



IDENTIFICATION OF ETHICAL CONCERNS/ISSUES IN AGRICULTURE AND RURAL DEVELOPMENT AMONG AGRICULTURAL WORKERS IN IMO STATE, NIGERIA

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Abstract

This paper examines ethical issues of concern among agricultural workers. The specific objectives were to describe the socio-economic characteristics of the respondents, identify the ethical issues of concern, and ascertain the respondents' perception of the issues in agriculture and rural development. Purposive random sampling technique was used to select 250 respondents from six higher institutions in Imo State, Nigeria. Data were collected with the aid of a questionnaire and analysed using percentages and mean. The major issues bothered on food, rural development, information sharing and environment. Results show that the respondents have a positive view of the issues raised such as households must be food secure ($\bar{X}=3.16$), everyone should have the right to food ($\bar{X}=3.36$), among others. Others were farmers health be promoted ($\bar{X}=3.20$), farmers quality of life enhanced ($\bar{X}=2.77$), rural development is a must ($\bar{X}=2.75$). Access to up to date information ($\bar{X}=3.05$), dissemination of reliable information ($\bar{X}=3.02$), biodiversity loss be discouraged ($\bar{X}=2.81$), water quality ($\bar{X}=3.28$), land access ($\bar{X}=3.49$). It means that the issue of good is of great concern as it affects the life we live now and in the future.

Key words: ethical issues, agriculture, rural, food, environment.

INTRODUCTION

The production, transformation and distribution of food and other agricultural products, generally accepted as routine aspects of daily life around the world (FAO, 2001), have a long history – the domestication of plants and animals began already 12,000 years ago in different parts of the world (CAST, 2005). Since that time, in most parts, agricultural practices have undergone significant changes from simple cultivation of crops and rearing of livestock. Agriculture has become intertwined with technological advances (Fossey, 2008).

The following are features of the field of agriculture which gives rise to ethical concerns: a) the universal requirement of food, agriculture's major product (food is vital to human survival); b) agriculture's biological basis is assimilation. Accordingly, the use of extensive fertile land areas, fresh-water and essential nutrients are inevitable in agricultural production; c) the use of plants' and animals' biological growth and reproduction capacities; d) its dependency on stable environment and ecosystem (food production is an organic process, which depends on the exploitation of living resources); e) its foundational importance for national economies; f) farming is a way of life that contributes to cultural norms to an extent disproportionate to the numbers actively engaged in agriculture. It safeguards skills which might

prove of inestimable value in the event of military or environmental crises (Brom, 2006; Herwig, 2005).

Agriculture, which is a key contributor to human livelihood in most parts of the world has undergone significant changes from simple cultivation of crops and rearing of livestock, and has today become intertwined with technological advances such as the "new biotechnologies" – genetic engineering, cell fusion, tissue culture and cloning. On a daily basis we encounter innovative technological discoveries which come with the promise of increased efficiency and productivity resulting from products and processes derived from research and consequently they have become high-priority issues in shaping the future of agriculture (Fossey, 2005; 2007).

Today many large corporations, undertaking pioneering research, contribute to a large body of agricultural inventions. However, the implementation of these technologies has met with considerable controversy and concern to many people across the world. Not only are the views and opinions conflicting at a scientific level, but also in terms of ethical and moral issues surrounding their use. Ethical issues are of particular interest with respect to genetic engineering and animal cloning. Some critics object to the application of genetic engineering; questioning our right to "play God

(Fossey, 2005; 2007). Others object because they believe that biotechnology is unnatural; in their view crossing species boundaries and creating life-forms that could not have evolved in nature, is wrong. Others ask more policy-oriented ethical questions: What specifically are the consequences of biotechnology research, development, and deployment?

