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Green Synthesis of Pyranopyrazole Derivatives Using Heterogeneous Catalyst Under Solvent-Free Condition

Bandita Datta

Abstract

Pyranopyrazole have always been occupying an important place in the natural and organic synthetic chemistry because of their biological and pharmacological activities. Optimization of silica-chloride catalyzed model reaction for the synthesis of pyranopyrazole derivatives has been carried out. A series of pyranopyrazole derivatives were successfully synthesized by one-pot four component reaction of hydrazine hydrate, acetylacetone, 1,3-cyclohexanedione and aromatic aldehydes under solvent-free condition using silica chloride as a heterogeneous catalyst. Reusability of the catalyst has also been validated experimentally.

Key words: Pyranopyrazole, one-pot, silica-chloride and heterogeneous.

Seasonal Variation in the Morphometric Parameters of Asian Honey Bees (*Apis cerana indica*)

Vinutha R Bhatta and Naresh Kumar A

Abstract

Honeybees and other pollinating insects play a vital role in our ecosystem. A world without pollinators would be devastating for food production. In recent times there has been growing concern about worldwide decline in the natural populations of honey bees due to habitat loss, fragmentation, chemical invasive agriculture, monoculture, urbanisation, industrialisation and climate change. Therefore, an attempt was made to systematically analyse how Indian honey bees *Apis cerana indica* respond to urbanisation and also to study their ability in maintaining their population levels in the urban habitats in different seasons as compared to their wild colonies from the natural habitats. Two locations, representing urban and wild natural habitats were selected for this study. Significant seasonal differences were found in the measured morphometric characters of both wild bees and bees from urban habitat and it was more significant in wild bees than in urban maintained bees. Present investigation indicated that seasonal variations affect morphological characters in honey bees *A. cerana indica*. This study also confirms the concept that it is essential to collect and compare the metrological data of bees corresponding to the season as environmental factors influence their morphology.

Key words: morphometry, seasonal variation, *Apis cerana indica*

Mrs. Vinutha R Bhatta, Faculty, Department of Zoology & Genetics, Jyoti Nivas College Autonomous, Bangalore - 560 095, Karnataka, India.
E-mail: vini0304@yahoo.com

Dr. Naresh Kumar A, Assistant Professor, Department of Zoology, Periyar University, Salem, PIN - 636 011, Tamil Nadu, India

Synthesis and Characterization of 2-methyl-6-(6-methylpyridin-2-yl)pyrimidine and 2-amino-6-(6-methylpyridin-2-yl)-pyrimidin-4-ol

Nehal H. Chande, R. Ramachandrappa, Arnet Maria Antony and Selva Kumar

Abstract

2-amino-6-(6-methyl pyridin-2-yl)pyrimidin-4-ol was obtained by four step synthesis. Sonogashira coupling of 2-bromo-6-methylpyridine and TMS acetylene using bis(triphenyl phosphine)palladium(II) chloride (Dikis) and copper(I) iodide catalysts gave 6-methyl-2-trimethylsilanylethynylpyridine, which underwent desilylation in the presence of *tetra*-butyl ammonium fluoride (TBAF) in THF to yield 2-ethynyl-6-methyl pyridine. Further on protection with Boc anhydride followed by cyclisation with acetamide and guanidine gave 2-methyl-6-(6-methylpyridin-2-yl)pyrimidine and 2-amino-6-(6-methylpyridin-2-yl)pyrimidine respectively.

Key words: Sonogashira coupling, Dikis, copper(I) iodide, TBAF

Ms. Nehal H. Chande, Scholar, Department of PG Chemistry, Jyoti Nivas College Autonomous, Bangalore - 560 095, Karnataka, India
Dr. R. Ramachandrappa, Coordinator, Department of PG Chemistry, Jyoti Nivas College Autonomous, Bangalore- 560 095, Karnataka, India
E-mail: rrchandra_jnc@yahoo.co.in
Ms. Arnet Maria Antony, Faculty, Department of PG Chemistry, Jyoti Nivas College Autonomous, Bangalore - 560 095, Karnataka, India
Dr. Selva Kumar, Deputy General Manager, Anthem Biosciences Pvt. Ltd., Bangalore - 560 099, Karnataka, India

Sustainable Rural Tourism Planning – A Perceptive from Raghurajpur Village in Odisha

Shwetasaibal Samanta Sahoo

Abstract

In the modern era of development, tourism plays the most vital role for the exchange of ideas, culture and values throughout the world. It has got greater potential to raise the country's economic growth in terms of income generation, entrepreneurial skills and its development. Tourism largely exploits resources that are not renewable. Due to the mass tourist travel to different destinations, the environment suffers negative consequences of such development. All these reasons cause the development of sustainable forms of tourism, in those aspects which do not cause the pollution of nature and its resources. The implementation of the concept of sustainable development of Rural Tourism has ensured that this form of tourism has nowadays become specific market niche, which attracts tourists to spend time in rural environment. Rural Tourism contributes to the revitalization of the village through the involvement of rural households in the provision of services to tourists, marketing of agricultural products on the tourist market as well as the promotion of cultural heritage and traditions of the village. The potential of Rural Tourism is also reflected in the preservation of natural resources. This paper examines the current situation of Rural Tourism in Raghurajpur village of Odisha with an emphasis on the examples of good practice. Raghurajpur, a small village in Puri district in Odisha has occupied the status of Heritage Cultural village. With the aim of emphasizing the present problems and opportunities for further development, the author discloses the Sustainable Tourism development plans for enriching better Rural Tourism experience in Raghurajpur.

