

THE LIVESTOCK ANSWER®

DRY FEED ADDITIVE

PRODUCT PURPOSE:

The Livestock Answer® contains sources of the following enzymes: Amylase that may hydrolyze starch, Cellulase that may hydrolyze cellulose, Lipases that may hydrolyze triglycerides, and Proteases that may hydrolyze proteins.

INGREDIENT GUARANTEE: This 25 lb bag contains the following:

Tested under the Food Chemical Codex testing procedures.

Fungal Protease (Validase FP-500)	83,983	HUT	Bifidobacterium bifidum	431	million organisms
Acid Protease (Validase AFP)	187	SapU	Bifidobacterium infantis	431	million organisms
Gluc Amylase (Gluc Amylase Conc.)	37	AG	Bifidobacterium longum	431	million organisms
Amylase (Validase FAA Conc.)	247,450	DU	Enterococcus faecium	431	million organisms
Lipase (Fungal Lipase	107,603	LU	Lactobacillus casei	431	million organisms
Cellulase (Cellulase 4000)	9,598	CU	Lactobacillus bulgaricus.	431	million organisms
Lactase (Lactase Conc.)	1,499	LacU	Lactobacillus plantarum	431	million organisms
Maltase (Maltase Conc.)	937	DP	Lactobacillus rhamnosus	431	million organisms
Invertase (Invertase Conc.)	937	SU	Streptococcus thermopilus	431	million organisms

Further Ingredient Guarantee provided by independant labratory:

Amylase 9.5 mg/L/minute; Cellulase 17.8 units/gram/minute; Lipase 40.0 mg free fatty acids liberated/L/minute; Protease (general) 1.713 mg amino acids liberated/L/minute; .

OTHER INGREDIENTS: Silicon dioxide; kaolin; reed-sedge peat; water; dried yeast; bakers dried yeast; dried brewers yeast.

FEEDING DIRECTIONS: To be added to the drinking water for the commercial feeding of the following:

- Feed Lot Cattle:** Feeders, Replacement Heifers, Brood Cows, Bulls – Add 2.5 lbs (1.134 kg) of **The Livestock Answer®** to 2,000 lbs (907.2 kg) of mixed dry feed and blend well.
- Dairy:** Growing Heifers, Bulls, Dairy beef, Lactating Dairy Cattle, Non-Lactating Dairy Cattle – Add 2.5 lbs (1.134 kg) of **The Livestock Answer®** to 2,000 lbs (907.2 kg) of mixed dry feed and blend well.
- Equine:** Mares, Breeding, Maintenance – Add 2.5 lbs (1.134 kg) of **The Livestock Answer®** to 2,000 lbs (907.2 kg) of mixed dry feed and blend well.
- Sheep and Goats** – Add 2.5 lbs (1.134 kg) of **The Livestock Answer®** to 2,000 lbs (907.2 kg) of mixed dry feed and blend well.
- Poultry:** Breeder, Broiler, Layer, Duck, Geese, Turkey – Add 2.5 lbs (1.134 kg) of **The Livestock Answer®** to 2,000 lbs (907.2 kg) of mixed dry feed and blend well.
- Swine:** Gestating and Lactating Sows and Gilts, Growers, Finishers, Gilts, Sows, Adult Boars – Add 2.5 lbs (1.134 kg) of **The Livestock Answer®** to 2,000 lbs (907.2 kg) of mixed dry feed and blend well.
- Small Pets:** Cats, Dogs, Rabbits, and Other Household Pets – Add 2.5 lbs (1.134 kg) of **The Livestock Answer®** to 2,000 lbs (907.2 kg) of mixed dry feed and blend well.

STORAGE:

Store in dry, cool place, out of direct sunlight.

CAUTION:

The Livestock Answer® is not produced for human consumption. Keep out of reach of children. Enzymes may change when subjected to excessive heat.

MANUFACTURED BY:

Environmental Care & Share, Inc, 15611 West 6th Avenue, Golden, CO 80401-5051

NET CONTENTS:

25 U.S. lbs (11.339 kilograms) Lot# Exp. Date

Probiotics
Digestive Enzymes

THE LIVESTOCK ANSWER

Promoting Natural Good Health

William R. Jacks PhD
Author and Consultant

OMRI™
Listed
Organic Materials
Review Institute

CLASSIFICATION/NAME	SOURCE ORGANISM	TYPICAL SUBSTRATE	FUNCTION
CARBOYDRASES			
alpha-Amylase	Aspergillus niger, var. Aspergillus oryzae, var. Bacillus amyloliquefaciens Bacillus licheniformis Bacillus subtilis, var.	barley, corn, corn feed meal, corn gluten feed, corn silage, grain sorgum, millet, oat, pea, tapioca, rice feed meal, soybean meal, wheat, wheat middlings, wheat feed meal	hydrolyzes starch
Cellulase	Aspergillus niger, var.	baley, corn, grain sorgum, rye, wheat, wheat bran	breaks down cellulose
alpha-Galactosidase	Aspergillus niger, var. Saccharomyces sp. fermentation extract	soybean meal, sweet lupin	hydrolyzes oligosaccharides
Glucosylase (Amyloglucosidase)	Aspergillus niger, var. Aspergillus oryzae, var.	see alpha-Amylase	hydrolyzes starch with production of glucose
Hemicellulase	Aspergillus niger, var. Bacillus subtilis, var.	barley, corn, grain sorghum, guar meal, lentils, oat, peas, rye, soybean meal, wheat	breaks down hemicellulose
Invertase	Aspergillus niger, var. Saccharomyces sp. fermentation extract	sucrose containing products and byproducts	hydrolyzes sucrose to glucose and fructose
beta-Mannanase	Aspergillus niger, var.	corn, copra meal, guar meal, soybean meal	hydorlyzes mannans, a component of hemicellulose
Pectinase	Aspergillus niger, var.	corn, wheat	breaks down pectin
Pullulanase	Bacillus licheniformis	see alpha-Amylase	hydrolyzes starch
Xylanase	Aspergillus niger, var. Bacillus subtilis, var.	barley, corn, grain, oats, rye, sorghum, triticale, wheat	hydorlyzes mannans, a component of hemicellulose
LIPASES			
Lipase	Aspergillus niger, var. Aspergillus oryzae, var.	plant and animal sources of fats and oils	hydrolyzes triglycerides
PROTEASES			
Protease (general)	Aspergillus niger, var. Aspergillus oryzae, var. Bacillus armyloliquefaciens Bacillus licheniformis Bacillus subtilis, var.	plant and animal proteins	hydrolyzes proteins
OXIDOREDUCTASES			
Catalase	Aspergillus niger, var.	hydrogen peroxide	produces water and oxygen
Glucose Oxidase	Aspergillus niger, var.	glucose	degrades glucose to hydrogen peroxide and gluconic acid
PHOSPHATASES			
Phytase	Aspergillus niger, var. Aspergillus oryzae, var.	corn, hominy, plant byproducts, soybean meal, sunflower mean, tapioca	hydrolyzes phytate

This panel is a partial copy of the Association of American Feed Control Officials' Table that serves as an Enzyme Marketing Coordination document which suggests how new enzyme/source organisms should be evaluated. Complete information may be obtained from their website at www.aafco.org.