# What Irish farmers have known for generations backed-up by scientific research

For centuries farmers have used hydrated lime. Not always knowing why, other than to say, this is the way it has always been done. Now through intensive research and lab testing, hydrated lime has been proved to deactivate bacteria and yeasts. It is now an approved biocide for use on hard surfaces to disinfect indoor floor surfaces of animal accommodations.

### ····· TEAGASC RESEARCH

### 2013 Research conclusion

"The hydrated lime bedding treatment resulted in significantly less Staphylococci and Streptococci on teat skin compared to the ground limestone bedding treatment. Numerically lower levels of BMSCC and subclinical infections were observed with the hydrated lime treatments. A larger number of study animals and a longer test period may be necessary to show a significant effect of HL in terms of reduced new infection rates. Hydrated lime could be successfully used as cubicle bedding material for dairy cows if used at the recommended rates with either CH or I based teat disinfectants"

Extract from Irish Journal of Agricultural and Food Research 52:D.Gleeson 159–171, 2013

### 2010/2011 Moorepark trials

Moorepark conducted trials Jan - Feb 2010/2011 which showed that milking cows bedded with White Rhino had lower bacteria counts and infection levels compared to cows bedded with standard cubicle limestone.

Results: By the end of the 5 week trial, milking cows bedded with hydrated lime showed 50% less staphylococcal and 45% less streptococcal bacteria than those bedded with cubicle lime (limestone).

These were similar results to the 2010 Moorepark dry cow study. Hydrated lime can be successfully used as cubicle bedding when used at 230g per cubicle with iodine or chlorhexidine based teat dip."



Tel: 059 9131811

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Available from co-ops & builders merchants nationwide.

**Local Stockist:** 



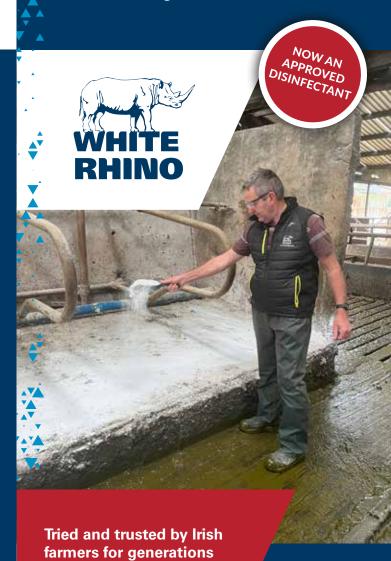
Agri Hydrate Lime
1 ton. Agri Hydrated Bag
(Low dust content)



Standard Building Grade 25kg Bag (Suitable for use in cubicles)

## HYDRATED LIME

Approved by the Department of Agriculture and Proven by Teagasc Research



## Advantages of both White Rhino Hydrated Lime products:

- Protects herd from disease and infection
- High pH deactivates most pathogens
- Reduces infections in cows prior to calving and ewes prior to lambing
- Reduces lameness in housed ewes
- Reduces disease and infections in calf houses
- Hydrated lime provides maximum absorption
- Additional value of slurry as a source of lime when spreading

### Method of use in cubicles:

- Ensure cubicles are cleaned and washed prior to application
- Dust the back third of cubicle with hydrated lime
- Recommended 230g maximum per cubicle per application
- Use biocides safely. Always read the label and product information before use
- · Dust loose houses prior to bedding
- Dust calf houses/calving boxes prior to bedding

## 2023 Department of Agriculture Approval

### **Biocidal Product Assessment Report Study**

"Following a comprehensive review of the data provided, the Irish Competent Authority considers the products to be bactericidal with specific disinfection activity against S. Uberis and yeasticidal as they have demonstrated a sufficient level of efficacy against the target organisms. All products within the family have been supported and have been shown to be efficacious in the disinfection of veterinary hard surfaces using a 2 hours contact time and under veterinary high soil (dirty) conditions."

Use biocides safely. Always read the label and product information before use.

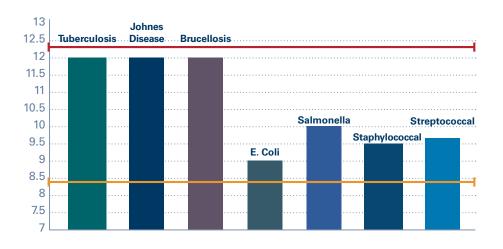
### **HOW IT WORKS**

1) Increased alkalinity - Addition of sufficient quantities of Lime to organic waste brings about a rapid and sustained increase in pH, to a level > 12. The high concentration of free OH- ions results in the denaturation of protein structures of microorganisms such as cell walls, capsid structures, enzymes and organelles. The time delay depends on the type of pathogen to be inactivated. It varies from a few hours for the most resistant bacteria and up to 3 months for the most pH resistant parasites."

#### Extract from

PRODUCT ASSESSMENT REPORT OF A BIOCIDAL PRODUCT (FAMILY) FOR NATIONAL AUTHORISATION APPLICATIONS Calcium dihydroxide family Product type(s): 3 [Calcium dihydroxide] Case Number in R4BP: [BC-RQ038593-12] Evaluating Competent Authority: Ireland

### Top of each bar shows the pH required to deactivate bacteria



The bar chart shows that White Rhino Hydrated Lime will deactivate pathogens giving your herd extra protection.

The pH for basic cubicle lime (limestone) is too low to deactivate these pathogens.

Hydrated Lime differs from cubicle lime (limestone) because it has been processed in a lime kiln and hydrator.

Refer to Clogrennane Lime Ltd. for the source of information.

### Effectiveness of Hydrated Lime versus Cubicle Limestone (often called cubicle lime)

White Rhino Hydrated Lime pH = 12.35 which deactivates all of the bacteria shown

Cubicle Limestone pH = 8.3 which deactivates **none** of the bacteria shown

Hydrated lime absorbs 15 times more moisture than cubicle limestone

White Rhino products will not burn cows if used at the recommended rate of 230g per cubicle