



Moldstop[®]
Mold inhibitors

ULTIMATE SOLUTION FOR PREVENTION OF MOULD GROWTH IN STORED FEED STUFFS

- Propionic Acid
- Ammonium Propionate
- Surfactants
- Plant Extracts

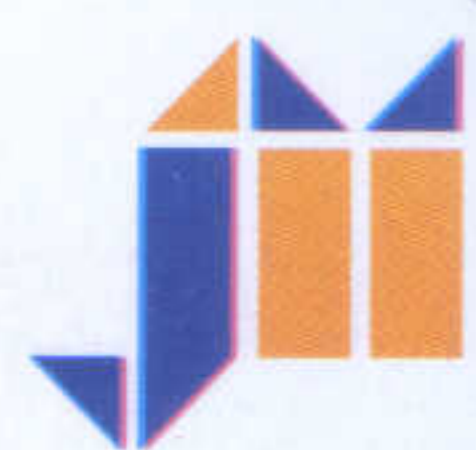


Moldstop[®]
Mold inhibitors

Employs: **“Activated Propionates”**
Neutralization with ammonium hydroxide -
strengthened by **“Micelle Stimulating Technology”**

SUPERIOR PENETRATION, SUPERIOR PROTECTION FROM MOULDS

Sole Distributor in Pakistan:



**JAWAD IMPEX
INTERNATIONAL**
Indenter, Importer & Distributor

Sale Office: 210-Rewaz Garden Lower Mall, Lahore - Pakistan
Ph: +92 (042) 37171014, 37171145
E-mail: jawadimpexintl@gmail.com
Web: www.jawadimpexintl.com

SILAGE PRESERVATION:

- High efficacy for promoting Aerobic stability of silage (Bunk life of Silage)
- Presence of Free as well as Buffered Propionic Acid.
- Supports desirable Fermentation (Lactic Acid).
- Hinders undesirable Fermentation by pathogens.
- Thus prevents synthesis of undesired products from undesired Fermentation.
- Increased palatability, increased Silage Intake, Thus, Increased Productivity from animals.



Innovation is the key

Manufactured by:



Impextraco[®]
Optimizing feed ingredients

INTRODUCTION

Mould control means cost effective strategy to maintain the nutritional quality and safety of raw materials.

These are thousands of known species of moulds worldwide. The need to control moulds is that they consume the main nutrients.

This results in deterioration of nutritional quality like a reduced starch and protein content, and poorer palatability.

Moreover, moulds produce mycotoxins, which pose a serious threat to animals and human health.

DRIVERS IN MOULD FORMATION

- 1- Mould needs nutrients for growth like nitrogen and energy. Intact seeds, however, show slow growth of moulds.
- 2- Appropriate Temperature is needed for optimal growth. Warmer temp is required by Aspergillus and Penicillium.
- 3- Moulds, are obligate aerobic organism. The growth proliferation of Moulds can be controlled by ensuring oxygen free storage
- 4- **Moulds need free water for their metabolism. Water activity (Aw-value), is used as an indicator of volume of free water. Aw-values greater than 0.6, indicate increased risk of mould growth.**

ORGANIC ACIDS AGAINST MOULDS

The two main characteristics of a best mould inhibitor product, it should have a broad spectrum efficacy as:

- 1- Inhibition of vegetative growths of moulds
- 2- Inhibition of growth of existing spores

COMPOSITION

ACTIVATED PROPIONATES

Killing moulds require a different approach than killing bacteria. Against moulds, organic Acids, not only has to pass cell membrane but also cell wall. Helical structure and lipophilic character of Propionic acid plays key role.

"Activated Propionates", further, strengthening the Anti-Mould character, by an innovative approach.

"Activated Propionates", involves, neutralization reaction with Ammonium hydroxide combined with micelle stimulating Technology.

Result is Activated Ammonium Propionate in micelle. These micelle, increase the porosity of cell walls of moulds, and than influx of Organic Acids. Inside moulds, organic Acids dissociate, decrease intracellular pH, so glycolysis inhibit and ultimately, kill the moulds.

SILAGE MAKING & SILAGE PRESERVATION

- A major aim of cattle farmers is to increase the utilization of crude protein & energy from forage. In practice, proteolysis can only be restricted by a very rapid decrease in silage pH or by applying heat during wilting.
- **A combination of extensive wilting and addition of organic Acids may result in preservation of 80% of the original protein content.**
- Preserving silage crude protein and rapidly available carbohydrates may stimulate microbial protein synthesis and as a result microbial fermentation in rumen. It implies that less rumen undegradable protein is needed to achieve the same mild yield.

DOSAGE

GRAIN / FEED STUFF

1-3 Lit/MT (13% moisture)

2-6 Lit/MT (upto 18% moisture)

SILAGE PRESERVATION

3-5 Lit/MT

Note: Dose depends upon ingredient moisture level & storage time.

Effect of mould contamination on nutrient content of grain

Grain Type	Moisture content (in %)	Mould contamination	Fat content (%)
Maize	13.0	No	3.8
	15.1	Yes	2.4
Sorghum	12.1	No	2.5
	15.0	Yes	1.3

Effect of maize quality on performance of young chicks

Maize Quality	Weight gain (g/3 weeks)	Feed Conversion Ratio	Metabolisable Energy (MJ/kg)
Good	738	1.80	11.5
Mouldy	612	2.15	10.7

