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Assessment of Farmers Perception on Soil Health and Organic Manures

Rebeka Sultana [1]
Md. Al Mamun [2]

Abstract

The study was conducted in September 2016 to February 2017 from two village namely Maria of Sajahanpur and Tajpur of Sherpur Upzila under Bogra district to observe the knowledge of farmers about soil health and uses of organic manure and also to determine the awareness of the farmers towards soil health and the use of organic manure. In order to conduct this research, a questionnaire survey was carried out and total 70 farmers were interviewed. In this study majority of the farmers (70%) used both chemical fertilizer and organic manures while 28% used only chemical fertilizer and 2% percent used only organic manure for their crop cultivation. This paper describes some findings that around 6% of the farmers had highly favorable attitude while 52% had moderately favorable attitude and 12% had slightly favorable attitude towards maintaining soil health and the use of organic manure. Moreover by this research it is reveled that the education and annual income are the key factor to change the attitude of farmers in the field of crop cultivation by using organic manure.

Key words: *Soil Health, Farmers, Knowledge, Organic manures, Attitude*

Introduction

Bangladesh is one of the most densely populated countries of the world. To meet the food grain requirement for a growing population with limited land resources, we are increasing pressure on land. To maintain nutrient balance it is necessary to understand the land types, soil nutrient status, and nutrient demand of individual crops and residual effects of fertilizer and soil physical properties. Determination of fertilizer, crops and cropping patterns are very important for sustainable crop produc and it should be included in the new national fertilizer recommendation guide.

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Assessment of Water Level Fluctuations for Forecasting Ground Water Situation: A Study in Sherpur Upazila under Bogra District

Mohammad Abid Hossain Mridha [1]
Dr. Syed Hafizur Rahman [2]

Abstract

This study was conducted in Sherpur Upazila under Bogra district of Bangladesh. The main objective of the study was to analysis the ground water fluctuations level by using Ground Water Table (GWT) data from 2006 to 2015 for determining the present and future ground water conditions in the study area. A total of eight observation wells data of bore hole were collected for this study. Under this study, highest fluctuations level were observed in selected union such as Kusumbi 9.06 meter, Bishalpur 8.66 meter, Vobanipur 8.76 & 8.59 meter, Mirzapur 8.57 meter, Dimbari 9.85 meter, Khamarkandi 9.29 meter and Garidhah 10.04 meter respectively during the month of April to May. Out of eight locations, the highest Ground Water (GR) fluctuations level was noted 10.04 meter at RDA Mouza of Garidah Union. Besides these, the lowest fluctuations level were varies from 3.32 to 2.20 meter during August to November in same locations. So, actual ground water variations were varies from 6.03 to 1.06 meter. Then critical period were found only two months like April to May and rich periods were four months such as August to November over the year. Also, the pump theory between suction head vs. performance that atmospheric pressure is what permits a pump to lift water. Mother Nature plays an important role by exerting 14.7 psi on any body of water at sea level. This limits the suction head of any pump to 10.33 meter, but only if perfect vacuum occurs in the pump. Thus, suction head is limited to 7.90 meter. Finally perceived that the highest fluctuations level were 10.04 to 8.57 meter in study area that was more than 7.90 meter with comparison between suction head vs. performance theory. So suction mode operating devices like shallow tube well and hand tube well would be inoperable in critical moment especially from April to May and users would be suffered for irrigation as well as drinking water at this time.

***[Key Words:** Ground Water Table (GWT), Ground Water (GR) Fluctuation, Critical and Rich Period, Centrifugal Pump, Shallow and Hand Tube Well].*

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Implementation Challenges of Social Safety Net Programs in Bangladesh: A Critical Overview

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MT Islam [2]
D Potts [3]

Abstract

As many developing countries Bangladesh is fighting against poverty and inequality. Bangladesh has emphasized on various types of safety net programs for facing poverty and inequality. The study is aimed for identify the challenges in implementation of safety net programs in Bangladesh. Limited coverage accompanied by meager allocation, rural biased and inappropriate budget allocation, imperfect targeting and irregularities in beneficiary selection, lack of proper coordination among agencies, and limited administrative and resource capacities are found as major challenges for safety net program implementation. The research is also indicated a comprehensive safety net policy is desired to respond the emerging challenges of poverty and inequality.

