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1	<p style="text-align: center;">对“人性”的一些看法</p> <p>张 洞 生 Email: zhangds12@hotmail.com 3/15/2010</p> <p style="text-align: center;">1957年毕业于北京航空学院, 即现在的北京航空航天大学</p> <p>【前言】。人性太复杂了, 没有人能够完全对此讲清楚说明白, 因为人类的智慧可能永远也不能达到完全认识人类本身。甚至任何一个个人的人性都不可能完全彻底地为他人所了解。但这并不妨碍人们从对人性不完整的认识中理解人性的某些重要的本质和规律。古人说: “人心之不同, 如其面焉”。这里的人心可以理解为人性。就是说, 每个人都有脸面, 这是共性, 但是每个人的面貌又不一样, 这是个性。有多少个人, 就有多少张不同的面孔。人性也一样, 既有共性, 也有个性。比如, “食色, 性也”。食色是人的共性, 而喜恶什么样的“食”和“色”, 就是各人的个性, 可以大不相同。每个人都有爱恨, 但是每个人所产生的爱恨的缘由、对象、程度都不相同。所以毛泽东说: “世界上没有无缘无故的爱, 也没有无缘无故的恨”。同样是“怒发冲冠”, 吴三桂是为红颜, 岳飞是为要“待从头、收拾旧山河, 朝天阙”。甚至一个人的“怒”也会因为缘由、对象、时间环境的不同而产生不同性质、不同形式、不同程度的“怒”。本文的重点在于 1*。将一个人思想动机的“善恶”与其所达到对社会效果的利害程度联系起来看, 将人性分解和区分为 8 种独立的原始类型。当动机与效果不一致时, 和八卦图一样, 由 8 种原始类型可组合成 $8 \times 8 = 64$ 种叠加型。2*。从人性的角度看人类社会的发展, 阐明私有制和公有制、资本主义和社会主义都是合乎人性中不同的 2 个主要方面的需要的。只有合乎人性发展所需要的社会经济制度才能存在和发展, 而那些不合乎人性发展所需要的社会经济制度将会被历史淘汰。所以人类社会的发展进程和人性的发展进程是一致的。3*。提出了有关人性的几个规律。[Academia Arena, 2010;2(6):1-9] (ISSN 1553-992X).</p> <p>【关键词】: 人性; 人性的 8 种原始类型; 人性和欲望的两重性; 私有制和公有制、资本主义和社会主义符合人性不同方面的需要; 人性的一些规律; 人性的 64 种原型与中国古代 64 卦极其类似</p>	Full Text
2	<p style="text-align: center;"><u>DOES ENERGY AND IMPULSE ARE INTER CONVERTABLE</u></p> <p style="text-align: center;">Manjunath. R (Reader in physics). #16,8th Main road, Shivanagar, Rajajinagar, Bangalore-560010, Karnataka, India manjunathr1988@yahoo.in</p> <p>Abstract: The new mathematical model allows us to calculate energy stored in particle as the function of impulse applied on it.It is shown that the impulse and energy are interconvertable.The paper also describes impulse is indirect measure of energy and relativistic variation of mass with position.th mathematical expressions was developed based on wave theory, classical mechanics, atomic physics and mathematical concepts [Academia Arena, 2010;2(6):10-13] (ISSN 1553-992X).</p> <p>Key words : Energy, Impulse, Photon,Wave theory</p>	Full Text
3	<p style="text-align: center;">The volume of matter and dark energy dominated universe</p> <p style="text-align: center;">Manjunath. R. (Reader in physics) #16, 8th Main road, Shivanagar, Rajajinagar, Bangalore-560010, Karnataka, India manjunathr1988@yahoo.in</p> <p>Abstract: The new mathematical model allows us to calculate the volume of infinite universe which varies with respect to time (t).It is shown that the mathematical equation for calculation of volume of infinite universe which varies with respect to time (t) accounts for scale factor of universe (a (t)),vacuum energy density, density parameter of present dark energy and matter dominated universe, density parameter of present dark energy dominated universe. The mathematical expressions was developed based on the cosmological concepts. Radius of Hubble sphere, vacuum energy density, critical density of universe and cosmological constant are brought together in one frame of reference to explain the phenomenon of rate of expansion of universe. [Academia Arena, 2010;2(6):14-18] (ISSN 1553-992X).</p>	Full Text

