

**ECOSYL™**

**DA Varicool™**

*Silage additive  
for flexible application  
to maize and  
wholecrop*

**Double  
Action**

**MTD/1™**

volac 

## Low volume application for maize & wholecrop cereals

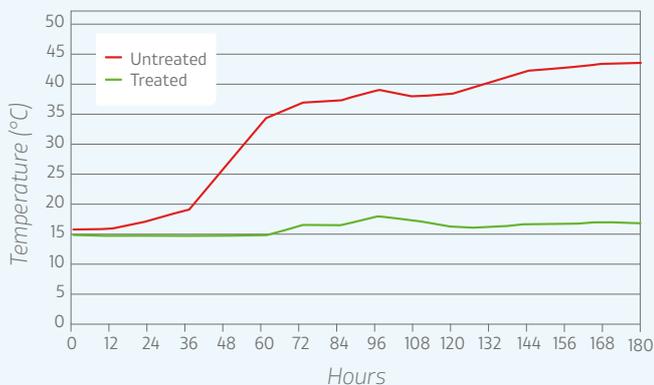
DA Varicool combines the fermentation and animal performance benefits of MTD/1 inoculant with reduced aerobic spoilage from potassium sorbate, a safe, non-corrosive food and feed approved preservative.

### Chemical action

Trials by the MGA and Kingshay have shown repeatedly that chemical preservatives are very effective at preventing aerobic spoilage. In the 2002 MGA trial DA Ecocorn (MTD/1 + sorbate) was the only product tested to reduce the daily loss in income due to heating and spoilage.

The graph below shows how effective chemical preservatives can be at preventing heating in maize silage.

Independent trial of MTD/1 + preservative (INRA, 1998)



Trials with DA Ecocorn have shown treated silage remains stable for longer. Trough life is also extended.

	Days Stable	
	Untreated	MTD/1 + Sorbate
Wheat	2.4	8.0
Barley	2.1	5.3
Maize	1.3	8.4

### Biological action

MTD/1 is the unique high performance strain of *Lactobacillus plantarum* proven over a wide range of crops and ensiling conditions to improve fermentation and animal performance.

MTD/1 increases the speed and efficiency of fermentation, reducing fermentation losses and improving palatability as shown below for maize.

Mean of 5 trials	Untreated	MTD/1
pH	4.0	3.8
Lactic acid: VFA ratio	2.9	4.9
Ammonia-N (%TN)	7.4	5.6

With 15 independent dairy trials, MTD/1 is supported by more animal performance evidence than any other inoculant. Trials with maize and wholecrop cereals have shown increases in milk yield of up to 1.8 and 2.2 litres/cow/day respectively.

	DM Intake (kg/cow/day)		Milk Yield (kg/cow/day)	
	Untreated	MTD/1	Untreated	MTD/1
Maize	11.4	12.6	36.5	38.3 (+1.8)
Wheat*	21.1	21.8	35.3	37.5 (+2.2)

\* Total TMR DM intake

## The Varicool concept – low volume, variable rate

Maize and wholcrop silages are very prone to aerobic spoilage, especially at feedout, resulting in high dry matter (DM) losses and significantly reducing their potential intake and production advantages.

### Some facts about clamps and aerobic spoilage:

- Clamps are not uniform so the risk of aerobic spoilage varies
- It is the top, shoulders and face of the clamp that are most at risk because air must be present
- At feedout, although the whole face is exposed to air, the risk is much higher at the top where the silage density is lower because the air can penetrate further into the clamp. So clamps heat more at the top than the bottom

This suggests that the most efficient way to use an anti-spoilage additive would be to vary the application rate according to the risk of aerobic spoilage in different areas of the clamp. Yet it is important to treat all of the clamp with the inoculant at a single rate. Varicool allows you to do this

### DA Varicool

- Allows you to apply the inoculant and chemical preservative separately for maximum flexibility
- Allows you to apply the chemical preservative at different rates, depending on the spoilage risk
- Allows low volume application of both the inoculant and the chemical, reducing downtime

You can apply the preservative at different rates depending on the risk of aerobic spoilage, eg: you could use a single rate across the whole clamp or you could apply it at three times this rate only on the last third going into the clamp.

	Preservative Rate (litre/t)	% of clamp treated
Single Rate	0.33	100
Double Rate	0.66	66
Triple Rate	1.0	33

Maize trials in the UK and by Pries & Hunting at Landwirtschaftskammer Nordrhein-Westfalen in Germany have shown that application of preservative at triple rate can give over 10 days extra stability.

Trial	Days Stable	
	Untreated	DA Varicool
Pries & Hunting 1	6.3	14.4
Pries & Hunting 2	6.2	17.5
Best (Devon)	1.6	8.3



**Jim Kirk, Okehampton, Devon**

‘With DA Varicool we can apply MTD/1 inoculant to the whole clamp but vary the preservative so we skipped the sorbate on the bottom and used extra on the top. The clamp has fermented well and the cows are really liking it, averaging 30 litres per day’



**Simon Heath, Stockton Holsteins, Newport, Shropshire**

‘DA Varicool saves labour and time, and the flexibility to vary the rate allows us to target the preservative to where it is needed most, giving us both efficacy and cost efficiency.’

## Pack size and storage

- For liquid application only
- 100t pack contains:
  - One bottle of MTD/1 inoculant
  - Two cans of preservative
- Unopened bottles can be stored for 18 months in a cool dry place. Use diluted product within 48 hours
- Unopened cans can be stored for 18 months in a cool dry place. Use diluted product within 7 days
- GMO free and suitable for organic use (restricted – contact certification body before using)



## Mixing and application

### Inoculant

- Dilute to 2 litres in the bottle
- Apply at 20 ml per tonne using a suitable ULV applicator e.g. Ecosyler

### Preservative

- Dilute six cans to 100 litres
- Apply liquid at variable rates from 0.33 to 1 litre/t with a standard applicator, e.g. Ecoflow



*MTD/1 is a natural bacterial strain first isolated in the UK by British scientists. It is manufactured and packaged in the UK.*

*Ecosyl silage additives are exported worldwide. In 2011 Ecosyl Products Ltd received the Queen's Award for Enterprise for innovation.*



### For further information:

Freephone | 0800 590440 Email | [info@ecosyl.com](mailto:info@ecosyl.com) Visit | [www.ecosyl.com](http://www.ecosyl.com)

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