

Natufermen

(Probiotics; DFM [Direct-Fed Microbial])



Features

- Secrete enzymes / Increase digestibility (starch / protein / fiber)
- Anaerobic condition / Regulate intestinal microflora
- Competitive exclusion / Inhibit proliferation of harmful bacteria
- Denitrification / Nitrogen fixation
- Space needed after performance before parentheses
- Enhance immune function (Bacitracin)
- Accelerate maturation process of slurry

Remarks

- Microorganism : *Aspergillus oryzae* GB-105 (Patented)
- Saccharification of starch / Degradation of protein
 - Produced by Solid State Fermentation
 - Filamentous fungi isolated from Korean fermented soybean lumps
 - Packaging : Paper bag 20kg

Types of Natufermen

Product Name	Microbes	Specification (CFU/g)
Natufermen 100	<i>Aspergillus oryzae</i> (AO)	$\geq 1.2 \times 10^6$
Natufermen Green	<i>Bacillus subtilis</i> (BA)	$\geq 1.2 \times 10^7$
Natufermen Mix	<i>Aspergillus oryzae</i> & <i>Bacillus subtilis</i> (AO & BA)	$\geq 1.2 \times 10^6, \geq 1.2 \times 10^7$

Summarizing the Functional Benefits of Natufermen:

Benefits	Description
Improved Digestibility & Gut Function	<ul style="list-style-type: none"> • Enzymes: Amylase, Protease, Cellulase aid digestion of starch, protein, and fiber • Promotes beneficial bacteria (Bacillus, Lactobacillus) • Suppresses harmful bacteria (Enterobacter) • Stimulates rumen microbial activity and VFA production • Boosts nutrient absorption and animal growth
Moisture Control in Manure	<ul style="list-style-type: none"> • Reduces droppings' water content by up to 9.5% • Results in firmer, drier feces • Minimizes fly breeding and improves barn hygiene
Additional Functionalities	<ul style="list-style-type: none"> • Competitive exclusion of pathogens • Nitrogen fixation & denitrification for manure quality • Contains enzymes, vitamins, organic acids, and growth factors for overall animal health

Effect of Natufermen on chicken, layer and dairy cows

Effects of Natufermen on egg weight, breaking strength and eggshell thickness

Treatments	Egg weight (g)	Breaking strength (kg/cm ²)	Eggshell thickness (mm10 ⁻²)
Control	60.2 ± 2.03	4.2 ± 0.13	33.3 ± 5.58
Natufemen	60.6 ± 4.53	4.3 ± 0.93	40.3 ± 1.80

Improve growth performance of layers

	Control	Natufermen Mix	
		0.15%	0.30%
Egg weight (g)	60.2	60.1	62.6
Egg shell strength (kg/cm ²)	4.2	4.7	4.3
Egg shell thickness (mm10 ⁻²)	33.3	37.8	40.3

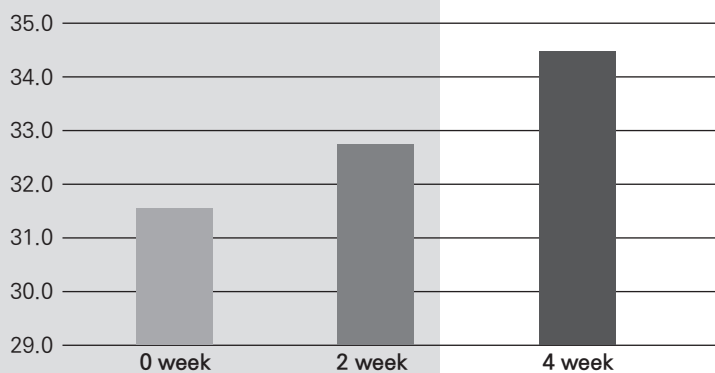
38 weeks old Lohmann Brown, fed for 6 weeks

Broiler growth performance

	Natufemen Mix	Control
Average BW (kg)	1.74	1.46
Market date (days)	38	36
Market weight (kg)	28,740	24,470
Feed intake (kg)	54,200	46,055
FCR	1.88	1.88
Cost/head (KRW)	387	306

Experimental period : 08. 27. 1999 ~ 10. 04. 1999 / Treatment : Natufermen 3kg/MT feed

Increase milk production



*37 Milking cows (avg. 2nd parity), 50g/day/head (Top dressing)

- Viable culture of microorganisms including enzymes, vitamins, organic acids, and unknown growth factors
- Maintain optimal pH in the rumen
- Proliferation of rumen bacteria ⇒ Increase feed efficiency
- Increase feed intake and milk production
- Increase VFA production in the rumen and decrease lactic acid production
- Decrease mastitis / foot rot / diarrhea

Recommended dosage

Animal	Recommendation level
Chicken	0.1~0.2% of compound feed
Dairy Cow	0.1~0.2% of compound feed

*Note: For the full data on the product, please refer to the detailed materials.