



# Natural Feeds & Fertilisers Ltd.

## CelTix™ DE-Bug User Information for grain stores

*CelTix™ DE has exceptional oil absorption properties, putting it ahead of other tested brands for insect control.*

**DE** (diatomaceous earth) is a fine powder of diatomite rock, made up of single celled diatom shells, deposited in vast beds at the bottom of oceans and lakes millions of years ago.

DE has a unique ability to absorb oils and lipids, due to its perforated design woven by Mother Nature into intricate patterns, which can be used to identify different species, and give each brand different properties. This enables specific brands of DE to absorb the protective lipid and waxy coats of stored grain insects, causing them to dehydrate and die, so providing a safe, natural alternative to chemical pesticides as a means of protecting stored grain.

Control is good for as much as a year, depending on species of insect and application rate. CelTix™ DE is most effective when moisture is low (12%) and temperatures are either high or low.

### How to add CelTix™ effectively

\*It is recommended that bins are emptied, cleaned and treated with CelTix™ DE before adding new grain, as even a few old grains could cause another infestation. Do this 7-14 days before storing the new grain, at a rate of 5g/square metre to all interior surfaces, (454g/1000 square feet). Apply using aeration fan or a compressed air duster.

\*To wet spray, mix 3kg DE into 20 litres of water. Spray at a rate of 10 litres per 200 square metres (50ml/m<sup>2</sup>).

### Calculating dimensions and quantities to use

Find radius of bin, which is 1/2 the diameter, and height of bin.

1. Floor area = radius x radius x 3.14

2. Ceiling = floor area + 30% for peaked roof

3. Wall area = radius x height to eaves x 6.29

Add 1, 2 & 3 to find total area. Divide total area by 1000 then times this number by 0.454 to determine the amount of CelTix™ to treat the empty bin.

\*Sprinkle CelTix DE onto the **new uninfested** grain as you auger the bottom metre and the top metre into the bin, or better still especially for wheat, add to the whole grain mass.

### CelTix™ DE application rates per tonne of grain

Wheat - 1.21kg, Corn - 5.68kg, Barley - 1.08kg, Oats - 1.00kg, Rye - 1.28kg, Peas/Beans - 1.21kg

Alternatively, calculate the amount of CelTix™ required to treat the whole lorry load, take half this amount and spread as evenly as possible over the entire surface of the grain in the lorry body. When the body is about half empty, spread the remaining DE evenly over the surface of the grain left in the lorry body.

\*Finally, blow or sprinkle the CelTix™ DE lightly onto the surface of the grain mass at the rate of 20g/square metre (1.86kg/1000 square feet).

To calculate surface dressing area, take ceiling area from initial calculation and divide by 1000 and then multiply by 1.86 to give you the correct surface dressing amount.

### CelTix™ DE application rates in kilograms per tonne for established infestations

GRAIN	Rusty grain beetle kg/tonne required	Red flour beetle kg/tonne required
Barley	1.30	3.04
Wheat	0.97	2.91
Oats	1.21	2.84
Rye	1.52	3.55
Peas	2.91	2.91
Corn	4.36	9.05
Soya beans	Surface treatment	Surface treatment
Feed grains	Use relevant rates above	Use relevant rates above

Treat top metre of grain and if you have an aerator add DE to the bottom so that the lower grain is coated.

**For more information contact Natural Feeds and Fertilisers Ltd: Tel/Fax 01970 820149, Email: [edwardsh@naturalfeeds-fertilisers.co.uk](mailto:edwardsh@naturalfeeds-fertilisers.co.uk)**