Key words: *safety nets, challenges, poverty and inequality.*

1. Introduction

As a lower income countries in the world, Bangladesh has been struggling for a long time to reduce its poverty and inequality and to improve the living standards of its millions of underprivileged people. The country has shown substantial progress on poverty reduction in the last decade though 47.6 million of its population living below the national poverty line. Inequality is additional immeasurable anxieties for Bangladesh (Iqbal et al., 2008). The inequality index is raised to 32.1 per cent in 2010 from 27.6 per cent in 1990 (World Bank, 2015). This trend of inequality has counteracted the recent improving poverty situation.

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In Vitro Regeneration of Stevia rebaudiana Bertoni from the Nodal Explant

Md. Asaduss Zaman [1]

Abstract

Stevia rebaudiana Bertoni is known as a medicinal plant and commercially use as non-caloric sweetener for diabetic patient. In this study, a protocol was developed for in vitro micropropagation using 6-benzylamino purine (BAP) and Kinetin (Kn) for the formation of multiple shoot proliferation and Indole-3-acetic acid (IAA), Indole-3-butyric acid (IBA) and 1-Naphthaleneacetic acid (NAA) for the induction of roots. Maximum number of shoot formation (7.82 ± 0.7 shoots per explants) was observed on a Murashige and Skoog (MS) medium supplemented with 0.5 mg L-1 BAP and 0.25 mg L-1 Kn. The maximum number of roots (30.12 ± 2.1 roots per explants) was obtained in a MS medium containing 1.0 mg L-1 IBA. The well rooted plantlets were successfully weaned and acclimatized in plant soil with survival rate of 83.3 %.

Key words: *MS medium, non-caloric sweetener, proliferation, regeneration, acclimatization.*

Introduction

Stevia rebaudiana Bertoni is a perennial herb, belonging to family Asteraceae. The leaves of stevia are the source of diterpene glycosides, such as stevioside and rebaudiosides, which are estimated to be 100-300 times sweeter than sucrose (Tanaka 1982). The plant originated from the northern regions of South America and grows wild in the highlands of Amambay, located at Iguac district, a border between Brazil and Paraguay. It is being commercially cultivated in China, Taiwan, Thailand, Korea, Japan, India and Malaysia (Jain et al. 2009). Stevia is known as natural non-caloric sweetener because of the presence of stevioside in its leaves. It has been used in a wide range of processed foods as a substitute for conventional sugars, or artificial dietetics especially in Japan (Handro and Ferreira 1989).

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Modelling of IPO underpricing in Bangladesh (2007 to 2016)

Faysal Ahmad Khan[1]
Tasruma Sharmeen Chowdhury[1]

Abstract

This study shows the degree of underpricing in initial public offering in Bangladesh and the relationship of underpricing with some company specific and issue specific variables. To measure the degree of underpricing both initial return (IR) and market adjusted initial returns (MAIR) have been used. The study reveals 284% average initial return and 266% average market adjusted return for the first listing day of the IPOs for the period of 2007 to 2016. Regression analysis is used to find the relationship between various predictor variables and underpricing. The regression analysis depicts that issue price, oversubscription, market return and size of the firm have significant effect on initial return. Similarly, market adjusted initial return is also influenced by issue price, oversubscription and size of the firm have significant effect over. The study found that issue size, age of the firm, floating percentage of share has not related with IPO underpricing in Bangladesh.

