrasse 70, 82049 Pullach, Germany
Phone +49.89.7446-2339, Fax +49.89.7446-2071, www.linde-gas.com

1. UN World Population Prospects: The 2006 Review
EDN FUMIGAS® is a registered trademark of The Linde Group. This information is provided for guidance only. We make no warranties expressed or implied and assume no liability in connection with the use of this information. Users are responsible for ensuring full compliance with the applicable registered product label as this is a legally binding document. For further support please contact your local Linde supplier. Fumigant registration is country-specific. Please refer to your local Linde representative for information on the registration status in your region.