Existing values and systems and traditional concepts of nature and human identity are being challenged. Because agriculture is characterized by practices that involve both social and ecological systems, ethical issues and practices in agricultural research have gained prominence (Fossey, 2008). With the advancements in biotechnology, that provide scientists with the means to irreversibly change 'human nature', ethical issues and concerns are far reaching, as they concern nature and environment, human health, animal welfare, sustainability of modern agriculture, socio-economic development, access to resources, and professional and scientific responsibility for research.

Ethical issues in the field of agriculture have gained prominence largely due to the fact that agriculture is characterised by practices that involve both social and ecological systems. But hardly are these activities of agriculture addressed in the context of ethics, and this necessitates the study. According to experts, agriculture has become an issue of moral concern because of the mismatch between global food supplies and human nutritional needs, the impact of agribusiness on rural employment, the consequences of modern agricultural biotechnologies for human and animal welfare, and the effects of intensive production systems on the sustainability of the global environment (Herwig, 2005).

Agricultural ethics may be defined as the "systemic thinking about the values and norms associated with the food system – farming, resource management, food processing, distribution, trade and consumption. Agricultural ethics incorporates elements of philosophical ethical analysis with concerns that arise in connection with the food system (CAST, 2005). The study aimed at describing the socioeconomic characteristics of the respondents, b) identify areas of ethical concern in agriculture, and c) determine perception of respondents on the ethical issues of concern.

METHODOLOGY

The study area was Imo state of Nigeria. The state is located in the South Eastern region of Nigeria with Owerri as its capital city. Imo state lies within latitude 40° 25' N and 70° 15' N and longitude 60° 50' E and 70° 25' E and cover an area of around 5,150sqkm. It is bounded by Abia State on the East and Delta State on the west, Anambra State to the North and River State to the South. The State has a population of 4,904,899 people in 2015 projected from 2006 census figure (NPC, 2010). The climate of the area is fairly constant, with the

raining season beginning in April and lasting until October with annual rainfall varying from 1500mm to 21200mm (60 to 80 inches). An average annual temperature above 20° C (68F) creates annual relative humidity of 75% with humidity reaching 90% in the raining season. The dry season experiences two months of harmattan from late December to late February. The population of the study constituted all the agricultural workers (agric. Superintendents and farm officers) in the six higher institutions in the state namely, Federal University of Technology, Owerri, (FUTO); Imo state university, Owerri, (IMSU); Federal Polytechnic, Nekede, Owerri, (POLYNEK); Imo State Polytechnic, Umuagwo, Ohaji, (IMOPOLY); Alvan Ikoku College of Education, Owerri, (ALVAN); Federal College of Land Resource Technology, Owerri, (FECOLART). Purposive random sampling technique was used to select respondents for the study. From FUTO, 80 respondents were selected, IMSU, 44, FEDNEK, 15, IMOPOLY, 37, ALVAN, 34, FECOLART, 40 respondents were selected to give a total sample size of 250 respondents. Data for this study were with the use of well-structured questionnaire administered to respondents. Objectives 1, 2 were analyzed descriptively using frequency counts presented in tables. Objective 3 was achieved on a 4-point likert type rating scale of strongly agree (SA), Agree (A), Disagree(D) and strongly Disagree(SD) with assigned weight of 4, 3, 2 and 1 added to give 10. This was then divided by 4 to give a mean of 2.50. Any mean response below 2.50 was taken as a negative ranking of ethical issues, while mean scores above 2.50 was adjudged as positive ranking of the issue.

RESULTS AND DISCUSSION

Socio Economic Characteristics Respondents

Table 1 shows that the average age of the respondents was 55.8 years and were mostly males (61.6%), married with average working experience of 10.3 years. Majority of the respondents had BSc degree as shown by 44%, 25% had HND, 10.8% had NCE, and 16% had MSc. On area of specialization, 34.4% trained in animal science, 28% trained in crop production, 10.8% studied general agriculture, 8.4% studied soil science, 5.6% studied agricultural extension. The area of specialization enables the respondents to respond meaningfully having known their various major area of specialization.