Keywords: *Initial Public Offering, Underpricing, Bangladesh, Initial Return (IR), Market Adjusted Initial Return (MAIR).*

JEL Classification: G3, G12, G30

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Production and Marketing Behavior of High Value Crops In Northwest Bangladesh

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Abstract

Agriculture is the most important sector of the economy in Bangladesh. It is the major source of livelihood in rural areas, where about 80 percent of the population is living. Approximately 46% of the labour force is employed in agriculture. Although its share in the GDP is predictably declining, agriculture (crops, livestock, fisheries and forestry) contributes approximately one-third of the GDP and agricultural production accounts for 32 percent to the value of exports. The performance of this sector has a great impact on the overall economic growth of the country.

The northwest region of Bangladesh is one of the poorest and most backward regions despite of its favorable natural resources. It has traditionally been disadvantaged compared to other parts of the country due to its physical isolation. This situation has been improved following the construction of the Bangabandhu Bridge and additional infrastructure investments leading to improvement in road links from the bridge to Dhaka and the northwest region. These developments have created new opportunities for increasing agriculture production and income of majority of the population living in this region. Moreover, the area has good potential for agriculture and scope for diversification, away from traditional crops. Although there is little scope for expansion or intensification of traditional crops, farmers could increase their incomes by raising crops that can provide a greater value per unit area i.e. HVC. There is ample scope of production of HVCs without affecting the household's food security in this region.

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Pesticides Application for Crop Protection: A Study on Farmer's Knowledge and Practices

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Nilufer Yasmin Jolly [1]
Washim Uddin [1]
Dr. Md. Abdur Rashid [2]

Abstract

To assess the knowledge and practices of farmers on pesticides application, a study is conducted at Maria village under Shahjahanpur Upazila of Bogra district, Bangladesh. Data are collected from randomly selected 73 farmers' through individual interview and focus group discussion. Result shows that most of the farmers are middle aged, had no educational background and owned less than 1.0 acre of land for crop production. The application of pesticides in vegetables fields is higher and increased the cost of production in comparison to rice, wheat and maize. It is found that to control pest 26% farmers' received advice from pesticide dealers instead of consultation with experts, whereas 48% do not know how to apply pesticides in right way. About 51% farmers read the labelling and measuring the doses of pesticides accordingly though most of them sprayed by day labours and among them 81% farmers' has not received any training on integrated pest management. It found that all the farmers are concerned to take bath after spraying and 49% to 66% farmers also took some safety measures during pesticides application. Another important findings of the study is that only 33% farmers disposed properly the leftover pesticides and empty containers. In addition, it is evident that 85% farmer harvested their vegetables before the recommended days after spraying, of which 10% harvested their crops the day after they applied pesticides, 21% and 25% in the 2nd days and 3rd days respectively. The study concluded that majority of the farmers' in the study village are unconscious about proper harvesting time of vegetables after spraying in the field and not well aware about adverse effect of pesticides on health and environment and they applied pesticides without having enough safety measures. Information dissemination through mass media and training should be undertaken for precise and safe practices of pesticides application at rural level. Finally, development of efficient policy interventions to minimize unusual and excessive use of pesticides by the rural people is urgent and further study on impact of pesticides on human and animal health is also demanded.

Key words: *Pesticides, Protection, Environment, Knowledge, Practices*

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Problems and Prospects of Artificial Insemination in Cattle: A Study in Bamonia Village

Mashrufa Tanzin[1]

