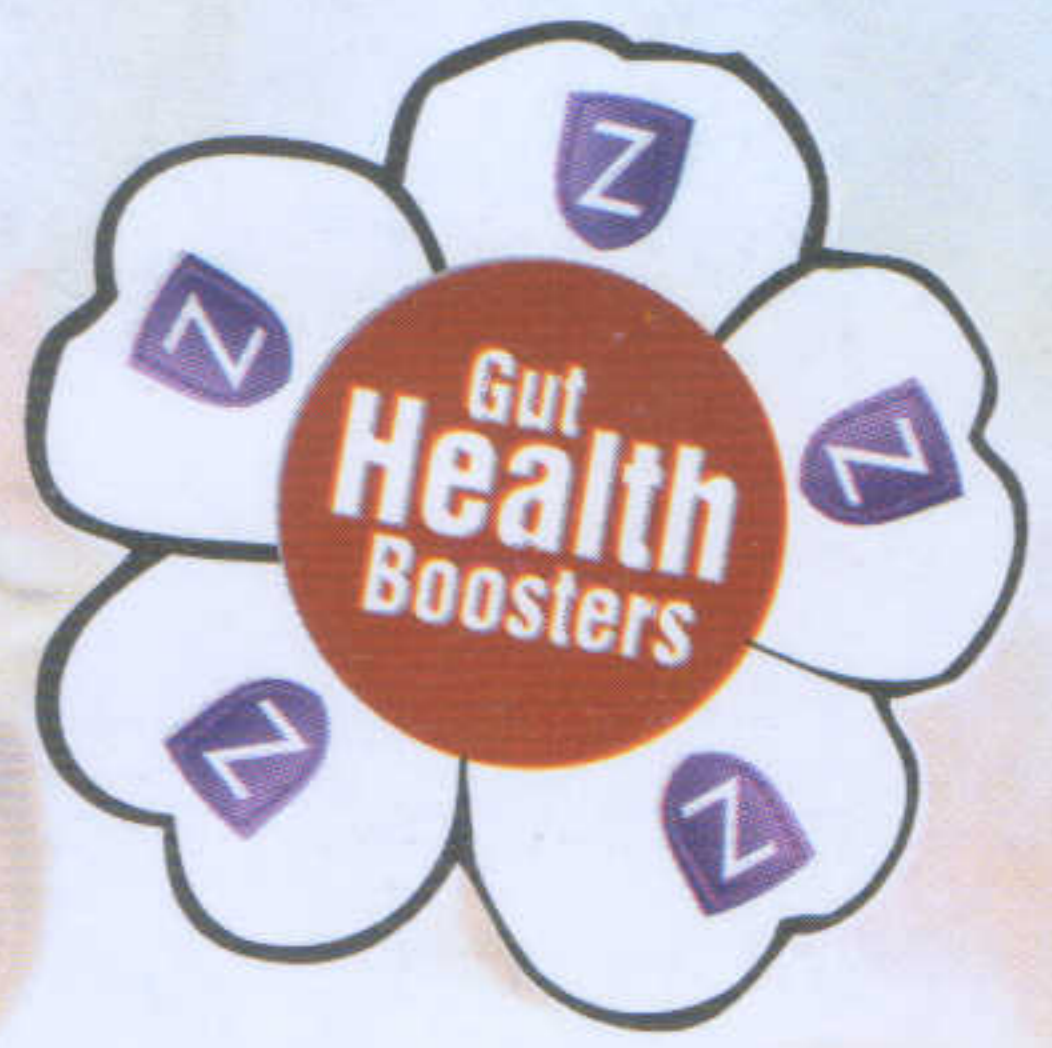




ZYMPEX[®] 008

FOR CORN, SOYA & LEGUMINOUS DIETS



ZYMPEX[®]
Power Enzymes

**Optimum performance by
Novel enzyme combination**



ZYMPEX-008, employs:-

- ◆ State of the Art, Solid State Fermentation (SSF).
- ◆ Novel organisms, *Aspergillus flavus* & *Trichoderma longibrachiatum*.



ZYMPEX-008, provides:-

- ◆ Flexibility in using a variety of feed ingredients.