	<p>Key words: Density parameter of universe, Scale factor of universe, vacuum energy density, critical density of universe, volume of universe</p>	
4	<p style="text-align: center;">Role of Sacred Plants in Religion and Health-care system of local people of Almora district of Uttarakhand State (India)</p> <p style="text-align: center;">Vijay Sharma* and B. D. Joshi Department of Zoology and Environmental Sciences, Gurukula Kangri University, Haridwar-249404, Uttarakhand (India) * vijaysharma_mediplants@yahoo.com</p> <p>Abstract: Uttarakhand, the mountainous state of Indian Himalayan Region (IHR) is famous for its religious culture, traditions and pronounced as Dev Bhoomi (Land of Gods). People of this state are highly religious and variety of rituals related to God, Goddess worships are performed in various ways, round the year by the local people in which plants have their defined roles and importance. A preliminary survey was carried out to find the role of sacred plants in the lifestyle and health-care system of local people of Almora district of Uttarakhand State. It was observed that 19 plant species have high utility and importance in such religious activities as well as traditional healing system. These believes not only show the human relation with plant diversity but also help in conserving these species. [Academia Arena, 2010;2(6):19-22] (ISSN 1553-992X).</p> <p>Key words: Religious beliefs, Traditional culture, Sacred rituals, Healing system</p>	<p>Full Text</p>
5	<p style="text-align: center;">Mathematical Theory On Evolution Of Universe</p> <p style="text-align: center;">Manjunath. R. (Reader in physics) #16, 8th Main road, Shivanagar, Rajajinagar, Bangalore-560010, Karnataka, India manjunathr1988@yahoo.in</p> <p>Abstract:-Most of the theories like Big bang ,Steady state theory..... were proposed to explain the evolution of universe. The inherent goal of proposal of this theory is to explain the early evolution of universe to some extent through mathematical derived equations. The fundamental concepts like energy,time,temperature ,mass ..are incorporated to frame this mathematical theory to explain the formation of universe . The new mathematical model allows to calculate Poynting–Robertson force. It is shown that the equation for the calculation of Poynting–Robertson force accounts for the force exerted by incoming solar radiation,gravitational radius of sun and dust grain's orbital radius. The new mathematical model is putforward to calculate momentum of emitted hawking radiation. [Academia Arena, 2010;2(6):23-36] (ISSN 1553-992X).</p> <p>Key words : Energy ,time , mass speed of light in vacuum.</p>	<p>Full Text</p>
6	<p style="text-align: center;">Standardization of Sterilization Protocol for Micropropagation of <i>Aconitum heterophyllum</i>- An Endangered Medicinal Herb</p> <p style="text-align: center;">Nidhi Srivastava¹, Barkha Kamal¹, Vikas Sharma¹, Yogesh Kumar Negi², A.K. Dobriyal³ Sanjay Gupta¹ & Vikash Singh Jadon¹</p> <p style="text-align: center;">1. Plant Molecular Biology Lab., Department of Biotechnology, Sardar Bhagwan Singh (P.G.) Institute of Biomedical Sciences & Research Balawala, Dehradun-248161, Uttarakhand, India 2. Department of Microbiology, Sardar Bhagwan Singh (P.G.) Institute of Biomedical Sciences & Research Balawala, Dehradun-248161, Uttarakhand, India 3. Department of Biotechnology, H.N.B.Garhwal University, Campus Pauri, Pauri Garhwal-246001, Uttarakhand, India. nidhi_srivastava27@rediffmail.com. jadon@rediffmail.com,</p> <p>Abstract: A protocol has been standardized for sterilization of nodal segments and seeds of <i>Aconitum heterophyllum</i> for its micropropagation intended for its mass propagation and conservation. Three sterilizing agents viz., HgCl₂, NaOCl and H₂O₂ were tested for sterilization by varying their concentration and time of exposure. 100% healthy shoots were obtained when explants were sterilized with 0.1% HgCl₂ for 5 minutes, inoculated on MS basal media with appropriate hormones and observing them for 30 days, while at 7.5% concentration of H₂O₂, 5 minutes exposure provided 90% of aseptic seed germination. Results showed that out of three sterilizing agents HgCl₂ was significantly reducing the contamination of explants and H₂O₂ of seeds in <i>in-vitro</i>, which shows that requirement of sterilization may vary with the type tissue used for micropropagation. [Academia Arena, 2010;2(6):37-42] (ISSN 1553-992X).</p> <p>Keywords: <i>Aconitum heterophyllum</i>, sterilization, micropropagation, conservation, contamination</p>	<p>Full Text</p>

