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ON

Advanced Technology in Agricultural Sector in

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08th & 9th February, 2024

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08th & 9th February, 2024



Seminar Director

Prof. K. Madhu Babu

HOD

Department of Economics, ANU

Organised by

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About the University

Acharya Nagarjuna University is named after 3rd A.D Indian Buddhist philosopher Acharya Nagarjuna, the proto-Einstein who expounded Sunyavada or Relativity theory which intrigues and inspires human world for an eternity. The university is fortunate to be situated on the very soil where Acharya Nagarjuna was born, lived and preached, a soil consecrated by the aspirations for knowledge and a state of wholeness by generations of students. It is the profound wish for the people of the area that this University one day raises to the level of the yesteryears Nalanda and Takshashila. Established in 1976, the university has completed 46 years of existence and has made rapid progress in terms of academics, research and structural expansion under the stewardship of successive Vice-Chancellors. The university has been accredited with A grade (3.08 CGPA) by the National Assessment and Accreditation Council in December 2016. The University is situated in the vicinity of state capital region Amaravati between the cities of Vijayawada and Guntur in Andhra Pradesh on Calcutta and Chennai National Highway (N.H-16, previously known as NH-5), its campus is spread over an area of 293 acres of land. Quantitative expansion and qualitative improvements on various academic fronts have been made possible through the efforts of its dedicated faculty, an efficient team of supporting staff and high quality students input. ANU is highly distinguished institution that caters the needs of students and scholars to meet the national and international challenges. The performance of ANU achieved 42 International Ranks, 10 National Ranks and 03 Awards in total 55 from prestigious and appreciated ranking institutions like NIRF, UI Green Metrics, TIMES, QS, ISO, Andhra Pradesh State Energy Conservation Award etc.

About the Department

The Department of Economics is one of the biggest and oldest Departments in the University established in the year 1976 with one Professor and three lecturers. At present 01 Associate Professor and four Guest faculty members in the Department. The Department offers with an intake of 45 students. Thus every year, nearly 90 Post-graduate students are being trained in the Department. The alumni of the Department are being placed in higher positions in Administration, teaching and research fields.

The Department also offers full-time and part-time research programmes leading to M.Phil., and Ph.D., Degrees. So far more than 125 M.Phil, and 160 Ph.D., Degrees were awarded in the Department. Among the other dignitaries visited our Department were Noble Laureate Sir John Hicks (21-01-1982), Dr.Ursula Hicks and Nobel Peace Prize winner Shri. Mohammad Yunus (27-122017). There are a number of students produced by the Department who are working in high esteemed position like World Bank, RBI, Income Tax Department, Indian Railways etc.

The Department has successfully organized the 100th Indian Economic Annual Conference during 27th – 30th December 2017 inaugurated by his Excellence Shri Ram Nath Kovindji President of India along with Honourable Chief Minister of Andhra Pradesh and his Excellency Governor of A.P Shri E.S.L. Narasimhamji. The worldwide renowned Economists, Prof. Kausik Basu President of International Economic Association and other popular Economists of National and International repute have addressed the gathering. The department organised the 4th Indian Association of Social Sciences Institutions annual conference in December-2017 and also organised the 33rd Indian society of Agricultural Marketing annual conference in November-2019 under the Chairmanship of Prof. R. Radha Krishna, Chairman, Centre for Economic and Social Studies. The department organising the Nation seminars in 2020, 2021, 2022 and 2023

Theme of the Seminar

A large proportion of Indian population is still dependent on agriculture. Despite a significant reduction in the share of agriculture in the overall GDP, the sector has not been able to shift a large section of the workforce away from it and to other sectors of the economy. Such over dependence on agriculture as a major source of livelihood has resulted into relatively lower per capita income in agriculture and widespread distress. The advent of green revolution during late-1960s and early-1970s was spurred by the innovations in seeds, inputs, irrigation, technological diffusion and procurement. The successful innovations led to a significant increase in food production and productivity, which ultimately led to food security of the nation. It also boosted the farm incomes and led to a sharp decline in rural poverty. However, the benefits of such successful innovations remained confined only to a limited number of crops (such as paddy and wheat) and the regions endowed with assured irrigation. In the last few decades, agriculture sector has once again started experiencing stagnation as costs of farming are raising fast and farm incomes and profitability are either stagnating or declining. Indian agriculture is afflicted with a large number of small holdings, poor adoption of modern seeds and inputs, no access to markets, relatively weak processing, etc. The inability of the industrial and tertiary sectors of the economy to absorb surplus workforce from the agriculture sector is accentuating the distress in the agrarian economy. Also, the faster economic growth in India points towards the need to produce more food, diversified production of better quality. Intensive agricultural practices in many regions have also led to the depletion of natural resources such as groundwater table, soil health and air quality. There have been many recent innovations in the agriculture sector, aiming at infusing faster growth, increase productivity, reduce risk in agriculture, enhance profitability and raise farmers' income in India. The innovations in agriculture may be broadly classified into four categories i.e.

