ResearchGate

See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/377487884

Sociological Issues in the Production of Endangered Crops and Livestock

Chapter · January 2024

CITATIONS
0

READS
11

3 authors, including:



Oluwagbenga Alao
Osun State University
71 PUBLICATIONS **106** CITATIONS

SEE PROFILE

All content following this page was uploaded by Oluwagbenga Alao on 18 January 2024.

The user has requested enhancement of the downloaded file.

t firms operating in the palm oil
il producers, retailers, wholesalers
wholesalers into two which were
olesalers. The producers according
l palms, supply small quantities to
k up the supplies of the producers
he other wholesalers buy from the
they go to the local markets to buy
ir palm oil from producers as well
areas mainly buy from producers
uy from wholesalers.

985): Agricultural Economics and
gman Group Ltd.

eadings in Agricultural Marketing:
Ltd.

(1983): Essential of Agricultural
s.

ory Rural Sociology: A synopsis of
nternational Publisher India Pp 125-

oduction to Rural Sociology, Dove
a.

nics Sixth Edition Pitman and Sons

995): An Introduction to Positive
nar Ltd.

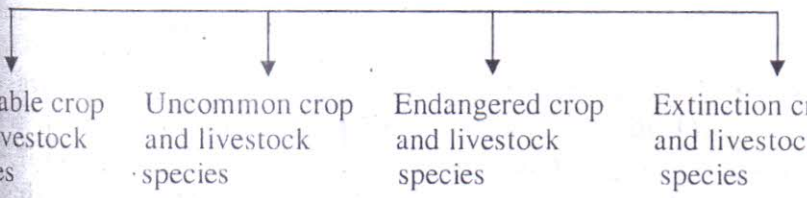
39

Sociological Issues in the Production of Endangered Crops and Livestock

A. J. Farinde, O.T. Alao and O. J. Yusuf
Department of Agricultural Extension and Rural Development,
Obafemi Awolowo University. Ile-Ife
E-mail: afarinde@oau.edu.ng; akinloyefarinde@yahoo.com

Introduction

Sometimes, we often hear people saying in "those days" we used to have, eat and use some crops and or livestock for food, aesthetic values, herbal or medicinal purposes, decorations, games, housing and environmental protection. The "those days" refers to the yester years - decade and century as time interval when the crops and livestock are found around in large quantities. Some of them are mostly underutilized, neglected and even destroyed due to destruction of their natural habitats. The underutilized and the neglected ones were left uncatered for, for long time, hence found in small quantities in isolated places. This makes people to often remark that some crops and livestock species are uncommon. The uncommon crops and livestock species are referred to as being "endangered". The endangered crops and livestock afterwards disappeared from the environment, and are regarded as being lost or gone into extinction. This, sociologically, can be illustrated on a continuum, because the disappearance follows a trend over a certain period; even though man's activities differ between "those days" and "nowadays"



Endangered species are therefore, species present in such small

numbers that it is at risk or danger of extinction, throughout all or a significant portion of its range. "Threatened species" is a related term, referring to a species likely to become endangered within the foreseeable future. According to Okafor (1993), endangered crops and livestock are, at one extreme, extinct or disappeared crops and livestock, while at other extreme, they are neglected, under-utilized, threatened and under-cultivated species, which are therefore in the process of being lost. They also include those crops whose habitats are greatly modified, cleared or destroyed. Okafor (1993) and Padulosi and Hoeschle Zeledon (2004), listed other terms often used synonymously to refer to "endangered" crop and livestock. These include "orphaned", "abandoned", "underutilized". "neglected", "lost", "under-used", "local", "minor", "forgotten alternative", "promising", "underdeveloped", amongst others.

This phenomenon has been left un-curtailed for so long a lime as a result of local culture and emerging cultural belief systems, declining knowledge of the utilization values; and nonchalant attitude of people towards them. In what follows, historical background and causes of species endangerment, protection measures and sociological issues involved in the production of endangered crops and livestock are discussed.

