

ISBN: 978-93-91768-00-3

# **Agriculture Science: Research and Review Volume V**

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**First Edition: 2022**



**First Edition: June, 2022**

**ISBN: 978-93-91768-00-3**



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Published by:

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**Nigave Khalasa, Kolhapur 416207, Maharashtra, India**

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## **MANAGEMENT OF MAJOR LAC HOST FLORA AND LAC CULTIVATION**

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### **Abstract:**

Lac has gained popularity in recent years as a result of its wide range of applications and biodegradable nature. Lac is in high demand all over the world. In India, the Indian lac insect, *Kerria lacca* (Kerr.), is the most commonly used insect for lac production. It is sedentary, phytosuccivorous, and feeds on the phloem sap of specific host plants, such as Palas (*Butea monosperma*), Kusum (*Schleichera oleosa*), Ber (*Zizyphus mauritiana*), *Flemingia semialata*, *Ficus* spp., etc. Indian lac is regarded as having the highest quality in the world. To meet the growing global demand, lac farming and productivity must be increased at the local level. Lac farming provides supplementary income to mainly poor subsistence level tribal farmers in the country's forest tracts. Lac has been one of the most important non-wood forest products used by human society since time immemorial. The present article will provide a complete knowledge about the management of major host flora of lac insects for improved lac cultivation.

**Keywords:** Lac insect, host flora, tree selection, canopy management

### **Introduction:**

Lac has gained popularity in recent years as a result of its wide range of applications and biodegradable nature. Lac is in high demand all over the world. Lac exports totaled 6339 tonnes in 2010-11, while productions total 17900 tonnes in 2011-12. Indian lac is regarded as having the highest quality in the world. To meet the growing global demand, lac production and productivity must be increased at the local level. Lac farming provides supplementary income to mainly poor subsistence level tribal farmers in the country's forest tracts. Lac has been one of the most important non-wood forest products used by human society since time immemorial. It contributes a small but significant amount to the country's foreign exchange earnings, but the lac's most important role in the economy is that it provides a secondary income to roughly 3-4 million tribal people, who are the socioeconomically weakest segment of the Indian population.



ISBN: 978-93-91768-00-3

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**First Edition: 2022**



**First Edition: June, 2022**

**ISBN: 978-93-91768-00-3**



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**AN OUTLINE OF PIG FARMING: A SOURCE OF LIVELIHOOD IN THE  
INDIAN CONTEXT**

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**Abstract:**

Pigs are an important part of the Indian livestock industry. Pigs are typically raised by economically disadvantaged members of society, and they not only provide better nutritional support but also serve as a valuable source of income. Pigs can meet the needs of the weaker members of society as a low-cost source of healthy animal protein. In India, six different pig breeds have been recognised. The larger population of nondescript pigs, on the other hand, has lower production ability and provides a meagre return to the farmers. However, proper cross-breeding programmes have increased the popularity of pig rearing, as has the development of popular and locally acceptable new breeds by crossing desi pigs with high-yielding exotic breeds. An increase in demand has resulted from an increase in pork consumption in India's cities and a greater acceptance of pig meat by society. To meet this demand and eliminate the production shortfall, a more detailed examination of the pig population and the state of pig farming at the village level will aid in the development of new schemes.

**Keywords:** Pig, rearing, husbandry, breeds, livelihood

**Introduction:**

The majority of pigs in India are raised in small-scale subsistence-based production systems. Pigs in low-input systems provide farmers with value-added output by consuming feed that would otherwise go to waste. Smallholder farming systems help the poorest people improve their livelihoods and food security. Pigs are often one of the main sources of cash income in rural areas and provide manure for cropping, in addition to providing protein for human consumption. It also serves as a financial safety net in times of distress, as well as contributing to community cultural traditions. Pig production, in particular, promotes greater self-sufficiency, increases incomes, and provides greater food security to urban households. Smallholder pig rearing



ISBN: 978-93-91768-01-0

# **Frontiers in Life Science**

## **Volume VI**

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*Dhuni Publishing*

**First Edition: 2022**



**First Edition: June - July, 2022**

**ISBN: 978-93-91768-01-0**



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## **HEALTH MANAGEMENT PRACTICES FOR SOME IMPORTANT VIRAL POULTRY DISEASES**

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### **Abstract:**

In the last half century, significant increases in the productivity of modern poultry stocks have been achieved for both the meat and the egg production sectors of the global poultry industry. Improvements in poultry management and housing, nutrition, ration formulation, the use of poultry genetics in commercial breeding programmes, and improved diagnosis and control of avian diseases have all led to synergies. The health and disease of poultry can be the least predictable of all these essential components.