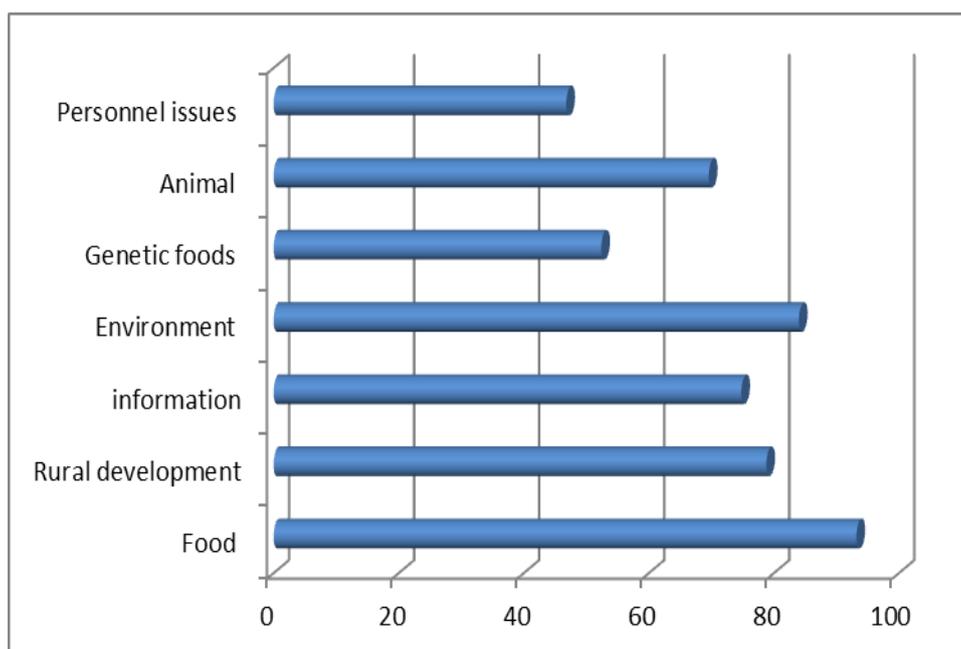
Areas of Ethical Concern

The result in figure 1 reveals the fields from which the issues/concerns emanated from. It could be seen that food (93.2%) emerged as the major area of concern of the respondents. This is because of its importance in human life, well-being and nutrition. Food is so important in human life, that ability to do work, and perform all

Table 1: Socio Economic Characteristics of Respondents

Characteristics	Frequency	Percentage
Age		
Less than 30	14	5.6
31-40	109	43.6
41-50	104	41.6
51-60	23	9.2
Gender		
Male	154	61.6
Female	90	36.0
Marital status		
Single	31	12.4
Married	219	87.6
Working experience (year)		
1-10	150	60.0
11-20	13	29.3
21-30	27	10.8
Highest degree obtained		
OND	10	4.0
NCE	27	10.8
BSc	110	44.0
MSc	40	16
Area of specialization		
Animal sciences	86	34.4
Crop sciences	70	28.0
Soil science	21	8.4
Agricultural economics	10	4.0
Fishers and aquaculture	13	5.2
Forestry and wild life	9	3.6
Agriculture extension	14	5.6
General agriculture	27	10.8

Field survey data, 2015

**Figure 1: Issue fields**

tasks depends on our putting something in the stomach. The second major field of concern was environment with 84% response. This field also embodies our habitat and all other necessary components of our well-being. The air we breathe, food we eat and all human related economic activities all take place in our environment. Other areas of concern were rural development with 78.8%, information (74.8%), genetic foods (52.4%), animal production (69.6%) and personnel issue with 46.8%. The finding agrees with Herwig, (2005) who posited that ethical issues in the field of agriculture have gained prominence largely due to the fact that agriculture is characterised by practices that involve both social and ecological systems. According to experts, agriculture has become an issue of moral concern because of the mismatch between global food supplies and human nutritional needs, the impact of agribusiness on rural employment, the consequences of modern agricultural biotechnologies for human and animal welfare, and the effects of intensive production systems on the sustainability of the global environment.