Sub Themes:

- ❖ Technological innovations in Agricultural sector, its include the development of High-yielding seeds, genetically modified crops and Bio-fortified foods, etc.
- ❖ Impact of micro irrigation drip and sprinkler irrigation on agricultural production and productivity.
- ❖ Institutional Innovations: Impact of institutional innovations in Indian agriculture in recent times. The schemes like Kisan Credit Card (KCC) and Prime Minister Fasal Bima Yojana (PMFBY) have been aimed at improving the access of farmers to institutional finance and insurance.
- ❖ Product Innovations:-The role of Agri-infrastructure is crucial for development. For optimal utilization of the agri produce, increased marketed surplus needs to be utilized for value addition so that farmers can realise remunerative prices.
- ❖ Central and state Government facilitates food processing through various measures of infrastructure development, subsidized transportation and support for formalization of micro food enterprises.
- ❖ Agricultural marketing Innovations:- The launch of National Agricultural Market (NAM) with an aim to digitize market operations and payments is a leading example of innovations in markets
- ❖ Doubling the farmers income through subsidiary sector like Livestock (Poultry, Dairy, Piggery and Goats rearing) in Andhra Pradesh
- ❖ Evaluation of Rythu Bharosa Kendralu
- ❖ Agricultural Debt Redemption Scheme to farmers

- ❖ Zero Budget Natural Farming
- ❖ Farmer Suicides with reference to marginalized and tenant farmer
- ❖ The state of A.P Fisheries and Aquaculture

Registration

Faculty, PDFs, NFSs registration Fee (without Publication) : Rs. 1000/-

Faculty, PDFs, NFSs registration with Publication of a Paper as a Chapter in ISBN book : Rs. 3000/-

Ph.D Scholars and Students registration (without publication) : Rs. 800/-

Ph.D Scholars and Students registration (with publication) : Rs. 2000/-

The Registration fee included working lunch, snacks, tea/coffee for two days along with conference kit. Registration fee has to be paid through Bank D.D. Drawn in favour of "National Seminar on "Advanced Technology in Agricultural Sector in India: Challenges and Strategies- With Special Reference to Andhra Pradesh" Payable at Union Bank (Andhra Bank), A.N.U. Campus, Nagarjuna Nagar, (IFSC: UBIN0815080).

Call for Papers:

Paper presenters may submit the abstract of their paper in about 500 words, along with the Registration Form on or before 15th January, 2024. Full length papers, one in hard copy and other in soft copy may be sent to the Director on or before 25th January, 2024. The paper should not exceed 10 pages in A4 size neatly typed in 2h spaces with font-Times New Roman (Size12). All registered abstracts accepted for presentation are in seminar proceedings. The participants intending to present papers in the seminar are requested to submit a soft copy of the Abstracts along with key words to atatics2024@gmail.com. Selected quality papers will be published with ISBN volume after plagiarism check.

Accommodation:

A moderate accommodation will be provided to the outstation registered participants in the University Guest house on payment basis.

How to reach the Venue:

By Air: There are daily flights from Delhi, Bombay, Chennai, Bangalore, Hyderabad. Vijayawada Airport is at a distance of 40 km from the Venue. You can book Ola, Uber or airport operated taxi to reach conference Venue.