Although poultry diseases from nutritional and metabolic causes, the focus of this information note is on minimizing diseases brought on by infectious agents, which can have detrimental and sometimes immediate negative effects on the effectiveness of commercial processes. Although poultry diseases from nutritional and metabolic causes can be have concern. The development of an intensive poultry industry in many of the countries discussed here depends on the growth in number and size of small and medium-sized commercial poultry operations. Therefore, the main focus of this review is on elevating poultry health for operations of this size. However, the effects on poultry health for and from such flocks are also included due to the significance of small-scale, village-based production units in many developing countries.

**Keywords:** Viral diseases, immunization, disease symptoms disease control

### **Introduction:**

Agriculture is the backbone of the rural economy. It also has a significant impact on the national economy, contributing 13–16 percent of GDP. The number of people who keep chickens in their homes is not known with precision. The estimated agricultural households are all thought to be involved in small-scale domestic poultry production using native chickens in various parts of the nation depending on climatic conditions. Natural selection primarily favours regional or native breeds when it comes to the chickens raised in free-range and backyard



ISBN: 978-93-91768-78-2

**Advances in Literature,  
Social Science,  
Commerce and Management**



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**Bhumi Publishing**

**First Edition: 2022**



**First Edition: June, 2022**

**ISBN: 978-93-91768-78-2**



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## SUCCESSFUL POULTRY BUSINESS AND MARKETING STRATEGY

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### Abstract:

Poultry farming in India, regardless of numerous constraints, has improved substantially over the last decade. Poultry production in India became restrained to backyards until recently. Local breed of birds had been reared for the deliver of eggs and meat. The growing call for for poultry merchandise necessitates augmenting the deliver via way of means of uploading stepped forward breeds of hen. In 1961, the percentage of hybrid populations' with inside the general populace of hen became approximately 2 percentages. Within multiple decades, those birds have ruled the marketplace sidelining the indigenous birds. The technological advances have revolutionized the function and the shape of poultry enterprise in India. It has become one of the maximum specialised organizations in lots of components of the country. A preferred self belief has been created the various human beings that inexperienced revolution has ushered a technology of self-reliance with inside the food grain production. The hastily developing populace has created a few doubts with inside the stated hypothesis. In fact, crop production by itself might not clear up the food trouble of the country. The advances in cereal technology, of course, can fill the empty stomach; however it is able to now no longer assist with inside the balanced boom of the human body. The leader substances of balanced food regimen additionally incorporate proteins, fats, minerals and nutrients, which can be crucial for boom. The deliver of those gadgets can without difficulty be elevated via elevated production of livestock merchandise.

**Keywords:** Poultry business, poultry products, marketing strategy, source of economy

### Introduction:

The poultry enterprise in India represents a prime fulfilment story. What became in large part a outdoor undertaking earlier than the Nineteen Sixties has been converted right into a colourful agribusiness with an annual turnover of Rs 30 000 crores (Basic Animal Husbandry Statistics, 2012). Today, India is the 0.33 biggest egg producer around the world and the 19<sup>th</sup>

ISBN: 978-93-91768-46-1

# **COVID 19: IMPACT AND RESPONSE**

## **VOLUME X**

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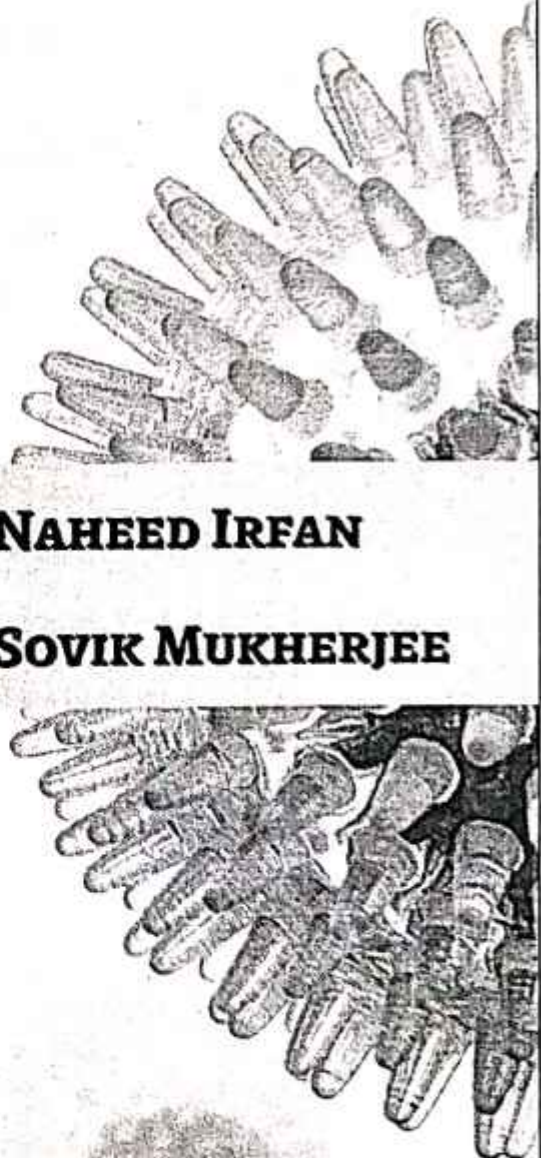
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**DR. SOVIK MUKHERJEE**



