

ECOLAN AGRA®

CLIMATE-SUSTAINABLE FERTILISERS



AGRA

**ecolan®**

ECOLOGICAL GROWTH

## CLIMATE-SUSTAINABLE FERTILISERS FOR ORGANIC AGRICULTURE

We developed the **ECOLAN AGRA® fertilisers** as supplements to plant nutrition in organic farming. They are excellent supplementary fertilisers for crop rotation and the agricultural production of legumes according to crop plan.

The basic raw material for the ECOLAN AGRA® fertilisers is bone meal, which is a side product of the domestic meat industry and rich in nitrogen, phosphorus, and potassium.

## ECOLAN AGRA® FERTILISERS ARE PART OF THE ORGANIC CULTIVATION SYSTEM

The high nitrogen content of the ECOLAN AGRA® fertilisers enables good nutrition efficiency. When used in loamy sand soils that contain little organic material, the nitrogen fertiliser is nearly as effective as chemical fertilisers.

Multi-nutrient ECOLAN AGRA® fertilisers supplement the nutrition needs of crop rotation in the spring when the soil is still cold and no organic material nutrients are yet available for the plants. The slowly dissolving phosphorus is released over the course of several years according to the needs of the plants.

By using ECOLAN AGRA® fertilisers, soil vitality is improved and the nutrients in the food system are recycled back into the fields.

# THE BENEFITS OF USING ECOLAN AGRA® FERTILISERS

1

## IMPROVES FARMING EFFICIENCY

For an organic fertiliser, ECOLAN AGRA® contains an exceptionally high concentration of useful main plant nutrients (N-P-K).

2

## NUTRITIOUS PROFITS

ECOLAN AGRA® includes a wide range of important secondary nutrients (Ca, Mg, S) and trace nutrients (B, Cu, Fe, Zn). Thanks to its efficiency, fertilising costs are rapidly covered due to increasing yields.

3

## USER FRIENDLY

ECOLAN AGRA® fertilisers have been granulated to an even granule size, which means excellent spreading consistency. Ordinary sowing and surface spreaders can be used to spread the fertiliser. The recommended amount to be used in arable farming is 500 to 1,000 kg per hectare.

**Use limitation pursuant to (EU) Nr. 142/2011 ECOLAN AGRA® 8-4-2, 8-4-4, 8-4-8, 10-4-2, and 13-0-3:**

Organic fertiliser; withholding period after spreading is no less than 21 days, during which time farm animals may not graze or the pasture vegetation be used for feeding. The user or other person responsible for the area of use must record the volumes, spreading areas, and spreading dates of the used animal-based fertilisers and keep the records for no less than 2 years.

**Spreading recommendation:**

It is recommended to spread the fertiliser as placement fertilisation as the moisture in the soil will enhance the release of the nutrients for the plants to use.

**Storage:**

In a dry and covered space on top of pallets or similar to avoid ground moisture. Any excess moisture will weaken the granules and their spreadability.

**Package size for granular fertilisers:**

Big bag 700 kg

**Granule size:**

2–6 mm



# ECOLAN AGRA® PRODUCTS



## ECOLAN AGRA® 3-0-0 NS

Organic fertiliser solution

NEW

**Package size:** Delivered in bulk with a tanker truck (45 to 58 tons) and in a 1 m<sup>3</sup> container.

**ECOLAN AGRA® 3-0-0 NS** is a new kind of wood based vinasse product (wood vinasse) which contains soluble nutrients that can be used by plants as such. ECOLAN AGRA® 3-0-0 NS can be used as it is for landscaping and the maintenance of green spaces, in which case earthing is recommended. In organic production, ECOLAN AGRA® 3-0-0 NS is suitable for a variety of cultivated plants, such as grains, grasses, and specialised crops.

By mixing nitrogen containing ECOLAN AGRA® 3-0-0 NS with liquid manure, the nitrogen content of the liquid manure can be improved. Wood vinasse has an acidic reaction with liquid manure, so the nutrients

in the mixture will not evaporate during spreading and can be well used by the plants. Wood vinasse likewise reduces the ammonia emissions and nitrogen loss of liquid manure during storage. When a wood vinasse and liquid manure mixture consists for example of 15 m<sup>3</sup> of liquid manure and of 2 m<sup>3</sup> of wood vinasse, plants can use 75 kg of soluble nitrogen, some 10 kg of phosphorus, and approximately 45 kg of potassium per hectare together with sulphur and other trace nutrients.

ECOLAN AGRA® 3-0-0 NS is suitable for spreading during the growing seasons among plants, and hay seed cultivations and pastures have for example benefited from wood vinasse fertilisation. Wood vinasse is spread with suitable equipment, and a wood vinasse and liquid manure mixture is spread with standard liquid manure spreading equipment. Organic fertilisers should be earthed immediately after spreading.