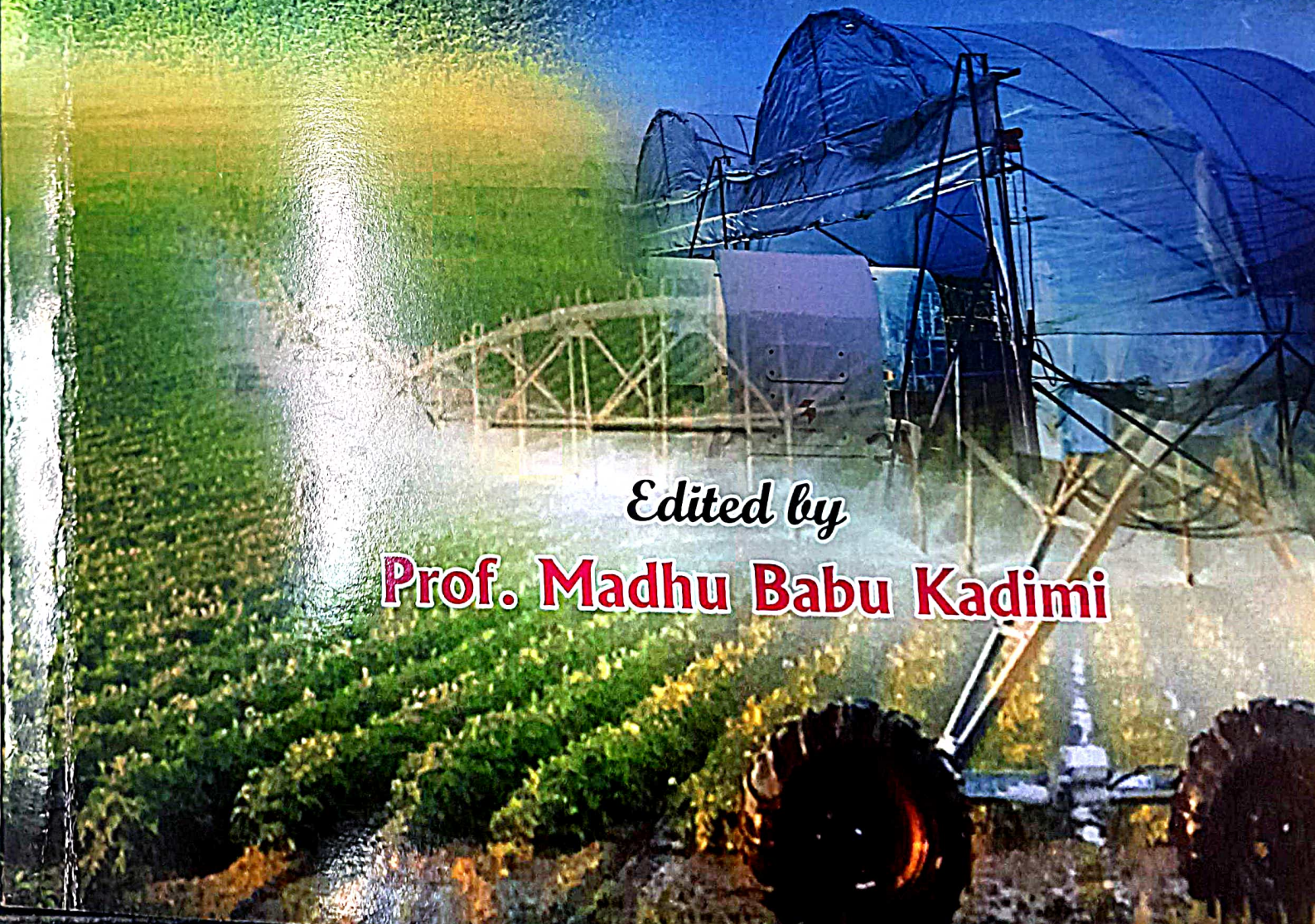
By Rail: Vijayawada and Guntur Railway Station is well connected with all major stations by rail. Conference Venue is 15 Kms from Railway Station.

By Road: Inter State bus Terminal and local buses connect with the neighbouring towns and cities. Conference venue is 15Kms from Guntur Bus Station and 20 K from Vijayawada Bus station Local Conveyance: 24 hours local means of conveyance like Ola, Cars/Auto Rickshaws are available.