**FIRST EDITION: 2022**





**First Edition: June, 2022**

**ISBN: 978-93-91768-46-1**



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## A CASE STUDY ON COVID-19 PANDEMIC IN MUNGELI DISTRICT OF CHHATTISGARH STATE

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Bilaspur-495009, Chhattisgarh, India

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### Abstract:

The current COVID-19 pandemic is clearly an international public health problem. There have been rapid advances in what we know about the pathogen, how it infects cells and causes disease, and clinical characteristics of disease. Due to rapid transmission, countries around the world should increase attention into disease surveillance systems and scale up country readiness and response operations including establishing rapid response teams and improving the capacity of the national laboratory system. Like many countries, major part of India was also affected by Corona pandemic. The present study was attempted to assess the impact of Corona health crisis among three blocks namely Mungeli, Patharia and Lormi in Mungeli district of Chhattisgarh state.

**Keywords:** Covid-19 impact, Corona cases, test preference, death rate, recovery rate

### Introduction:

Corona viruses are a large family of viruses which may cause disease in animals or humans. Seven corona viruses can produce infection in people around the world but commonly people get infected with these four human corona viruses: 229E, NL63, OC43, and HKU1. They usually cause a respiratory infection ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respirator Syndrome (SARS) and the most recently discovered corona virus (COVID-19) causes infectious disease (Chatterjee *et al.*, 2020). This zoonotic disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The WHO originally called this infectious disease Novel Coronavirus-Infected Pneumonia (NCIP) and the virus had been named 2019 novel corona virus (2019-nCoV). The virus is typically rapidly spread from one person to another via respiratory droplets produced during



ISBN: 978-93-91768-24-9

# **Environment and Sustainability**

## **Volume III**



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**First Edition: 2022**



**First Edition: June, 2022**

**ISBN: 978-93-91768-24-9**



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## A REVIEW ON NESTING BEHAVIOUR OF WETLAND ASSOCIATED AVIFAUNA

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### ABSTRACT:

The nest building, breeding, egg laying, hatching, developing the nestlings are a vital and anxious work in the birds community. The birds construct their nests mainly to shelter, care and protect their eggs and particularly their growing nestlings from predatory animals and from adverse climate conditions during the breeding period. The main aim of this review article is to collect and present the important researches which thrown light on the breeding biology, nest construction skill and nesting habitat of various wetland birds. Therefore, the information about the nesting activity of wetland avifauna will further support the protection of these ecologically important birds' species as well as their nesting site in order to provide them natural environment for their breeding and survival.

**KEYWORDS:** Nesting site, breeding, nest construction, egg laying, nestlings, protection

### INTRODUCTION:

The nesting activities of birds are vigorously affected by various extrinsic factors such as quality and quantity of food materials, accessibility of nesting and roosting area, atmospheric conditions, position of the nesting area, inter-specific competition for resources, presence of predators and anthropogenic disturbance (Reale and Blair, 2005, Lima, 2009; Fink *et al.*, 2010; Herring *et al.*, 2014; Ajitha and Josh, 2015; Jedlikowski and Brambilla, 2017; Jiang *et al.*, 2017). There are huge variations in the shape, design of the nest, size, structure, materials used *etc.* Birds make a variety of nest such as ground nest, cavity nest, plat form nest and modified cupped nest *etc.* Pattern of nest construction differs from species to species (Hansell, 2000), way of life and their surrounding area (Collias and Collias, 2014).