Importance of Ethical Issues by Respondents

Findings in table 2 revealed that agriculture workers attached much value to ethical issues of concern. Statements on ethical field of food reveals the concern of the respondents. All the eight statements on food reveals the value attached to them by the respondents. The respondents believed that all human households made by God should be food secure with a mean value of 3.16, justice is a God-given right (M=3.44), hunger should be eliminated (M=3.35), food should be of high quality (M=3.27), consumers health (M=3.26), poverty reduction (M=3.27), moderate use of antibiotics (M=3.31), right to food for all (M=3.36). The above is in line with FAO (1998) report which states that food is essential for the survival of human beings; hunger results from neglect of the universal right to food. Both formal ethical systems and ethical practices in every society presume the necessity of providing those who are able-bodied with the means to obtain food and enabling those who are unable to feed themselves to receive food directly. Failure to do so is deemed an injustice, an unethical act, whereas the elimination of hunger and malnutrition is deemed beneficent. Today, nearly every nation state recognizes the need to enhance the well-being of its citizens. Such improvements in well-being also advance human dignity and self-respect (FAO, 2001). While charity is sometimes necessary to respond to desperate and pressing situations, it cannot provide for long-term improvements in well-being, which can only be accomplished by providing people with access to skills, capital, employment, education and opportunities. In addition, for sustainable agriculture and rural development to flourish, a viable rural infrastructure must be in place, together with an enabling policy environment. Human health is improved by the elimination of hunger

and malnutrition. Healthy people are more able to participate in human affairs and more able to live productive and meaningful lives. Furthermore, the protection of human health also involves ensuring adequate nutrition and safeguards against unsafe food (FAO, 2001).

On rural development field, the respondents revealed that sustainable development is a must with a mean value of 2.75, participatory development (M = 3.13), promotion of famers health (M = 3.2); farmers quality of life enhanced (M = 2.77), availability of rural infrastructure (M = 3.38), promotion of consumer choice (M = 3.24), prohibition of waste/toxic dumping (m = 3.29), youth development (M = 3.34), and respect for cultural differences (M = 3.31). The meaning of the above is that human health is improved by the elimination of hunger and malnutrition. Healthy people are more able to participate in human affairs and more able to live productive and meaningful lives. Furthermore, the protection of human health also involves ensuring adequate nutrition and safeguards against unsafe food.

Another ethical field of concern was Undeniable access to information with mean value of 3.05, proper information dissemination (M = 3.00), transfer of appropriate technology (M = 3.02), and information relevant to the user needs and interests (M = 2.70). The respondents have high regard for environmental issues of concern. They agreed that biodiversity loss be discouraged as indicated by a mean response of 2.81, discourage chemical pollution of soil (M = 3.41), chemical pollution of water sources (M = 3.45), and promotion of use of high quality water (M = 3.28). Others issues agreed were access to water (M = 3.94), access to land (M = 3.49), sustainable land use management (M = 3.02), condemnation of ecosystem damage (M = 3.05), access to sustainable energy (M = 3.37), and natural habitat management (M = 3.68). Warso, (2015) is of the opinion that sustainability and sustainable agriculture as a normative concept provides a reasonable starting point of ethical consideration. It encompasses vague moral intuitions such as intergenerational justice, sensible use of resources and so forth. Its importance stems from the exploitative use of resources on which agriculture depends, combined with the belief that the life and well-being of most human beings depends on agricultural production. Principally, a definition of sustainable agriculture can specify the purpose or goal of sustainability in the realm of agriculture. Furthermore, such a definition can specify the means to achieve sustainability in agriculture. The most unarguable goal of sustainable agriculture is to sustain the capacity to produce food, fiber, and other essential agricultural products which are required to satisfy essential needs and well-being of human population for an indefinitely long time.