7	<p>Output Performance Of Food-Crop Farmers Under The Nigerian Agricultural Insurance Scheme In Imo State, South East, Nigeria</p> <p>Nwosu, F.O¹; N.N.O Oguoma¹; J.I. Lemchi¹; G.N. Ben –Chendo¹; A. Henri-Ukoha¹; S.U.O. Onyeagocha¹; I.I. Ibeawuchi²</p> <p>1. Department of Agricultural Economics, Federal University of Technology, Owerri, Nigeria. 2. Department of Crop Science and Technology, Federal University of Technology, Owerri, Nigeria.</p> <p>Emai: ofnwosu@yahoo.com; nnooguoma@yahoo.com; jlemchi@yahoo.com; gnbenchendo@yahoo.co.uk; haukoha@yahoo.com; steveonyeagocha@yahoo.com; ii.ibeawuchi@yahoo.co.uk</p> <p>ABSTRACT: The Nigerian Agricultural Insurance Scheme was established in 1984 by the Federal Government with the promotion of agricultural production as one of its specific objectives. This study was conducted to evaluate the output performance of the food-crop farmers who have embraced the scheme. The study also analysed the influence of socio-economic characteristics on the farmers output. Primary data and secondary information sources were used in the study. The primary data were obtained from 77 food-crop farmers selected through simple random sampling from a list of 145 food crop farmers under the scheme in Imo State. Data analyses were done using both descriptive and inferential statistics. The descriptive statistics such as mean, frequency were used to analyse the socio-economic characteristics of the farmers while inferential statistics (Z - test and multiple regression model) were used to determine the impact and influence of socio-economic characteristics like age, farming experience, educational background etc on the farmers’ output respectively. The Z – test analysis of the impact of the scheme on the farmers’ output showed that there was a positive and significant change in the farmers’ output after insurance. The results of the analyses of the socio-economic characteristics of the respondent farmers showed that majority (66.23%) of the sampled farmers are males. It also showed that majority (46.75%) of the sampled farmers were within the age bracket of 41-50 years. Also, over 70% of the insured farmers had secondary school education and above. The Z – test analysis showed that there was an increase in farm output of the farmers after embracing the scheme. The average farm output was 16.01 metric tones before insurance but rose to 21.66 metric tones after insurance. The multiple regression analysis on the influence of socio-economic characteristics on the farm output after insurance showed that educational level, farming experience, farm size and number of technologies used in the farm are significant variables. While age, sex and household size are insignificant variables. The study therefore recommends that more effort should be put in to creating awareness of the laudable objectives of the insurance scheme to food-crop farmers (especially in the enhancing the nation’s quest for food security. [Academia Arena, 2010;2(6):43-47] (ISSN 1553-992X).</p> <p>Key words: Insurance, Output-Performance; Food-Crop; Food-Security, Farm- income; Nigeria</p>	<p>Full Text</p>
8	<p>Model for Computational Analysis of the Quantity of Water Evaporated during Initial Stage Drying of Wet Clay Designated for Production of Spark Plug Ceramic Component</p> <p>Chukwuka I. Nwoye¹ and Ihuoma Ezichi Mbuka²</p> <p>¹Department of Materials and Metallurgical Engineering, Nnamdi Azikiwe University, Awka, Nigeria. ²Department of Materials and Metallurgical Engineering, Federal University of Technology, Owerri, Nigeria. chikeyn@yahoo.com</p> <p>Abstract: A model has been derived for computational analysis of the quantity of water evaporated during initial drying of wet clay (designated for production of the ceramic component of spark plug). The drying process was carried out at the temperature range: 80-95⁰C. The model; $y = \text{Antilog}[(0.9524 \text{ Log}(833/T))]$ indicates that the quantity of evaporated water during the drying process is dependent on the drying temperature, the evaporating surface being constant. It was found that the validity of the model is rooted on the expression $N \text{ Log} = \text{Log} (A/T)$ where both sides of the expression are correspondingly approximately equal to 1. The maximum deviation of the model-predicted quantity of evaporated water from the corresponding experimental value is less than 11% which is quite within the acceptable deviation range of experimental results. It was observed that above 80⁰C, both quantities of evaporated water as obtained from experiment and derived model show proximate agreement; both decreasing with increase in the drying temperature. Water evaporation per unit rise in the drying temperature evaluated from experimental and model-predicted results are -0.16 and -0.10g/⁰C respectively, indicating proximate agreement. [Academia Arena, 2010;2(6):48-53] (ISSN 1553-992X).</p> <p>Key words: Keywords: Model, Water Evaporation, Dried Clay, Spark Plug Ceramic Component</p>	<p>Full Text</p>
9	<p>Model for Predictive Analysis of the Concentration of Dissolved Lead In Relation to the Initial and Final Solution pH during</p>	<p>Full Text</p>