**ISBN: 978-93-91768-54-6**

# **Frontiers in Life Science**

## **Volume V**

**Editors**

**Dr. Surekha A. Saraf**

**Dr. Ganesh B. Hedawoo**

**Dr. Abhijit V. Sahasrabudhe**

**Dr. Pallavi P. Ulhe**

**Bhumi Publishing**

**First Edition: 2022**



**First Edition: June, 2022**

**ISBN: 978-93-91768-54-6**



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**Published by:**

**Bhumi Publishing,**

**Nigave Khalasa, Kolhapur 416207, Maharashtra, India**

**Website: [www.bhumipublishing.com](http://www.bhumipublishing.com)**

**E-mail: [bhumipublishing@gmail.com](mailto:bhumipublishing@gmail.com)**

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## AN ASSESSMENT OF FEEDING HABIT OF THE CATTLE EGRET, *BUBULCUS* *IBIS*

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### Abstract:

In bird population, the biological clock is harmonized with the photoperiod as a major time cue. Every bird has cognitive skills to differentiate the long days from short days through the process that measures day length. However, information on feeding habit of Cattle Egret, *Bubulcus ibis* is very interesting to investigate their feeding techniques and strategies. *Bubulcus ibis* is commonly found to feed in a small group in various wetlands across the country and take part in an important function to control the population of the insects as well as other invertebrates on which they fed. Therefore, help the agriculture system. In current study we investigated the effect of 'time of the day' and 'photoperiod' on daytime feeding habit of *Bubulcus ibis*. The different feeding practices of *Bubulcus ibis* were recorded for two consecutive days each during long days (May and June 2020) and during short days (December 2020 and January 2021). One-way ANOVA (using SPSS 16.0) was applied to find out the effects of 'photoperiod' and 'time of the day' on daytime feeding activity with respect to frequency of feeding techniques. The rhythms in daytime feeding habit were estimated using the Cosinor rhythmometry at 24 h and 12 h. The present study revealed that the *Bubulcus ibis* used three main feeding habit viz., slowly walking, probing and striking. Moreover, bird was more active during short day than the long day. The important role of *Bubulcus ibis* in environment is well known. Though, the rapid development and urbanization may produce threat to these avian fauna by damaging their natural habitats.

**Keywords:** Wetland, Cattle Egret, feeding habit, short day, long day.

### Introduction:

Feeding habit is the way of searching the food from the surroundings. Finding food is very essential activity which plays a vital function for the survival, fitness and reproduction (Danchin *et al.*, 2008; Daniel, 2013). Habitat use, feeding techniques and time are the main important parameters for feeding activity. The quality and quantity of food material plays a major role in determining the distribution pattern of birds (Koul and Sahi, 2013). The feeding behavior involves all the strategies and techniques exhibited by the bird during searching and



ISBN: 978-93-91768-24-9

# **Environment and Sustainability**

## **Volume III**



### **Editors**

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**Dr. Vinayaka K.S**

**Dr. Gyanendra Kumar**



**First Edition: 2022**



**First Edition: June, 2022**

**ISBN: 978-93-91768-24-9**



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**Published by:**

**Bhumi Publishing,**

**Nigave Khalasa, Kolhapur 416207, Maharashtra, India**

**Website: [www.bhumipublishing.com](http://www.bhumipublishing.com)**

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## FORAGING BEHAVIOUR OF WETLAND BIRDS: A REVIEW

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### ABSTRACT:

Bird shows different and unique behavioural pattern by which they sustain their life on earth. Behavioural ecology of avian fauna deals with all the adaptive behavioural circumstances such as, flying, singing, escaping, roosting, feeding, preening, nesting, mating, breeding, parenting of nestlings, territory defence, predation, migration, navigation and communication, etc. exhibited throughout the life. Foraging behaviour is essential for their survival, growth, and reproductive fitness. The primary objective of this review article is to document the diverse researches focused on foraging behaviour of various wetlands associated avian fauna. Consequently, the information on the behavioural pattern of wetland birds will be pertinent and important for the ethnologists studying wetland habitats and associated fauna.

**KEYWORDS:** Wetland habitat, wetland birds, foraging behaviour, distribution, conservation.

### INTRODUCTION:

The ornithological studies are important to understand the life of birds in natural habitat, their conservation and management strategies. The Indian subcontinent serves as an excellent ground for the growth and development of the biodiversity. India is one of the 12 mega-biodiversity recognized for its wealthy flora and fauna (Venkataraman, 2011). Birds are the natural dweller of the aquatic and terrestrial habitat. They are found in all types of water such as fresh, marine and brackish. Wetlands are important habitat for the terrestrial as well as the wetland avian communities. According to Ramsar convention of the IUCN, "wetlands are submerged or water saturated land, natural and man-made, permanent or temporary filled, that is static or flowing, fresh, brackish or salt including areas of marine water". It is assumed that the Indian freshwater wetlands maintain 20% of the identified range of biodiversity of the country (Manjunath and Ravikiran, 2016).



