

TRAINING MATERIAL

Title:

Compost from algae and cattle manure by local composting process (ID:540)

Training:

What is the product?

The product is black brown solid with fibrous pieces.



Product category : PFC 3.A –organic soil improver (regulation EU 2019/1009 of 5 June 2019)

Who is the vendor of the product?

The product “Compost from algae and cattle manure” (CACM) is made from Cattle manure, Equine manure, straw and algae is sold by the French agricultural holding “SARL Gautronneau”, in Charente-Maritime (F), by local composting.

Which other product are provided by the vendor?

None.

Which are the advantages of the product and the problems addressed?

Which is the nutrient content of the product?

Nutrient content (in raw matter) : 0.8 % N – 0.71 % P₂O₅ – 1.82 % K₂O – 0.52 % MgO – 6.43% CaO - 0.62 % SO₃

Organic characteristics : OM = 13.62 % RM - C/N = 8,5 – pH = 8.9

Which equipment and methods can be used to apply the product?

- The product is hygienized but according to the storage conditions gloves may be recommended for greenhouse handling.
- For ground application on arable land, the product can be spread with an universal spreader or with spreaders with spreading tables.

How to use the product?

Storage : The CACM product can be stored in heaps possibly at field (*but be careful to your local regulations about organic fertilisers storage conditions*) preferably sheltered.



Cultivation : Mainly open field but it can be used in greenhouse.

Recommended crops: Arable crops (Wheat, Barley, Rape, Corn, Sunflower), vegetables, Grapes, Fruit trees.

The CACM product is a soil improver obtained with a natural composting treatment without chemical inputs : made on an outdoor platform, the raw material is managed by swathing, with turning by towed turner three times.

The temperature rise comes from the micro-biomass aerobic activity (bacteria, fungi, yeast...) and is maintained above 50°C for at least 4-5 weeks : that provides a good hygienization.

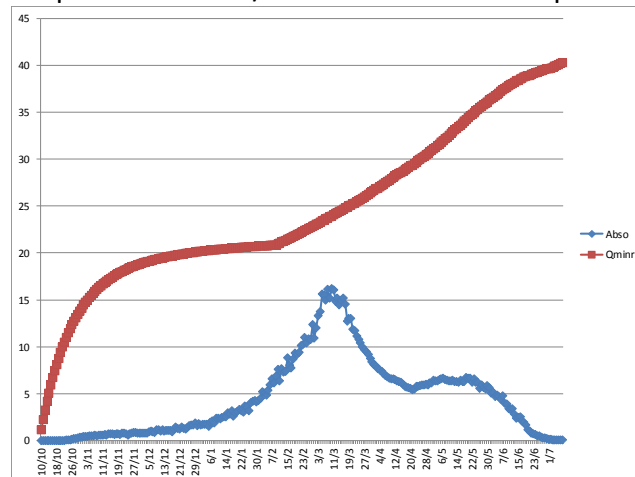
As a soil improver, this product has few contents of nutriment but it provides many kinds of elements to increase soil's fertility : a 10 tons/ha input provides

- 80 kg/ha of total N but with only 25% released during the cropping cycle;
- About 40 kg/ha of P₂O₅;
- About 110 kg/ha of K₂O.

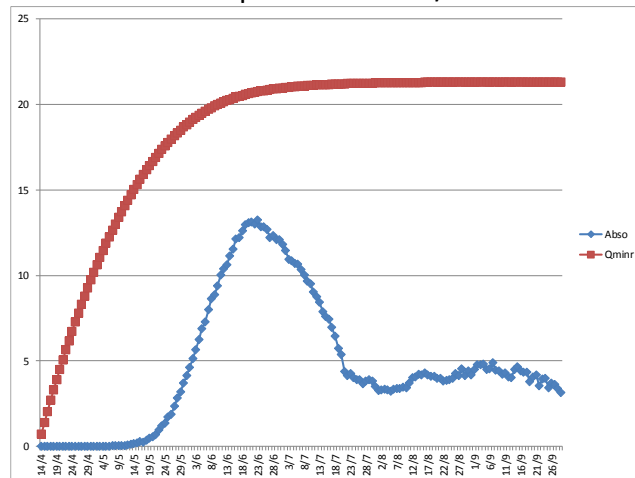
The agricultural origin of the CACM product ensures a high ability to be recycled in the soil and the medium C/N ratio indicates a good ability to bring organic carbon in the soil without unbalancing its CN cycle : neither high release of mineral N nor nitrogen deficiency for the crop.

Examples:

- A winter wheat crop with two 10 t/ha additions of CACM product



- A corn crop with one 10 t/ha addition of CACM product



Blue curve : N absorbed by the crop (x100 g N/ha) - Red curve : N released from CACM (kg N/ha)

As a soil improver, the CACM product allows to increase C storage in soil : a 10 tons/ha input bring to the soil about 680 kg C/ha, and simulations show that a yearly input of 10 t/ha during ten years allows to fix about 6 tons/ha of carbon in a clay-limestone soil thanks to the direct carbon supply of the compost and thanks to the fertilizing effect which increases the crop residus.

The alkaline pH has an improving effect on acidic soils.

Typical doses :

The dose has to be specified according to the farmer's purpose : to optimize the nutrients supply for the current cropping cycle (15 – 30 t/ha) or to increase regularly the soil's fertility (5 – 10 t/ha).

It is to be computed according to the local conditions with agronomic trials.

When ?

The CACM can be applied on the ground and get buried a few days before sowing but the fertilizing effect is more efficient if the product is spread just before the nutrition period during spring (be careful to spreading dates authorized by your local environmental regulations...).

In any cases, don't hesitate to consult your local advisor !

Which are the authority permits and in which EU countries?

Permit availability : marketing in France using the French standard NF U44-051.

How much does it cost?

25€/ton or 300 €/ha (average value to be adjusted according to the type of crop, yield objectives, soil situation, etc.).

For more information: https://nutriman.net/farmer-platform/product/id_540