Sole Distributor in Pakistan:



**JAWAD IMPEX
INTERNATIONAL**
Indentor, 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

Manufactured By:



Impextraco[®]
Optimizing feed ingredients
Made In Belgium

NON-STARCH POLYSACCHARIDES

A major portion of common vegetable feed ingredients consists of carbohydrates making carbohydrates crucial factor for animal production. All of these poorly digestible components excluding lignin, are classified in a group referred to as Non-Starch POLYSACCHARIDES (NSP). The NSP fraction is well known for the Anti-Nutritional effects it can exert.

Within the group of NSP, hemicellulose, is a heterogenous subgroup predominantly, made up of xylan, arabinans, galatins, glucans and Mannans.

Fig, 1 shows that Arabinoxylans, is the principal, NSP fraction, in several of the most important feed raw materials including wheat and Corn.

NSP CONTENT OF FEED INGREDIENTS (AS % OF DRY MATTER)

	AX SOL	AX INSOL	β -GLUCANS	CELLULOSE	MANNANOSE	GALCTOSE	NSP	AX/NSP
Wheat	1.8	6.3	0.8	2.0	T	0.3	11.4	71%
Rye	3.4	5.5	2.0	1.5	0.3	0.3	13.2	67%
Corn	0.1	5.1	T	2.0	0.2	0.6	8.1	64%
Wheat bran	1.1	20.8	0.4	10.7	0.4	0.8	35.3	62%
Sorghum	0.12	3.8	0.2	2.0	0.1	0.15	6.45	62%
Wheat DDGS	4.9	13.4	2.3	5.8	T	0.9	33.2	55%
Barley	0.8	7.1	4.3	3.9	0.2	0.2	16.7	47%
Corn DDGS	0.4	12.6	T	7.1	0.7	2.1	28.6	45%
Rice bran	0.2	8.3	T	1.2	0.4	0.1	21.8	39%
Rice	T	0.2	0.1	0.3	T	1.3	0.8	25%
Sunflower cake	0.8	5.2	-	12.3	1.2	4.1	31.5	19%
Soy bean meal	0.75	2.25	-	6.2	1.3	-	21.7	14%

Enzyme activities present in Zymplex 008

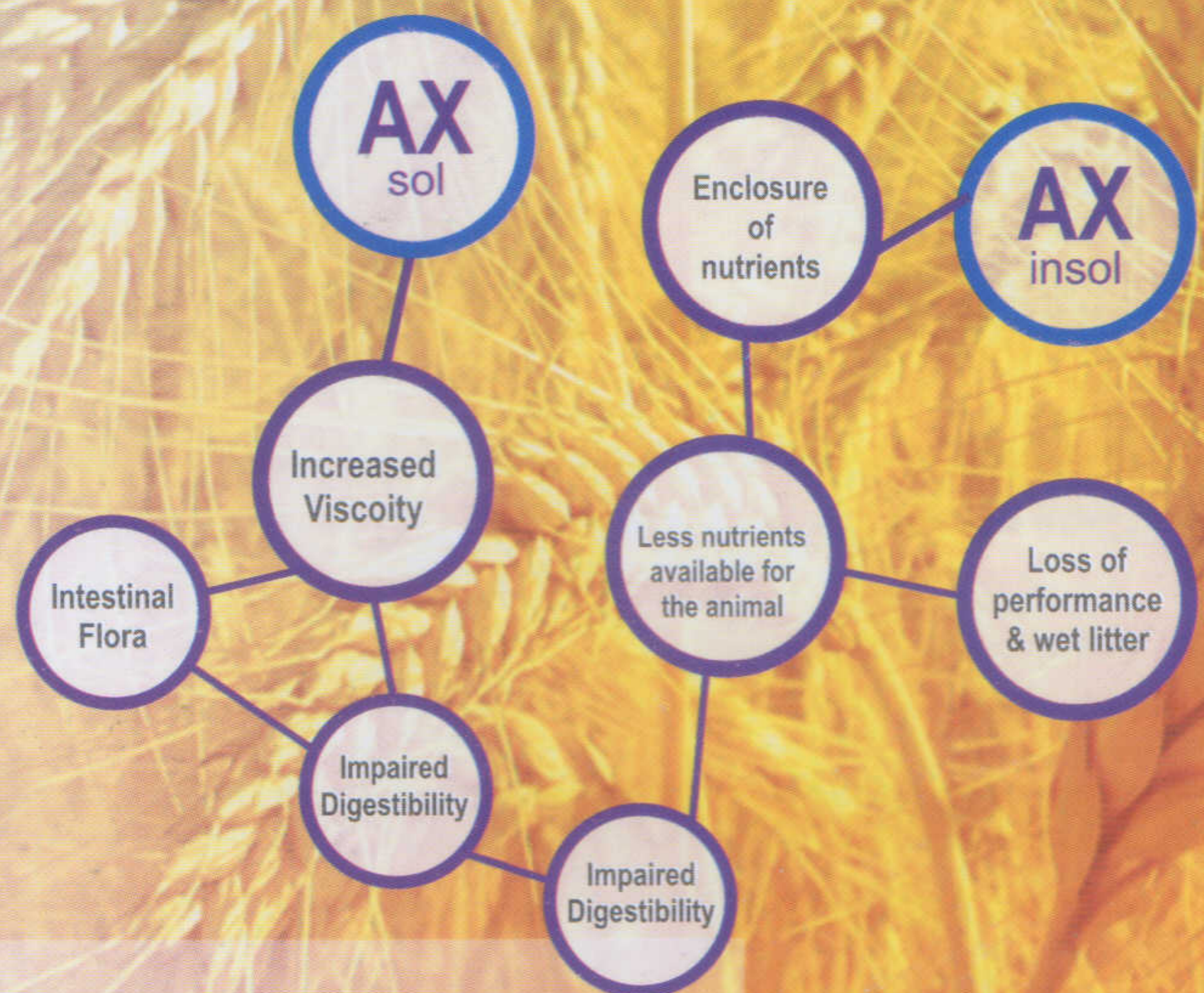
PRINCIPAL ACTIVITIES	ADDITIONAL ACTIVITIES	
α - Galactosidase	Polygalacturonases	Pectinmethylesterases
β - Mannanase	Pectinlyases	Glucopyranosidase
β - Glucanase	Cellulases	Cellobiases
β - Xylanase	Arabinofuranosidases	Rhamnopyranosidases
	Acid proteases	Neutral proteases
	Amylases	