An Essays on **Advanced Technology in Agriculture**



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Prof. Madhu Babu Kadimi



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ECONOMIC ANALYSIS OF POULTRY PRODUCTION (BROILER) IN GUNTUR DISTRICT OF ANDHRA PRADESH

A.Veera Kumari

Introduction

About 62 per cent of Indians lives in rural regions and are largely employed in agricultural sector. In addition to crops, farmers raise cattle and chickens to boost their income. In several countries, including India, poultry production has moved to the top of the list of animal husbandry industries and attained industrial status. Indian poultry has grown significantly during the past 20 years in all areas relating to poultry. All social classes in India, but especially those who are economically underprivileged, greatly benefit from the chicken sector. Additionally, it contributes to the desired level of socio economic transformation in rural areas, which is necessary for rural prosperity and development. Poultry farmers have immediate financial success and are simple to adopt. Poultry farming helps to address the issue of rural inhabitants, particularly women, who are unemployed or underemployed, while also increasing the producer's revenue. India is the world's eighth-largest producer of meat, according to FAO data from 2022. In 2021–22, poultry products were exported for about Rs. 532 crore. India is third in the world for egg production and fifth in the world for meat production. In India, where both conventional and organized poultry farming are practiced, there are regional variations in the structure of the chicken industry. Small-scale growers produced the majority of the chicken, which they then sold to bigger producers in other regions. On chicken farms, 20% of jobs were created through the sale of feed, medications, equipment, and other services, while the remaining 80 per cent were created directly. Egg production grew at a 6 per cent annual growth rate. Global egg production reached 73 million metric tons between 1961 and 2020, and egg consumption per person increased from 82 to 162. India (122.11 billion) is the world's third-largest producer of eggs, after China (530 billion) and the United States (102 billion). Overall egg production in India increased dramatically from 1,832 million in 1950–51 to 88,139 million in 2020–21. The annual per capita availability of eggs has increased from 5 eggs in 1950–1951 to 91 eggs in 2021–22. Tamil Nadu tops the nation in egg production, contributing 18.9 per cent of the total; Andhra Pradesh is second with 18 per cent; and Telangana is third with 13.4 per cent. 237 eggs were accessible per person annually in 2019–20, which is more than twice as many as there are in India on average. Each person requires 182 eggs annually, under the recommendations of the ICMR.

Objectives and Methodology:

The main objective of the paper is to study the cost-benefit analysis of the broiler farming in the Guntur district of Andhra Pradesh. The study is based on primary as well as

secondary data. The primary data has been collected from sample units with the help of questionnaire, administrated to the poultry sector enterprises to elicit firsthand information. Guntur district is purposively selected on the basis of highest percentage of broiler poultry farms concentrated among the 13 district of Andhra Pradesh. 300 poultry farmer are selected from the 12 mandals of Guntur district. A total of 300 poultry farmers are interviewed by the pre-tested interview schedule.

Results of the study

An attempt is made in paper to analyse the cost and returns of the poultry production in the study area. The broiler production is not seasonal. It's cultivated throughout the year usually one can year 5 to 6 batches are year. The duration of or a batch is 45 to 50 days. In the cost usually all those expenses are included which are incurred on the production. The cost of production is calculated by adding the cost of raw materials, the cost of labour charges other direct expenses and overhead costs. Overhead costs include farm expanses, office and administrative expenses and selling and distribution expenses are analysed in this paper.

Fixed investment of poultry farms:

The pattern of fixed capital investment for different broiler farms are presented in the Table -1. The fixed assets included land, buildings equipment's like, feeders, drinkers, electricity, water lines, pump sets. The data reveals that the total fixed investment of poultry farm is Rs. 5,54,000/- out of total fixed investment.63.18 per cent (Rs.3,50,000/-) of amount id spent on broilershed followed by 19.86 per cent (Rs.1,10,000/-) on office and labour room. 5.60 per cent (Rs.27,333/-) is towards on drinkers, 3.43 per cent (Rs,16,667/-) is spent on installation of electricity for sheds. This clearly shows that 83 per cent of an amount is spend on sheds of office room and 17 per cent of spent on the equipment.

The intra size group analysis clearly shows that the total fixed investment is found to be high for large farmers which is Rs.7,77,000/- followed by an amount of Rs.5,75,000 for medium poultry farmers and Rs.3,10,000 for small farmers. Among the total fixed cost 83.57 per cent of amount is spent on buildings by small farmers followed by medium farmers (83.35 per cent) and 81.73 per cent by Large Farmers. In case of the cost of equipment, it is found to be high for Large Farmers, i.e., 18.28 per cent successively by Small Farmers (16.13 per cent) and Medium Farmers (15.65 per cent). The data clearly shows that the broiler shed are the main component. Further among equipment's feeder, drinkers and electricity are the other company of fixed investment.