Leaching of Galena in Butanoic Acid

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Abstract: A model has been derived for predictive analysis of the concentration of dissolved lead during leaching of galena in butanoic acid solution. The model;

$$Pb = \text{Antilog} \exp (/)^{0.7407} \left[\left[\right] \right]$$

shows that the concentration of dissolved lead during the leaching process is dependent on the values of the initial and final leaching solution pH. The validity of the model was found to be rooted in the expression $(\text{LogPb})^N = e^{(/)}$ where both sides of the expression were correspondingly approximately almost equal. The maximum deviation of the model-predicted concentrations of dissolved lead from the corresponding experimental values is less than 7% which is quite within the acceptable deviation limit of experimental results. [Academia Arena, 2010;2(6):54-61] (ISSN 1553-992X).

Key words: Model, Lead Dissolution, Solution pH, Butanoic Acid, Galena Leaching

Standardization of Sterilization Protocol for Micropropagation of *Aconitum heterophyllum*- An Endangered Medicinal Herb

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Abstract: A protocol has been standardized for sterilization of nodal segments and seeds of *Aconitum heterophyllum* for its micropropagation intended for its mass propagation and conservation. Three sterilizing agents viz., HgCl₂, NaOCl and H₂O₂ were tested for sterilization by varying their concentration and time of exposure. 100% healthy shoots were obtained when explants were sterilized with 0.1% HgCl₂ for 5 minutes, inoculated on MS basal media with appropriate hormones and observing them for 30 days, while at 7.5% concentration of H₂O₂, 5 minutes exposure provided 90% of aseptic seed germination. Results showed that out of three sterilizing agents HgCl₂ was significantly reducing the contamination of explants and H₂O₂ of seeds in *in-vitro*, which shows that requirement of sterilization, may vary with the type tissue used for micropropagation. [Academia Arena, 2010;2(6):62-66] (ISSN 1553-992X).

Keywords: *Aconitum heterophyllum*, sterilization, micropropagation, conservation, contamination

Effect of Melting Temperature of Pb-Sb-Cu Alloy on Its Electrical Resistivity and Power Dissipation Capacity

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- 11 **Abstract:** The effect of melting temperature of sand cast Pb-Sb-Cu alloy (designated for production of battery heads and plates) on its electrical resistivity and power dissipation capacity was studied following determination of the electrical properties of the alloys (cast using three different techniques; Technique A, Technique B, Technique C and cooled in the furnace) and then heating of the alloy until melting occurred. Technique A, involves simultaneous addition of Cu powder and pouring of the molten Pb-Sb into the mould. Techniques B, involves addition of Cu powder intermittently as pouring of Pb-Sb into the mould was going on and Technique C involves pouring a stirred mixture of heated Pb-Sb alloy and powdered Cu into the mould. The results of the investigation indicate that the current flow, power dissipation and electrical conductivity increases with increase