Legend Pectin System Hexosan System Pentosan System Protease System Starch System

Table 3: Enzyme Systems in Zymplex 008

ANTI-NUTRITIONAL EFFECTS OF AX

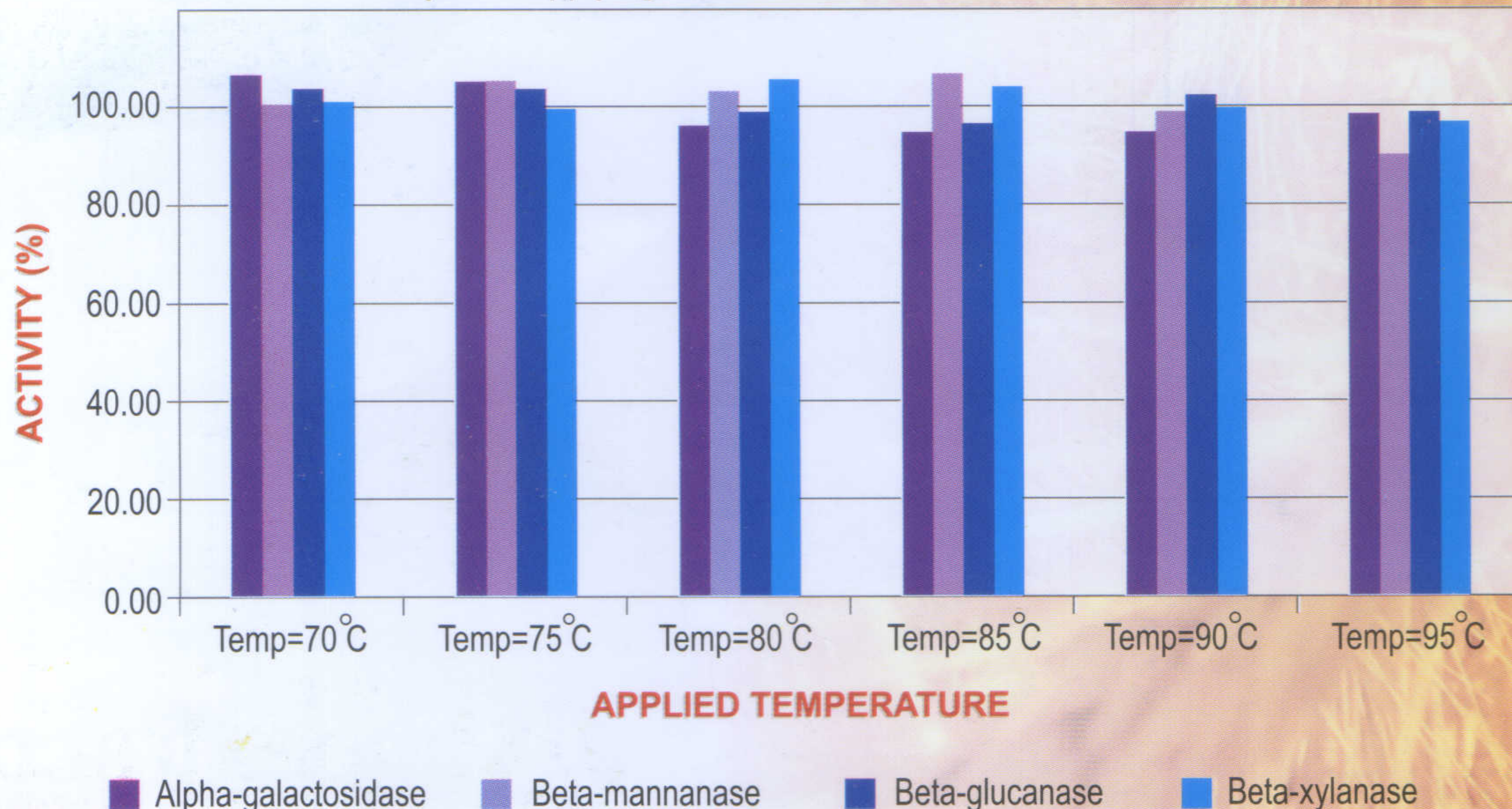
ARABINOXYLANS (AX)