Table -1
Fixed investment Pattern of Poultry Farmers

Items	(Values in Rupees)			Total
	Small	Medium	Large	
I. Fixed cost	185000	385000	480000	350000
a. Poultry House	(59.68)	(66.96)	(61.78)	(63.18)
b. Office and labour room	(24.19)	(17.39)	(19.95)	(19.86)
II. Poultry equipment	18000	25000	50000	31000
a. Feeder	(5.81)	(4.35)	(6.44)	(5.60)
b. Drinkers	(3.87)	(4.35)	(5.79)	(4.93)
c. Electricity	(3.23)	(3.83)	(3.22)	(3.43)
d. Water liners	(3.23)	(3.13)	(2.83)	(3.01)
Total cost of equipment	(16.13)	(15.65)	(18.28)	(16.97)
Total fixed cost	310000	575000	777000	554000
	(100.00)	(100.00)	(100.00)	(100.00)

Source: Primary Data

Note: Figures in parenthesis indicates per cent to the respective total

Variable costs on different broiler farms:

The variable costs on different broiler farm sizes have been presented in Table 2. The variable cost includes, day old chick, feed, medicines and vaccines labour, electricity, litter material and other miscellaneous expenditure. The perusal of table brought out that the total

variable cost on average is Rs.5,39,722/-. Among the total variable cost, the value of day old chick is Rs. 64,333/- (11.92 per cent). The cost of chicks is the cost incurred for the day-old-chicks that are delivered by the hatcheries to the broiler farms. The percentage of average cost of chicks to total variable cost is found to be high in Large Farmers as compared to Medium (10.82 per cent) and Small (8.83 per cent).

Feed is yet another important element for the growth of chicks into birds. The rate of feed consumed is proportionately equal to the rate of weight gained. The major component of cost is the poultry feed right from the day-old-chicks are brought till they are sold. The average cost poultry feed is Rs. 3,52,923/-. The intra size group analysis shows that the feed cost is found to be high in case of Medium Farmers which is 66.29 per cent (Rs.3,06,250/-)when compared to Small 66.25 per cent (Rs.1,35,000) and Large Farmer with account for 64.77 per cent (Rs.6,17,520/-).

Broiler farmers employ two types of labour in broiler farming namely family labour and hired labour. Type of labour influences broiler production. Effective involvement and spirit of family labour result in low mortality and high weight gain of broiler birds. Among various means of expenditure in broiler farming, the investment of human labour took the major share to total cost. Cost of labour included the expenditure on cleaning of sheds, application of vaccines, catching of birds, daily tracking, watering, feeding and the like the average cost of labour to total cost is Rs.33,333/- per batch which accounts for 5.18 per cent. The intra size group analysis also carried out that the labour cost per batch is found to be high for Small Farms which is Rs.15,000/- per batch which accounts for 7.36 per cent when compared to Large Farmers which is Rs.60,000/- which accounts for 6.29 per cent. In case of Medium Farms it is Rs.25,000/- which accounts for 5.41 per cent. The data on labour to total cost is lower for Medium Farms which is Rs.25,000/- per batch accounting for 5.41 per cent.



UGC Sponsored National Seminar

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Challenges and Strategies- With Special Reference to Andhra Pradesh**



8th & 9th February, 2024

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**DEPARTMENT OF ECONOMICS, ACHARYA NAGARJUNA UNIVERSITY
NAGARJUNA NAGAR - 522 510, GUNTUR DISTRICT, ANDHRA PRADESH, INDIA**

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This is to certify that Prof/Dr./Ms./Mr.

A. Veera Kumari, Assistant Professor,.....

..... *Dept. of Economics, Govt. Degree College, Avanigadda.* presented the research paper entitled

..... *"Economic Analysis of Poultry Production (Broiler) in Guntur District of Andhra*

..... *Pradesh,"*..... in the UGC Sponsored Two day National Seminar on "Advanced

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K. Madhu Babu,

Prof. K. Madhu Babu

Seminar Director



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This is to certify that **Prof./Dr./Ms./Mr. A. Veera. Kumari, Assistant Professor in Economics** of **... Government Degree College, Svanigadda**..... has delivered a lecturer as a Resource person/ Chairperson / Discussant / Rapporteur in the technical session talk on... **Advanced Technology in Agricultural Sector in India: Challenges & Strategies with Sp. reference to AP** on February 08th & 09th , 2024. Organised by Department of Economics, Acharya Nagarjuna University, Nagarjuna Nagar-522510, Guntur and Andhra Pradesh.

K. Madhubabu
Prof. K. Madhu Babu
Seminar Director