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	<p>in the melting temperature of the Pb-Sb-Cu alloy. It was also found that the electrical resistance and resistivity of the alloy decrease with increase in the melting temperature. This is sequel to the fact that the minimum additional energy (energy gap) which a bonding electron must acquire to leave the bond in the valence band and move into the conduction band hence becoming free to conduct electricity, decreases with decrease in the electrical resistance, resistivity and with increasing temperature. Increased copper addition (up to a maximum of 8.26%) to the base alloy (Pb-Sb) was discovered to have increased correspondingly the current flow, power dissipation, electrical conductivity and decreased correspondingly the electrical resistance and resistivity of Pb-Sb-Cu alloy so produced. This is attributed to the increased melting temperature of the alloy as a result of increased impurity atoms in the alloys in the form of copper. [Academia Arena, 2010;2(6):67-71] (ISSN 1553-992X).</p> <p>Keywords: Effect, Melting Temperature, Electrical Resistivity, Power Dissipation, Pb-Sb-Cu Alloy</p>	
12	<p>Evaluation Of The Distributive Trade Channels For Selected Food Staples In Imo State, Nigeria.</p> <p>Oguoma, N.N.O.</p> <p>Department of Agricultural Economics, Federal University of Technology, Owerri, P.M.B 1526, Owerri, Imo State, Nigeria. e-mail: nnooguoma@yahoo.com</p> <p>ABSTRACT: This study analyzed the efficiency of the distributive trade channels for Cassava, Maize and Yam in Imo State, Nigeria. It aimed specifically to identify the types of markets for these staples, the category of channel members, their relative efficiency and the factors influencing their relative efficiency. Survey conducted, following the use of the multistage sampling technique, identified a decentralized market for cassava and maize with the dominance of “freelance” retailers followed by the wholesalers and, then, the cooperative retailers ,in that order, as the channel members. The centralized market type was identified for yam, with a predominant north – south flow. Despite the relatively small volume of trade executed by the cooperative retailers, they were found to be relatively more efficient in the channel management of these staples. The factors that influenced the efficiencies of the channel members were the volume of sales and the volume of losses incurred by each category in transaction, cost of capital, type of channel member, cost of transportation and storage. It was recommended, among others that, for these staples, renewed emphasis should be placed on the activities of such group-based channels as the cooperative retailers in order to reduce the level of losses occurring along the channels as well as reverse the trend towards food insecurity staring the economy in the face. [Academia Arena, 2010;2(6):72-79] (ISSN 1553-992X).</p> <p>KEY WORDS: Evaluation; Efficiency; Distributive Trade Channels; Selected Food Staples; Imo State; Nigeria</p>	<p>Full Text</p>
13	<p><i>In vitro</i> Antimicrobial activity of water extract of <i>Moringa oleifera</i> leaf stalk on bacteria normally implicated in eye diseases</p> <p>Thilza I.B.¹, Sanni S.², Zakari Adamu Isah³, F.S. Sanni⁴, Muhammed Talle⁵, Musa Bamaiyi Joseph⁵</p> <ol style="list-style-type: none"> 1. Department of Veterinary Medicine, University of Maiduguri, p.m.b 1069, Borno state, Nigeria. 2. Department of Veterinary Pharmacology, University of Abuja, Gwagwalada, Abuja, Nigeria. 3. Department of Veterinary Pharmacology, University of Maiduguri, p.m.b 1069, Borno state, Nigeria. 4. Department of Biochemistry, University of Maiduguri, p.m.b 1069, Borno state, Nigeria. 5. WHO National Polio Laboratory University of Maiduguri Teaching Hospital. <p>thilzathilzathilza@yahoo.com</p> <p>Abstract: The <i>in vitro</i> antibacterial activity of the water extract of <i>Moringa oleifera</i> leaf stalk extract was conducted. Paper disc diffusion method was used to assess the effect of the extract on <i>Pseudomonas aerogenosa</i>, <i>Staphylococcus albus</i>, <i>Staphylococcus aureus</i>, <i>Escherichia coli</i>, <i>Staphylococcus pyogenus</i> and <i>Enterobacter aerogenes</i>. At dilution of 1000mg/ml, 700mg/ml, 400mg/ml and 200mg/ml only mild activity against <i>Escherichia coli</i> and <i>Enterobacter aerogenes</i> was noticed. <i>Pseudomonas aerogenosa</i>, <i>Staphylococcus albus</i>, <i>Staphylococcus aureus</i> and, <i>Staphylococcus pyogenus</i> was resistant at these concentrations. The highest activity was produced by <i>Escherichia coli</i> at 1000mg/l which comparably is less than that of the standard drug tetracycline (250mg/ml). in conclusion, this study has shown that the water extract of <i>Moringa oleifera</i> posses some degree of antimicrobial activity especially at high dose. [Academia Arena, 2010;2(6):80-82] (ISSN 1553-992X).</p> <p>Keywords: <i>In vitro</i>; Antimicrobial activity; <i>Moringa oleifera</i>; diseases</p>	<p>Full Text</p>
14	<p><i>In-vitro</i> antibacterial activity of <i>Allium humile</i></p> <p>Himanshu Agarwal¹, Shashi Ranjan¹, Garima Kishore¹, JP Bhatt², Sanjay Gupta¹</p> <ol style="list-style-type: none"> 1. Department of Biotechnology, Sardar Bhagwan Singh (P.G) Institute of Biomedical Sciences & Research, Balawala, Dehradun, Uttarakhand, Pin- 248161, India, 2. Department of Zoology & Biotechnology, HNB Garhwal University, Srinagar, Uttarakhand, India 	<p>Full Text</p>