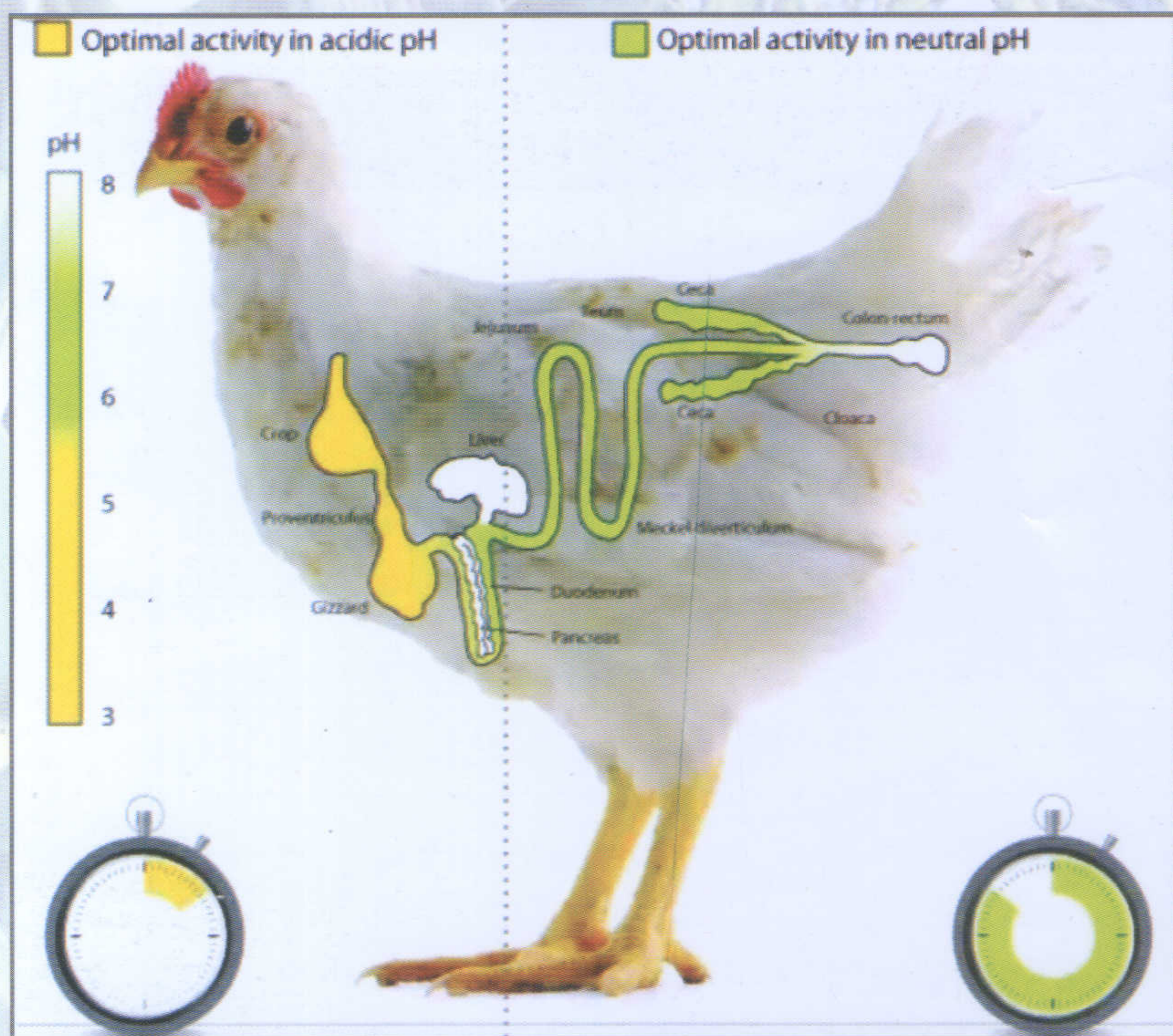
STABILITY OF ENZYMES IN ZYMPEX 008

Stability during pelleting process

Activity after applying different temperatures for 5 minutes



Optimum activity & stability throughout GIT:-



Broilers fed corn/soy diets - standard versus high energy diets

The experiment was performed both on standard diets as well as on diets with an elevated energy level (+65 kcal/kg).

The four different treatments were:

- a: control group with the standard diet