Use amounts in arable cultivation: ECOLAN AGRA® 3-0-0 NS can be spread into the soil just before or during sowing (with suitable equipment) and among the plants during the growing season. The recommended use amount is 2 to 4 tons per year, where the plants will receive 50 to 100 kg of soluble nitrogen per hectare.

Sold in 1 m<sup>3</sup> containers, ECOLAN AGRA® 3-0-0 NS is suitable for the precision fertilisation of gardens and greenhouses in conjunction with irrigation. Wood vinasse mixes well with water and can be used with different irrigation systems. It is not recommended to use wood vinasse during each irrigation cycle so that no deposits are formed in the irrigation system.

**Use amount for irrigation fertilisation:** The recommended use amount is 10 to 50 litres of ECOLAN AGRA® 3-0-0 NS fertiliser per 1 m<sup>3</sup> of irrigation water.

**Nutrient concentrations (% of dry matter):**

nitrogen (N) .....	2,8 %
	(water soluble 2,6 %)
sulphur (S) .....	1,2 %

# ECOLAN AGRA® 10-4-2

Organic animal-based  
mineral fertiliser



(EY) N:o 889/2008

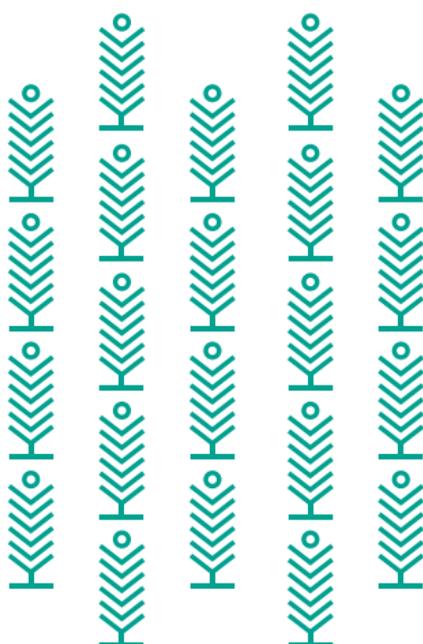
**ECOLAN AGRA® 10-4-2** is suitable for the fertilisation of grains, oilseeds, potatoes, and garden plants. It can also be used to fertilise herbaceous plants. Suitable for use in organic farming as a supplementary fertiliser according to crop plan.

**Use amount:** for arable farm plants 500 to 1,000 kg per hectare, and for the sowing fertilisation of winter grains approximately 250 kg per hectare. 60 % of the phosphorus in the fertiliser is calculated as usable by plants pursuant to environmental aid conditions.

When used according to the recommendation, 50 to 100 kg of nitrogen and 20 to 40 kg of phosphorus can be spread per hectare, of which 12 to 24 kg is calculated as usable. The recommended use amount includes 10 to 20 kg of potassium and an amount of sulphur that is sufficient for grains.

### Main nutrient concentrations (% of dry matter):

nitrogen (N) .....	10,0 %
	(water soluble 2,7 %)
phosphorus (P) .....	4,0 %
	(water soluble 0,15 %)
potassium (K) .....	2,0 %



## ECOLAN AGRA® 13-0-3

Organic animal-based  
mineral fertiliser



(EY) N:o 889/2008

Suitable for nitrogen fertilisation if there is no need for phosphorus or other nutrients. Can also be used in sowing fertilisation as starter nitrogen or as supplementary fertiliser in the early growing season to increase yields and to improve quality.

**Use amount:** Supplementary fertiliser for cabbages and other plants requiring plenty of nitrogen in the spring together with compost fertiliser or during the growing season 400 to 600 kg per hectare. Also well-suited as starter nitrogen for grains, oilseeds, and legumes, for which the amount is 200 to 300 kg per hectare.

### Main nutrient concentrations (% of dry matter):

nitrogen (N) .....	13,0 %
	(water soluble 0,3 %)
phosphorus (P) .....	0,0 %
potassium (K) .....	3,0 %

## ECOLAN AGRA® 8-4-2

Organic animal-based  
mineral fertiliser



A multi-nutrient compound fertiliser suitable for the fertilisation of grains, oilseeds, potato, grasses, and garden plants with nitrogen mainly contained in organic matter.

**Use amount:** The recommended amount to be used for arable farming plants is 500 to 1,000 kg per hectare. 60 % of the phosphorus in the fertiliser is calculated as usable by plants pursuant to environmental aid conditions.

When used according to the recommendation, 40 to 80 kg of nitrogen and 20 to 40 kg of phosphorus can be spread per hectare, of which 12 to 24 kg is calculated as usable.

