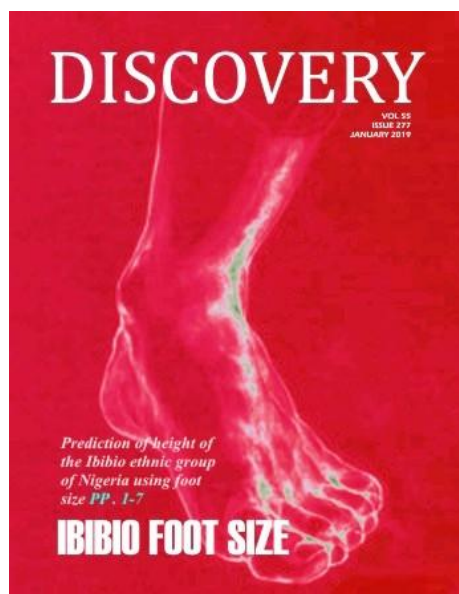


Discovery

About the Cover



This present study was to determine the stature and foot length and to determine the correlation if any between stature and foot length among adults of the Ibibio ethnic group of Nigeria. It was also aimed to find a regression equation to predict stature from foot length in adults of the Ibibio ethnic group of Nigeria. Adults of the Ibibio ethnic group participated in this anthropometric study. A total of 300 people (179 males and 121 females) between the ages of 18 and above were studied. These participants were randomly selected from the eleven local government areas of Akwa Ibom state which make up the Ibibio ethnic group. Verbal consent was obtained from each individual. Stature and foot length were measured using standard anthropometric techniques. Pearson's coefficients of correlation and regression equations were calculated using Minitab statistical package for stature and foot length. The mean and standard deviation for stature in this study was 167.45 ± 7.03 and 159.89 ± 5.44 for male and female respectively and that for foot length was $27.01 \pm 3.1.43$ and 25.31 ± 1.20 for male and female respectively. The foot length showed a strong significant linear correlation (r) with stature. ($r=0.71$ and $r=0.64$, ($p<0.01$) for males and females respectively. The following equations were derived to predict the stature (S). In males $S= 74.37 + 3.45$ foot length (cm), in females $S= 86.36 + 2.91$ foot length (cm). The results from this study showed that the male had significantly higher figures in all parameters than their female counterpart, thus indicating the existence of sexual dimorphism in these parameters among the Ibibio ethnic group of Nigeria. The result from this study is comparable to studies done in other ethnic groups and may be relevant in further anthropometric or forensic studies as it concerns the Ibibio ethnic group. (Ref: Gabriel D Edem, Christopher C Mbadugha, Uwemedimo G Udoh, Emmanuel A Ekanem. Prediction of height of the Ibibio ethnic group of Nigeria using foot size. *Discovery*, 2019, 55(277), 1-7).

Prediction of height of the Ibibio ethnic group of Nigeria using foot size

Gabriel D Edem, Christopher C Mbadugha, Uwemedimo G Udoh, Emmanuel A Ekanem

This present study was to determine the stature and foot length and to determine the correlation if any between stature and foot length among adults of the Ibibio ethnic group of Nigeria. It was also aimed to find a regression equation to predict stature from foot length in adults of the Ibibio ethnic group of Nigeria. Adults of the Ibibio ethnic group participated in this anthropometric study. A total of 300 people (179 males and 121 females) between the ages of 18 and above were studied. These participants were randomly selected from the eleven local government areas of Akwa Ibom state which make up the Ibibio ethnic group. Verbal consent was obtained from each individual. Stature and foot length were measured using standard anthropometric techniques. Pearson's coefficients of correlation and regression equations were calculated using Minitab statistical package for stature and foot length. The mean and standard deviation for stature in this study was 167.45 ± 7.03 and 159.89 ± 5.44 for male and female respectively and that for foot length was $27.01 \pm 3.1.43$ and 25.31 ± 1.20 for male and female respectively. The foot length showed a strong significant linear correlation (r) with stature. ($r=0.71$ and $r=0.64$, ($p<0.01$) for males and females respectively. The following equations were derived to predict the stature (S). In males $S= 74.37 + 3.45$ foot length (cm), in females $S= 86.36 + 2.91$ foot length (cm). The results from this study showed that the male had significantly higher figures in all parameters than their female counterpart, thus indicating the existence of sexual dimorphism in these parameters among the Ibibio ethnic group of Nigeria. The result from this study is comparable to studies done in other ethnic groups and may be relevant in further anthropometric or forensic studies as it concerns the Ibibio ethnic group.

Discovery, 2019, 55(277), 1-7

AGRICULTURAL SCIENCE

Impacts of soil amendments practices on growth and yield attributes of spring planted sugarcane under water deficit conditions

Arshad Ali, Muhammad Zafar, Asad Ur Rahman, Ammara Gill, Sadia Ismail, Faisal Mushtaq, Mohammad Asghar Ali, Abdul Hadi, Muhammad Mubashar Zafar