- b: Zympex-008 group with the standard diet (diet A with Zympex-008 at 500g/MT)
- c: control group with the diet elevated in energy
- d: Zympex-008 group with the diet elevated in energy (diet C with Zympex-008 at 500g/MT)

Each treatment was performed on 720 broilers (Ross x Arbor Acres): the male broilers were housed by 60 birds per pen. The birds were weighed at 0 days, 21, 42 and 49 days.

The composition and the analytical parameters of the feed are represented in the table.

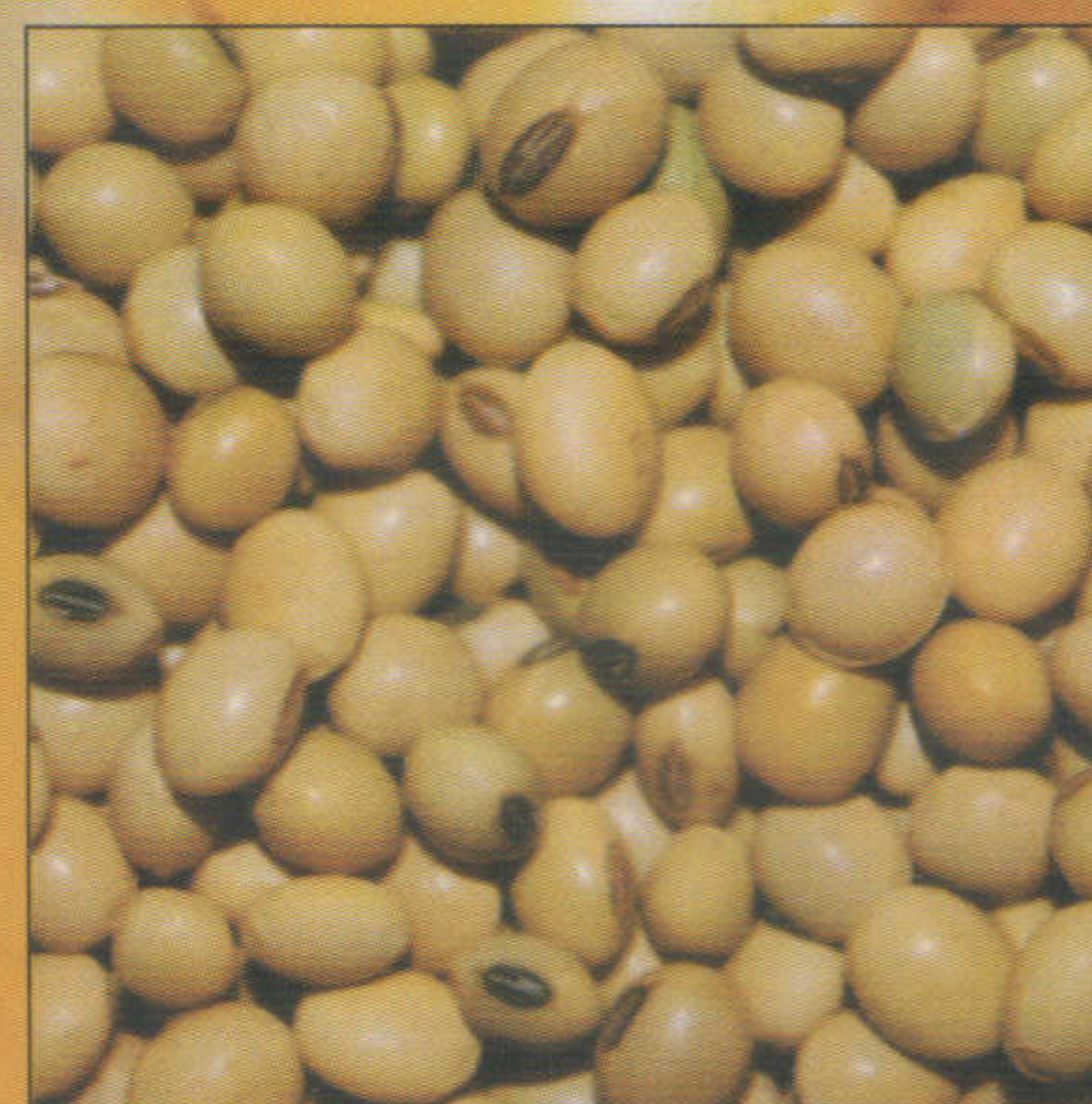
The feed was pelleted at 80 C.