Abstract

TThe study was conducted on "Problems and Prospects of Artificial Insemination". The study area was Bamunia village under Aria union of Shajahanpur Upazilla in Bogra district. It was observed that most of the respondents were 25-34 years of age (43.33%), farmer (50%), educated up to class five (33%) and almost every family rearing some cattle. Data was collected through direct interview and using structured questionnaire. It was found that three respondent (10%) commercially cultivate grass as fodder for their cattle. Most of the respondents (57%) were rearing native cattle In case of native breed, majority (47%) of puberty age range was between 2.5-3.0 years and 2.0-2.5 years was in case of cross bred (53%). In case of native breed, majority (67%) of first conceived age range was between 2.5-3.0 years and 2.0-2.5 years was in case of cross bred (83%). Seventy three percent of them used artificial insemination for breeding their cattle. It was found that most of the respondents (68%) of the study village are using frozen semen supplied by Cattle Research and Development Centre (CRDC) of Rural Development Academy (RDA), Bogra. Majority (50%) of the respondents opined that their cows conceive after twice service. In case of artificial insemination, the majority (40.91%) of respondents opined that the cost range was Tk. 300 and above. But natural service the most of the respondents (75%) told that the cost range was Tk. 100-200. It was observed that among the farmers who used artificial insemination for breeding their cattle they faced problems like repeat breeding, dystocia, calf mortality, long distance of artificial insemination centre, lack of knowledge about management, vaccination, veterinary services are also found in the study. However it was found that farmers who have cross bred cattle they are more benefited than that of the farmers having native types of cattle in terms of milk production, early reproduction and high income. Through focus group discussion (FGD) the issues come from the different groups of villagers if ensuring proper training, provide required land for fodder cultivation, disburse loan facilities with low rate of interest, reduce feed price, provide treatment supports and ensure high performance breed through available artificial insemination with quality semen this sector can be highly profitable which help to improve the rural livelihood patterns as well as contribute the growth of national economy.

KEY WORDS: Problems, Prospects, Artificial insemination

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Role of Cooperative Society in Livelihood Improvement: A Study on Chakkeshab Village of Bogra District

Andalib Mahejabin[1]
Md. Tanbirul Islam[2]

Abstract

Bangladesh has a long history of cooperative movement. Cooperative societies are contributing to livelihood improvement of rural dwellers. This study was conducted in a rural village Chakkeshab of Bogra. Agriculture is the main profession of most of the villagers. They formed a cooperative society in 2006 under the guidance of Comprehensive Village Development Programme (CVDP) and raised their savings. They received training from CVDP on some income generating activities. Cooperators could strengthen their communication network with nation building departments situated in the upazila headquarter.

It was found that members of this cooperative society were benefited in many ways. The result of this type of financial inclusion and awareness building was harvested by the villagers. They found the society as a means of their income generation, and their recognition. According to the sustainable livelihood framework of DFID, their access to some assets was measured and the result found impressive. Moreover, it is worth mentioning that in the village Chakkeshab, the villagers didn't go to file cases with courts rather they solve by themselves. This approach of togetherness became a sustainable institution of rural development.

Key Words

Cooperative Society, Livelihoods Improvement, Financial Inclusion.

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Study on Soil Nutrient Status of Poranbaria Village under Bogra District

Suvagata Bagchi[1]

Abstract

This study was undertaken in Poranbaria village of Amrul union under Shajahanpur Upazilla of Bogra district to access the current nutrient status of organic matter, potassium, phosphorus, sulphur, zinc, nitrogen and boron in soil. Soil samples were collected from Poranbaria village after harvesting rice during aman season in 2013.The soil samples were prepared methodically and sent it to Soil Research Development Institute (SRDI) laboratory, Bogra for nutrient analysis. From the analysis report it was found that most of nutrient contents were in low level which gives alarming signal for maintaining the soil fertility. Organic matter was found only 1.65-2.23%, potassium content was only from 0.16-0.19ml-equivalant/100gm, phosphorus content was found from1.18-15.16Mg/gm, nitrogen content was found from0.08-0.1%, zinc level was found from 0.55-0.92Mg/gm and boron level was found from0.03-0.06 Mg/gm. From the result it is clear that farmers are using fertilizer less than the requirement. In other cases they are careless or less using organic fertilizer. So, this is the fact of nutrient status of Poranbaria village which is alarming for future crop productivity in this soil. Therefore some initiatives should be undertaken which may help in maintaining soil fertility in this study village

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