Genetic modifications remained as ethical issues of value among the respondents. Cultivation of organic food with mean value of 3.49 reveal respondents concern for safe food production. Other concerns were

Table 2: Importance of Ethical Issues by Respondents

Major issue/statement	Mean	SD
Food		
Household must be food secure	3.16	0.773
Right to food for everyone	3.36	0.808
Food should be of high quality	3.27	0.849
Consumers health is important	3.26	0.688
Poverty must be reduced	3.27	0.773
Moderate use of antibiotics	3.31	0.849
Hunger should be eliminated	3.35	0.763
Justice is a God-given right	3.44	0.669
Rural development		
Sustainable rural development is a must	2.75	0.978
Development should be participatory	3.13	0.819
Farmers health should be promoted	3.20	0.875
Farmers quality of life enhanced	2.77	0.917
Availability of rural infrastructure	3.38	0.703
Promotion of consumers choice	3.24	0.728
Prohibition of waste/toxic dumping	3.29	0.760
Genders issues	2.81	0.546
Youth development	3.34	0.772
Respect for cultural differences	3.31	0.786
Information and communication		
Undeniable access to information	3.05	0.798
Proper information dissemination	3.02	1.020
Transfer of appropriate technology	3.00	1.001
Safety of technology	2.84	0.931
Freedom of speech	3.05	0.860
Information relevant to user needs/interests	2.70	0.489
Environment		
Discourage biodiversity loss	2.84	0.741
Water quality be high	3.28	0.621
Access to land a priority	3.49	0.822
Sustainable land use management	3.02	0.755
Access to sustainable use of energy	3.37	0.966
Condemnation of ecosystem damage	3.05	0.853
Natural habitats management	3.68	0.622
Discourage chemical pollution of soil	3.41	0.640
Discourage chemical pollution of water sources	3.45	0.816
Genetic modification		
Cultivation of organic food	3.49	0.966
Safety of GM crops/foods	3.53	0.742
Biosafety training	3.43	0.723
Moderation in use of GM foods	3.80	0.828
Genetic resource access	3.26	0.640
Genetic resource conservation	3.01	0.816
Animal issues		
Recreational capture of animals	2.80	0.351
Human treatment of animals	2.74	0.627
Long life is a value	3.10	0.626
Vaccination of animals	3.14	0.628
Non use of hormones in animals feeds	3.45	0.554
Cross space disease	3.55	0.672
Protection of animals	3.01	0.600
Personnel issues		
Punctuality at duty post	2.90	0.547
Honesty in business dealings	3.01	0.759
Lateness of work	2.4	0.945

Table 2 continued

Truancy/loitering at work	2.81	0.462
Absenteeism	2.65	0.547

the safety of genetically modified crops/foods with mean value of 3.53, moderation on use of GM foods (M = 3.80), bio safety training (M = 3.43), genetic resource access (M = 3.20) and genetic resource conservation (M = 3.01).

Animal issues were of concern to the respondents as they revealed that recreational capture of animals should be discouraged as shown by mean value of 2.80. Other animal issues were human treatment of animals (M = 2.74), long life is a value (M = 3.10), vaccination of animals (M = 3.14), non – use of hormones in animal feeds (M = 3.45), cross space diseases (M = 3.55), and protection of animals (M = 3.01). Other issues were personnel in nature. The following personal issues of ethical concern were punctually at duty post (M = 2.90), honesty in business dealings (M = 3.01), lateness of work (M = 2.94), truancy/loitering it work (M = 2.81) and absenteeism (M= 2.65).

CONCLUSION

The emphasis on food security is ethically justified given the number of people who face starvation. Again, food security promotes socio-economic stability, both nationally and internationally. Access to food for all stems from beneficence and justice. The ethical imperative is urgent, given the number of lives lost, the loss of quality of life, the substantial environmental impact of satisfying food needs, and the availability of natural resources for present and future generations. The dissemination of scientifically correct, unbiased information and the role of an honest broker were clearly thought to be major ethical issue of concern. There needs to be public information in order to allow the public to make informed decisions about food.

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