Financial calculations were performed using market prices at the time of the trial.

SPECIFICATIONS OF THE DIETS

Ingredients (%)	STANDARD ENERGY			HIGH ENERGY (6.5 Kcal/Kg)		
	STARTER	GROWER	FINISHER	STARTER	GROWER	FINISHER
Corn	62.69	66.31	72.75	59.51	63.27	69.89
Soybean meal	28.81	24.77	18.64	30.27	26.1	19.83
Poultry by-products	4.0	4.0	4.0	4.0	4.0	4.0
Animal/vegetable fat	1.64	1.67	1.88	2.6	3.3	3.48
Calcium Carbonate	1.10	1.12	0.96	1.21	1.14	0.99
Salt	0.20	0.21	0.21	0.21	0.21	0.21
DL-methionine	0.26	0.22	0.17	0.27	0.24	0.18
HCl-Iysine	0.14	0.13	0.10	0.13	0.11	0.09
Others	1.77	1.57	1.29	1.80	1.63	1.33
Cost (\$/MT)	124.78	119.43	108.98	128.23	122.28	112.23
Characteristics						
AME (kcal/kg)	3025	3100	3180	3090	3165	3245
Crude protein	21.2	19.5	17.0	21.7	19.9	17.4
Lysine	1.22	1.10	0.91	1.25	1.12	0.93
Methionine	0.51	0.47	0.41	0.52	0.48	0.42
Meth. + Cyst.	0.94	0.86	0.74	0.96	0.88	0.76
Calcium	0.90	0.85	0.75	.092	0.87	0.77
Avail. Phos	0.43	0.04	0.35	0.44	0.41	0.36

Table 4: Specifications of the broiler diet



Field trial: Efficacy of Zympex 008

Costs and gains

Diets		STANDARD ENERGY			HIGH ENERGY (6.5 Kcal/Kg)		
		Control	Zympex 008	△	Control	Zympex 008	△
Carcass yield	%	70.97a	71.09a	0.12	71.28a	71.39a	0.11
Breast yield	%	22.66b	23.57a	0.91	22.59a	23.31a	0.72
Feed costs / bird	\$ cent	64.01b	63.18a	-0.83	64.46b	66.28b	+1.82
(Return - Feed cost) / bird	\$ cent	72.49b	78.12a	+5.63	76.10a	76.81a	+0.71
Value of breast meat	\$ cent	144.23b	155.07a	+10.84	147.43a	154.62a	+7.91

Table 6: Gains in broilers

CONCLUSION

Zympex 008 effectively reduces the FCR and increases the weight gain when used in corn/soy diets. The difference between control and Zympex 008 group is more pronounced in standard diets than in high energy diets. The highest financial return is obtained by using Zympex 008 in combination with a standard diet. Thus, Zympex 008 reduces feeding costs by allowing the use of cheaper raw materials in the diet.

