



BIHAR ANIMAL SCIENCES UNIVERSITY

Bihar Veterinary College Campus, Patna-800 014

DETAILS OF RESEARCH PROJECT

1.	Title of the Project			Dietary supplementation of phytase and xylanase on performance and egg quality of Vanaraja layer bird fed on wheat bran-based diet
5.	Name and designation of the Project Leader			Dr. Pramod Kumar Assistant Professor cum Jr. Scientist
6.	Name and designation of project leader and associates together with time proposed:			
S.N.	Name	Designation	Time to spent (year)	Key Outputs
i	Dr. Pramod Kumar	Assistant Professor- <i>cum</i> -Jr. Scientist	2 years	It will help to understand the complementary effect of phytase and xylanase and their effective utilization either alone or in combination in layer birds. By performing this study, we can judge whether any interaction occurs with these two enzymes or not and also observe the laying hen performance, egg quality, efficiency of phosphorus utilization and metabolic status of layer birds along with economy of production.
ii	Dr. Kaushalendra Kumar	Assistant Professor- <i>cum</i> -Jr. Scientist	2 years	
iv	Dr. Amrendra Kishore	Assistant Professor- <i>cum</i> -Jr. Scientist	2 years	
7.	Location of research Programme		PRTC, BASU, Patna	
8.	Objectives and Deliverables			
	(a) Objectives		1. To evaluate the effects of phytase and xylanase and their interaction on performance of vanaraja layer birds. 2. To study the effects of phytase and xylanase supplementation on production economy of vanaraja layer birds.	
9.	Technical Programme (year wise):		02 years	
S. No.	Annual Target Activities		Years	
i.	➤ Make necessary arrangement for experimental trials on 22 weeks old		2022-23 (6 months)	

	<p>layer vanaraja birds for 24 weeks will be performed at PRTC, BASU, Patna following standard management practices.</p> <p>➤ A total 280-layer birds will be divided in 7 groups (1. Phytase Group 1- 400 U/kg, Group 2 -1200 U/kg; 2. Xylanase Group 3 - 1000 U/kg, Group 4 - 3000 U/kg; 3. Phytase + Xylanase Group 5 – Gr. 1 + Gr. 3 combination, Group 6 – Gr. 2 + Gr. 4 combination; Group 7- Control) and each group having 40 birds which further divided into 5 replicate of 8 birds each.</p>	
ii.	<p>➤ Start the feeding trials and record the data of performance study as required.</p> <p>➤ Hen body weight will be recorded at the beginning and on the final day of the trial.</p> <p>➤ Weekly feed intake and egg production per cage/house will recorded.</p> <p>➤ Egg quality will be determined at the end of the trial using eggs collected per cage over 3 consecutive days (egg quality variables included whole egg weight, shell weight, shell thickness, shell strength, yolk weight, and yolk colour).</p> <p>➤ The height and weight of the albumen will also be measure in</p>	2023-24 (12 months)

	order to calculate Haugh units. ➤ A 5 days metabolic trial will also be performed at the end of experiment to measure the nutrient balance study.	
iii.	➤ Data analysis, report writing and submission.	2023-24 (6 months)
10.	Date of start	June 2022
13.	Approximate Budget	2.0 lakhs

14. Budget Summary

S. No.	Description	1 st Year	2 nd Year	Total
i.	Unskilled Manpower	--	Existing labours of PRTC	
ii.	Chemicals/Glassware/kits/consumables	0.50 lakhs	1.0 lakhs	1.50 lakhs
iii.	TA/DA	--	--	--
iv.	Recurring cost for Feeds, birds etc.	provide by PRTC	provide by PRTC	--
v.	Miscellaneous expenditure	0.25 lakh	0.25 lakh	0.50 lakhs
			Grand Total	2.0 lakhs