Key words: Rural Tourism, Sustainability, Planning, Development, Raghurajpur

Revival of Rural Ethnicity through Cultural Inheritance: A Creative Rural Development Strategy for Anegundi

Manisha Seal

Abstract

The quality of life in remote communities is directly related to the survival and enhancement of their culture, built heritage and landscapes. Conservation of rural places and its ethnicity creates a spirit of home while interlinking generations including diaspora to connect them to their past and reinforce a sense of belonging. But these unique cultural inheritance and their values are extremely fragile which require conservation and preservation measures. Rural community participation with regard to conservation and preservation of rural inheritance is an appropriate way to bring sustainable rural development. Arts, culture, and heritage are increasingly viewed not only as amenities to improve the quality of life, but as a foundation upon which the future of the rural communities of India rests. In this context, Rural Tourism would be a promising industry and one of the main sectors that national and local government may support and promote as vehicle for revitalization of the rural areas by exhibiting its rural art and culture to its tourist community in order to achieve economic benefits.

This paper highlights the rural cultural inheritance of rural community of Anegundi, based on a review of Karnataka's historical background. The paper's primary concerns are:

- search for the prospects for livelihood support and the scope of development in the villages through tourism
- bring out the experience and contributions of the community for the development of Cultural Tourism,
- this research study emphasizes on array of concerns, dynamics, and strategies that influence the development and vivacity of arts activities in rural setting of Anegundi in Karnataka.

Key words: Rural Communities, Rural Cultural Inheritance, Community Participation

Area, Production and Trade of Vegetables and Fruits in Kerala

N. Karunakaran

Abstract

Kerala is basically an agro-based economy where major portion of the labour force is working in agriculture and allied activities. The new agricultural policy increased the status of agriculture to that of industry which will promote its export. It improved earnings by the establishment of agro-based industries. The scope for vegetables and fruits cultivation is vast in Kerala. The area and production of these food crops shows certain immediate measures to improve its cultivation and storage. Since this cultivation is the major area of employment to the common people in the state and is profitable in Kerala, due importance and proper encouragement should be given for vegetables and fruits cultivation.

Key words: Kerala; vegetables; fruits; marketing; profitability.

Rice Production in Assam - Problems and Prospects

Tulika Chowdhury and Tribeni Barkataky

Abstract

Assam is situated in the North Eastern region of India. Agriculture is the backbone of the economy of Assam. More than 75% of the state population is directly or indirectly dependent on Agriculture. According to 2011 census report 69% of the total workers in Assam are agricultural workers. Assam is producing both food and cash crops. The primary food crops of Assam include rice, wheat, pulse and maize. Major proportion of working population engaged in producing rice, as it is the staple food of Assam.

In 2010-2011, the state produced 50.54 lakh MT of rice. In 2009-2010 Assam has produced 44.08 lakh MT. The growth rate yield of summer rice is at impressive rate. But the production of rice in Assam has been suffering from various problems like fragmentation of land holding, lack of irrigation facilities, traditional varieties and cultivation practices.

It is high time for Assam to have a second green revolution with a new agricultural strategy to increase the production of agriculture mainly rice. This paper tries to find out the problem and prospects of rice production in Assam, so that the state will be able to produce the staple food rice in large quantity.

Key words: Rice production, problem and suggestion

Consumer Attitude Towards Branded Gold Jewellers in Mangalore City

Sharath

Abstract

The attitude and perception of the consumer will play an important role in the product market. The investor or the buyer of the product always observes the market and they wait for the right opportunities to claim the market share. In this context the gold jewellers also play a role in changing the attitude of the consumer in the market on this ground a small attempt was made to understand the consumer attitude towards the gold jewellers in Mangalore city by taking few respondents from that city. To achieve this there were few objectives were framed and these objectives are analysed based on the structured questionnaire and data obtained is presented through tables and graphs.

Key words: Consumers, jewellers, Mangalore, attitude, Brand market

Financial Inclusion: Banks Role in Achieving Inclusive Growth

Shashikala V

Abstract

Agriculture employs more people than any other economic sector in India making it the main occupation of the country with majority of Indians forming a large chunk of rural population. It is recognized that access to finance is still hard for the rural mass in India and banks need to play a larger role in a faster, broad-based and inclusive growth leading to rural development. To keep the momentum of the growth at present level India needs to serve the financial need of the excluded masses to bring them into the main stream of developmental process. Financial inclusion is seen as one of the means for overall economic development of a country. The growth of the Rural Retail Banking Industry fosters financial inclusion by Nationalization of banks, priority sector lending, the lead bank schemes, establishment of more Regional Rural Banks, launch of self-help groups and bank linkage programs to provide financial access to the unbanked and under banked areas. The present paper focuses on to understand inclusive growth phenomenon, its need and financial inclusion as an instrument to attain it with reference to the initiatives taken by Government of India and Reserve Bank. The study is of conceptual in nature and after analyzing the facts and figures, it can be concluded that undoubtedly Financial Inclusion is playing a catalytic role for the economic and social development, but still there is a long road ahead to achieve the desired outcomes.

Key words: Financial Inclusion, Inclusive Growth, Kissan credit card, KYC, RBI