DOSAGE

- ◆ 200-500 gm/MT feed
- BROILERS 200 to 350gm/MT
- LAYERS 150gm/MT

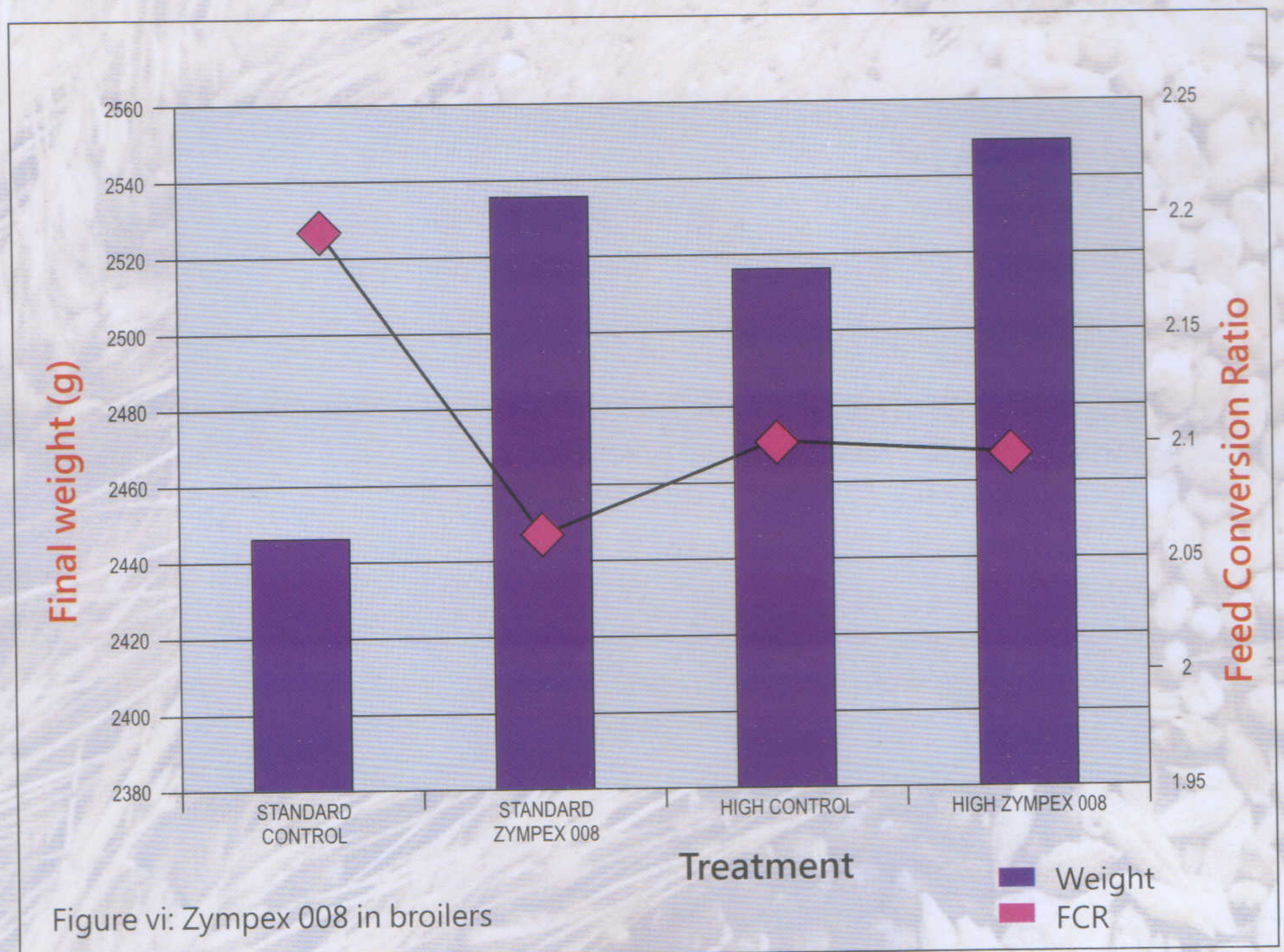
PACKING

- ◆ 25 KG bags

FEED TOP OVER

- ◆ Trials proved that if used over feed, can improve the FCR.

Effects of Zympex 008 in corn/soy diets for broilers



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