### Main nutrient concentrations (% of dry matter):

nitrogen (N) .....	8,0 %
	(water soluble 3,0 %)
phosphorus (P) .....	4,0 %
	(water soluble 0,15 %)
potassium (K) .....	2,0 %

# ECOLAN AGRA® 8-4-4

Organic animal-based  
mineral fertiliser



(EY) N:o 889/2008

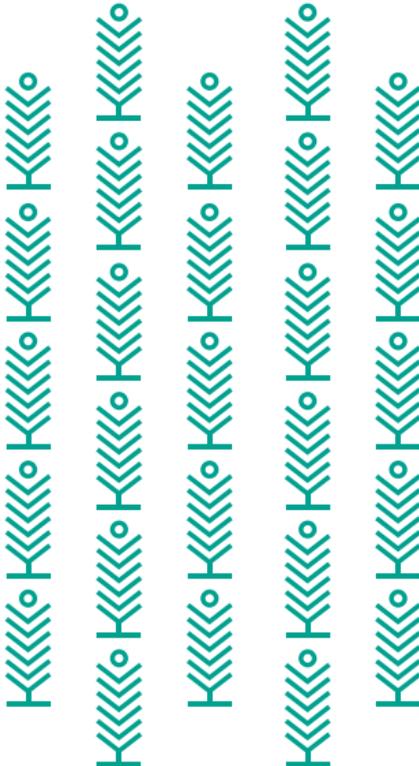
A multi-nutrient compound fertiliser suitable for the fertilisation of grains, oilseeds, potato, grasses, and garden plants with nitrogen mainly contained in organic matter.

**Use amount:** The recommended amount to be used for arable farming plants is 500 to 1,000 kg per hectare. 60 % of the phosphorus in the fertiliser is calculated as usable by plants pursuant to environmental aid conditions.

When used according to the recommendation, 40 to 80 kg of nitrogen and 20 to 40 kg of phosphorus can be spread per hectare, of which 12 to 24 kg is calculated as usable.

### Main nutrient concentrations (% of dry matter):

nitrogen (N) .....	8,0 %
	(water soluble 2,5 %)
phosphorus (P) .....	4,0 %
	(water soluble 0,15 %)
potassium (K) .....	4,0 %



## ECOLAN AGRA® 8-4-8

Organic animal-based  
mineral fertiliser



(EY) N:o 889/2008

A multi-nutrient compound fertiliser suitable for the fertilisation of grains, oilseeds, potato, grasses, and garden plants with nitrogen mainly contained in organic matter. Trace nutrient fertiliser suitable for the cultivation of demanding specialised crops.

**Use amount:** The recommended amount to be used for arable farming plants is 500 to 1,000 kg per hectare. 60 % of the phosphorus in the fertiliser is calculated as usable by plants pursuant to environmental aid conditions. When used according to the recommendation, 40 to 80 kg of nitrogen and 20 to 40 kg of phosphorus can be spread per hectare, of which 12 to 24 kg is calculated as usable.

### Main nutrient concentrations (% of dry matter):

nitrogen (N) .....	8,0 %
	(water soluble 2,7 %)
phosphorus (P) .....	4,0 %
	(water soluble 0,15 %)
potassium (K) .....	8,0 %

## ECOLAN AGRA® POTASSIUM SULPHATE

Suitable for supplementary potassium and/or sulphur fertilisation in organic agriculture. Recommended as potassium fertiliser for plants that are sensitive to chlorine.

**Use amount:** Referential use amounts for grain cultivation 50 to 100 kg per hectare for grass, 100 to 150 kg per hectare for berries, and 150 to 250 kg per hectare for root vegetables and vegetables.

### Main nutrient concentrations (% of dry matter):

potassium (K) .....	42,0 %
sulphur (S) .....	18,0 %
chlorine (Cl) .....	<1,0 %

## ECOLAN AGRA® PATENT POTASH

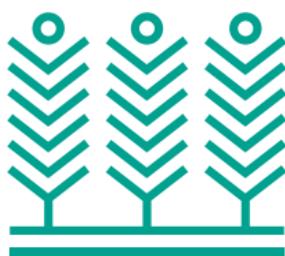
Potassium sulphate containing  
magnesium salt

Suitable for supplementary potassium, magnesium, and/or sulphur fertilisation in organic agriculture. Supplements the need for magnesium in organic fruit and berry cultivation in particular. Recommended as potassium fertiliser for plants that are sensitive to chlorine.

**Use amount:** Referential use amounts for grain cultivation 50 to 100 kg per hectare for grass, 100 to 150 kg per hectare for berries, and 150 to 250 kg per hectare for root vegetables and vegetables. Can be spread as both surface and placement fertilisation.

**Nutrient concentrations (% of dry matter):**

potassium (K) .....	25,0 %
sulphur (S) .....	17,0 %
magnesium (Mg) .....	6,0 %
chlorine (Cl).....	<3,0 %



# ecolan®

ECOLOGICAL GROWTH

Ecolan Oy manufactures climate-sustainable fertilisers for agriculture and forestry out of industrial side streams.

## ECOLAN OY

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## MANUFACTURING OF ECOLAN AGRA® FERTILISERS

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