The studies related to effect of irrigation levels and soil amendments practices on sugarcane was conducted on a loamy soil under field conditions at Agronomic/Research/Farm area, University/of Agriculture, Faisalabad/Pakistan during growing season 2016-17. The experiment was laid out in RCBD with split plot arrangement and three replications with a net plot size of 4.8 m x 10.0 m. Planting was sown in 120 cm wide trenches using two eyed cane setts in dual rows @ 75,000 setts ha⁻¹ by hand placement. Sugarcane variety CPF-249 was planted on Last week of March 2016. All agronomic operations were kept uniform except (N) nitrogen and (P) phosphorus fertilizers and time of irrigations. In experiment, potash @112 kg ha⁻¹ was applied in trenches at the time of planting while Nitrogen and phosphorus fertilizer was applied as per treatment plan from organic and inorganic sources with irrigation combinations viz. $I_0T_0 = 100\%$ of recommended Irrigation (16 Irrigations) + Control, $I_0T_1 = 100\%$ of recommended Irrigation (16 Irrigations) + Press-mud, $I_0T_2 = 100\%$ of recommended Irrigation (16 Irrigations) + Polymer Coated SSP, $I_0T_3 = 100\%$ of recommended Irrigation (16 Irrigations) 50% Cane Trash boiler ash+50% SOP, $I_1T_0 = 75\%$ of recommended Irrigation (12 Irrigations) + Control, $I_1T_1 = 75\%$ of recommended Irrigation (12 Irrigations) + Press-mud, $I_1T_2 = 75\%$ of recommended Irrigation (12 Irrigations) + Polymer Coated SSP, $I_1T_3 = 75\%$ of recommended Irrigation (12 Irrigations) + 50% Cane Trash boiler ash+50% SOP, $I_2T_0 = 50\%$ of recommended Irrigation (08 Irrigations) + Control, $I_2T_1 = 50\%$ of recommended Irrigation (08 Irrigations) + Press-mud, $I_2T_2 = 50\%$ of recommended Irrigation (08 Irrigations) + Polymer Coated SSP, $I_2T_3 = 50\%$ of recommended Irrigation (08 Irrigations) + 50% Cane Trash boiler ash+50% SOP. Effect of irrigation levels and soil amendments techniques on number of internodes and harvest index remained non- significant. The highest number of tillers m⁻² (15.63) was recorded at I_0T_2 (100% of recommended irrigation + polymer coated SSP) and minimum m⁻² (11) at I_1F_1 (75% of recommended irrigation + press mud). The maximum cane length (220.00 cm) was recorded at I_0T_2 (75% of recommended irrigation + polymer coated SSP), weight per stripped cane (1.09 kg) at I_0T_2 (100% of recommended irrigation + polymer coated SSP), while minimum cane length (157 cm) was recorded at I_2T_0 (50% of recommended irrigation + control), weight per stripped cane (0.51 kg). All the quality parameters Brix (%), Sucrose content in juice (%) exposed non-significant effect of irrigation levels and soil amendments techniques in spring planted sugarcane. Maximum commercial cane sugar (CCS) (15.00 %) and cane sugar recovery (14.53 %) was recorded at I_0T_2 (100% of recommended irrigation + polymer coated SSP).

Discovery, 2019, 55(277), 8-19**A study on sesame and blackgram intercropping system as influenced by moisture conservation practices under rainfed condition**

Siddhartha Mandal, Binoy Chhetri

A field experiment was conducted to study the sesame based intercropping system as influence by moisture conservation practice. Among the intercrops 2:4 row ratio combinations recorded highest yield and yield attributes under different moisture conservation practices. Irrigation twice recorded highest yield and yield attributes followed by FYM mulch and dry weed bio-mass mulch. Gross income, net income (Rs. ha⁻¹) and B: C ratio was recorded maximum for sesame and blackgram when grown alone. Sesame + blackgram intercropping situation (2:4) recorded higher gross income and net income followed by sesame + blackgram (2:2) intercropping situation. Among the methods of moisture conservation practices, irrigation twice recorded the highest gross income, net income (Rs. ha⁻¹) and B: C ratio when sesame was grown alone (0.49) but when sesame intercrop with blackgram in 2:4 row ratio combination recorded maximum B: C ratio (0.25). The LER value ranged from 1.34 to 1.85. The maximum yield advantages (85%) were attained with C4M1 followed by C4M0 (78%). The lowest advantages among different intercropping combinations were recorded with Sesame + Blackgram (2:4) (1.81) and Sesame + Blackgram (2:2) (1.67) intercropping.

Discovery, 2019, 55(277), 20-23

CHEMICAL SCIENCE

Simulation of Rate of Adsorption by Approach of Multiple Regression Model

Ikenyiri PN, Abowei FM, Ukpaka CP, Amadi SA

Mathematical model was developed to monitor, predict and simulate the rate of adsorption of Crude oil using the approach of multiple regression techniques. The research revealed that the rate of adsorption of crude oil in the process of remediation depends completely on sawdust dosage, weight of adsorbent and concentration of crude oil as well as the independent variables. The functional parameters that controlled the process was monitored and predicted using multiple regression approach in the determination of parameters a_c, a, a_2, a_3 for the various adsorbent of the wood sawdust A, B, C, and D as presented in this paper. The experimental rate of adsorption was validated with the developed model and the result obtained shows a good match indicating the reliability of the developed model. The research work demonstrates the usefulness of the developed model in monitoring, predicting and simulating the rate of adsorption of wood sawdust of various species in enhancing bioremediation in a polluted site environment.

Discovery, 2019, 55(277), 24-32

Economic rising of China: Reference for economic development for developing country

Md Ziaur Rahman

China is integrating in the international system to gain advantage and authority for its own national interest. China has modernized its policies in almost in all sectors namely, the economic, foreign and domestic to transform itself into a supreme global power. For a long time, China was focused on domestic development, the country was strengthening its root from the within and then in the international system. The country's remarkable economic growth has been effective for earning an authoritarian status in the world order. Now that China has been successful in attaining a stable domestic and international status, the country is focused on achieving a 'top dog' position in the world order and proclaiming "The Chinese Dream" of Xi Jing ping for making the nation an ideal one based on the characteristics and ideologies of China. This paper focuses on all the aspects of China as a global leader; it discusses China's economical-political history, struggles for success and policies for becoming a superpower. In addition, Chinese foreign policies and its relationship with the other countries, especially with Bangladesh have been enlightened here.

Discovery, 2019, 55(277), 33-39