

ZAR-MIN[®]

FEED ADDITIVE

ZAR-MIN DESCRIPTION

ZAR-MIN Feed Additive is a processed aluminosilicate belonging to a class of naturally occurring minerals called zeolites. There are over 600 natural zeolite occurrences in the world. There are 40 different structural types of natural and man-made zeolites that differ in the way the alumina and silica are stacked. The zeolite used in **ZAR-MIN** is classified as a clinoptilolite (clino) and has a complex and open honeycomb structure that does not "swell" within the digestive tract. The **ZAR-MIN** natural zeolite was selected due to its excellent absorption characteristics, high ion exchange capacity and high surface area. These properties make **ZAR-MIN** "selective" to mycotoxins, yet do not interfere with the bioavailability of vital nutrients in the GI tract (Pond 1984, 1989). These properties provide the basis of why **ZAR-MIN** is desirable for use in dairy rations.

MYCOTOXIN MANAGEMENT TIPS

If Contaminated Feed is Suspected:

- Take cows off suspected feed
- Have feed checked by a lab
- Destroy contaminated feed, if practical
- Use caution while working with contaminated feed

Suggested Changes to Rations:

- Increase trace minerals, Selenium, Zinc and Manganese
- Increase levels of A, D, E, K, B
- Increase protein levels
- Use **ZAR-MIN** at 6-8 oz. per head per day rate; taper to 4-6 oz.

BENEFITS IN DAIRY RATIOS

ZAR-MIN offers the following benefits when used as an anti-caking agent and as an additive to aid in mycotoxin control programs:

- Highest ion exchange capacity — 1.75 meq. per gram
- Improves flowability and pellet binding
- Excellent ionic buffering characteristics
- Does not bind minerals and vitamins
- Creates no problems with palatability
- Reduces free ammonia in rumen
- Is not a complex carbohydrate extract (mannan oligosaccharides)
- Superior anti-caking agent
- Research tested, field proven
- Improves feed storage and handling
- Versatile product — use in TMR, complete feeds, pelleted feed
- Free of dioxins
- Does not swell up in the rumen like bentonite

RESEARCH FINDINGS — FOR DAIRY USE

Increased growth and weight gain — *Mumpton & Fishman, 1977*

Reduced free ammonia in the rumen — *Hemkan, et. al., 1984*

Altered rumen fermentation — increased milk production — *Rossel, 1993; Hemkan, 1984*

Reduces incidence of scours in calves — *Kondo, 1969*

Reduces aflatoxin concentrations in milk production from cows fed contaminated feed — *Harvey, 1991*

FEEDING INSTRUCTIONS

Normal feeding program:

10-40 lbs. per ton of feed — 4-6 oz. per head per day

If mycotoxins are present:

Include **ZAR-MIN** at 6-8 oz. per head per day

Reduce **ZAR-MIN** at 4-6 oz. per head per day after 2-3 weeks, in conjunction with other management procedures

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