ISBN: 978-93-91768-78-2

**Advances in Literature,  
Social Science,  
Commerce and Management**



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**Bhumi Publishing**

**First Edition: 2022**



**First Edition: June, 2022**

**ISBN: 978-93-91768-78-2**



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Published by:

Bhumi Publishing,

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Website: [www.bhumipublishing.com](http://www.bhumipublishing.com)

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**IMPACT OF YOU TUBE ADVERTISEMENT ON CUSTOMER PURCHASE  
INTENTION TOWARD PRODUCTS AT CITY BILASPUR,  
CHHATTISGARH, INDIA**

**Devendra Singh Porte\*, Srijan Dev Mahant and Amita Paikra**

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**Abstract:**

You tube is the biggest worldwide online video data framework with 1.9 billions dynamic worldwide client more than 24 thousand hours of video content are transferred on to you tube consistently 70% of substance is seen by means of cell phones and 7 billions hours of video substance are viewed on a week by week premise that incorporates how to do recordings instructive recordings content music recordings and wide scope of authoritative and brands substance, for example, channels news (for example advancements promoting big name endorsers tribute influencer and item position will have more than 4 billion client around the world). Shoppers are being impact by various things today in the realm of online networking advertising. The job of influencer, for example, you tubes recordings bloggers, YouTubers has expanded continually with the you tube getting more than 30 millions guests for each day there is no doubt you tube is a very force full apparatus for the marking and advertising. The catch is, it requires a ton of time and cash on the sponsor part to make it powerful. Regardless of how large the spending plan is publicizing can be succeed just on the off chance that it gain the consideration the networks well. YouTube and show system of the assortment of approaches to contact specific crowd Keyword logical focusing on we can utilize catchphrases that it will help coordinate our objectives our add to the video content. hence, this study was planned to analyse the impact of youtube advertisement on customer purchase intention toward products at city Bilaspur, Chhattisgarh, india

**Keywords:** Social media marketing, YouTube, advertisement, purchasing intention

**Introduction:**

Internet based life are intuitive PC innovation that encourages the production of thought and sharing data, thought, vocation intrigue and different kinds of data by means of virtual



ISBN: 978-93-91768-54-6

# **Frontiers in Life Science**

## **Volume V**

**Editors**

**Dr. Surekha A. Saraf**

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**Dr. Pallavi P. Ulhe**

Bhumi Publishing

First Edition: 2022



**First Edition: June, 2022**

**ISBN: 978-93-91768-54-6**



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**NESTING ACTIVITY OF CATTLE EGRET, *BUBULCUS IBIS* AT PENDRA  
UNDER GAURELLA-PENDRA-MARWAHI DISTRICT OF  
CHHATTISGARH STATE**

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**Abstract:**

The breeding behaviour and nesting activity is the one of most responsive bioindicator for the bird species which has a great impact on community, population and ecology. This study was carried out to explore the nest construction activity of Cattle Egret *Bubulcus ibis* in Pendra under the Gaurella-Pendra-Marwahi district of chhattisgarh state. The timing of nest building is one of the most important features which affect the reproductive or breeding activity of various bird species. The shelter or nesting trees, nesting phase, nest construction period and nest visitization rate of *Bubulcus ibis* were the main parameters of the current study. Both male and female bird involved in nest construction activity. The nest construction period by *Bubulcus ibis* was found in summer between late May and starting of June with average nest construction duration of  $13 \pm 1.83$  days. The nest visitation rate by the adult *Bubulcus ibis* was increasing in ascending order during initial, middle and late stage in respect to complete the final nest structure. Hence, the study of nesting activity could be very essential for the conservation of this ecologically important wetland bird.

**Keywords:** *Bubulcus ibis*, nesting, nesting trees, nest construction period, nest visitization

**Introduction:**

Construction of a nest, incubating and hatching the eggs, feeding and nurturing of the nestlings are all very essential and apprehensive job for the parent birds. The different wetland avifauna differs in their habitat choice, diet and behaviour but they have certain common basic necessities for nesting (Hafner, 2000). The avifauna builds their nests mostly to protect themselves, their eggs and especially their developing young ones from voracious animals and from unfavorable weather conditions during the nesting season. Thus, nest is a container in which eggs and young ones develop safely (Collias and Collias, 2014).

A wide range of wetland avian fauna breeds during monsoon, when food resources are abundant (Ali, 2003; Balakrishnan and Thomas, 2004). Urfi (2011) reported the relationship between monsoon season and the reproductive cycle of heronry birds which is driven by