Abstract: This review aims to obtain the preliminary information regarding the inhibitory effects of the extracts of *Allium humile* on the test strains *B. subtilis*, *S. aureus*, *E. coli* and *P. aeruginosa*. The anti-bacterial activities of five solvent extracts viz. n-Hexane, Chloroform, Ethyl acetate, Methanol and Aqueous fractions of *Allium humile* were evaluated using disc diffusion technique. The extracts and fractions demonstrated significant anti-bacterial activity. Extract from Chloroform was the most potent against all the test organisms with the largest diameter of zone of inhibition. n-Hexane also showed considerable zone of inhibition. Ethyl acetate, Methanol and Aqueous fractions also exhibit slight inhibitory effects on both the gram-positive and gram negative test strains. [Academia Arena, 2010;2(6):83-86] (ISSN 1553-992X).

Keywords: *Allium humile*, Antibacterial, Zone of inhibition, chloroform extract, Inhibitory effect

The effect of aqueous leaves extract of henna (*Lawsonia inermis*) in carbon tetrachloride induced hepatotoxicity in swiss albino mice

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ABSTRACT: The hepato-protective effect of aqueous leave extract of *Lawsonia inermis* on Carbon tetrachloride induced liver damage in swiss albino mice was investigated by measuring the serum of Alanine aminotransferase (ALAT) and Aspartate aminotransferase (ASAT). Groups A and F were administered carbon tetrachloride and distilled water respectively. Groups B and C were administered the extract at 100mg/kg and 150mg/kg body weight respectively for seven days prior to carbon tetrachloride treatment, while groups D and E were administered extract alone at 100mg/kg and 150 mg/kg body weight respectively. The extract significantly ($P < 0.05$) decreased the serum levels of ASAT and ALAT, even though not dose dependant. The results suggest that aqueous leave extracts of *Lawsonia inermis* has hepato-protective effects at appropriate dosage. [Academia Arena, 2010;2(6):87-89] (ISSN 1553-992X).

KEYWORDS: Hepato-protective, *Lawsonia inermis*, Carbon tetrachloride, Alanine aminotransferase (ALAT), Aspartate aminotransferase (ASAT).

Factors Influencing the Use of Fertilizer in Arable Crop Production Among Smallholder Farmers In Owerri Agricultural Zone of Imo State

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Abstract: The study evaluated the factors influencing the use of fertilizer in arable crop production among smallholder farmers in Owerri Agricultural Zone of Imo State. The objectives determined factors influencing the use of fertilizer in arable crop production among smallholder farmers, and determined socio-economic characteristics of smallholder arable crop production farmers in the study area. A multistage random sampling technique was adopted in selecting six Local Government Areas (LGAs), two community from each selected LGA, two villages from each selected communities and five farmers from each selected village. Data were collected with the aid of a well-structured questionnaire from one hundred and twelve farmers. Data were analyzed using frequency distribution, and logistic regression analysis. Results of the analysis showed that output of crop, level of education, farm size and price of fertilizer were important factors influencing farmers' use of fertilizer in arable crop production while gender, age and household size were not. The result further showed that the average age of the farmers were 54.3years, 52.7% of them were males. The farmers spent about 8.5years in school and 20.6 years was their average farming experience. They have an average farm size of 1.3ha and household size of 7persons. The number of extension contact per month was twice. [Academia Arena 2010;2(6):90-96]. (ISSN 1553-992X).

Key words: Fertilizer use, arable crops, smallholder farmers, Nigeria

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