History behind endangered species

In the past, the Western civilization believed that mankind had dominion over every living thing, but as humans became more aware of their surroundings and learned the different effects (positive or negative) of animals, they began to understand the importance of the animal kingdom and the need to preserve these beasts that God had given us. Man had always thought that the uses of animals was solely for the purpose of farming, hunting, or exploited in any way we choose. Due to the seemingly smallness of the human population in comparison to that of the animal kingdom, it was believed that there was no possible way to annihilate an entire species. Ever since the beginning of time, humans have thus always hunted to feed

ghout all or a
s" is a related
ered within the
ndangered crops
ppeared crops and
ted, under-utilized,
are therefore in the
those crops whose
troyed. Okafor (1993)
listed other terms often
op and livestock. These
d". "neglected", "lost",
ernative", "promising",

for so long a lime as a
ltural belief systems,
alues; and nonchalant
iat follows, historical
ent, protection measures
oduction of endangered

ved that mankind had
ians became more aware
rent effects (positive or
nd the importance of the
ese beasts that God had
ses of animals was solely
ploited in any way we
the human population in
t was believed that there
e species. Ever since the
always hunted to feed

themselves. As time passed, humans learned to grow crops, which now also became food for the animals to feed on. As this new trend began to take off, humans began to protect their crops from predators, as it was likely they would lose much of their crops to the hands of a hungry animal. To add to the killing, animals began to lose their habitat to humans for agricultural and expansion of settlement purposes. As their habitats began to deplete, so did the population of the animals within the area. It was not until approximately a hundred and fifty years ago that people began to notice the dwindling numbers of certain species. Unheeding the warning signs indicated by this decrease began the road to animals becoming endangered, and ultimately going into extinct. Now, the disheartening reality is that, we can annihilate not only an entire species, but multiple entireties of species. And that if we do not control how we treat them, one day we will lose these creatures. This is when the idea of conservation began.

Some conservation strategies used in history, in the protecting of endangered species include erection of reserves and promulgation of law prohibiting hunting of certain creatures. The early 20th century, was where the first action was taken to protect endangered creatures. Reserves were the first step towards preservation. Reserves in African countries were erected where only local citizens and honorable guests were allowed to hunt. Such conservation reserve areas in Nigeria comprise the National Park (NP), which include Kainji NP, Old Oyo NP. Yankari NP, etc. Other conservation areas include Game reserves/Wildlife Sanctuaries and Strict Nature Reserves (SNRs). Also, when birds became a hot commodity in the 20th, as their feathers became decorations for the wealthy to put on hats, to stop the bird population from becoming extinct, laws were put in to stop bird-hunting. These laws include federal Environmental protection Agency Decree No. 50 and 58 both of 1989 and Decree No.11 of 1985 on endangered species, and the national wild life policy, all promulgated in recognition of the great need to conserve the remaining local animals and plant species. These laws are still in full effect today, and only allow certain birds to be hunted, granted

that you have the appropriate licenses.

Characteristic features and examples of endangered crop and livestock species

According to Padulosi and Hoeschle - Zeledon (2004), the term" endangered" crops have these common features:

- they are an integral part of local culture, presenting traditional food preparation, and are the focus of current trends to revive culinary traditions;
- highly adapted to agro-ecological niches and marginal areas; they have comparative advantages over commodity crops because they have been selected to withstand stressful conditions and can be cultivated using low input and biological techniques;
- ignored by policy makers and excluded from research and development agenda;
- cultivated and utilized drawing on indigenous knowledge: cultivation and use can he enhanced by using farmer-based knowledge and by introducing innovative cultivation practices;
- characterized by fragile or non-existent seed supply systems; and
- hardly represented in ex-*situ* gene banks.

Adelaja and Ojeifo (1993) used the following criteria for assessing endangered crop species:

- degree of threat/genetic erosion from previous studies;
- degree of use by local people;
- essential as food supplement;
- essential for a particular non-food product;
- distribution/taxonomy known;
- conservation status in natural areas;
- conservation status in collections;
- degree of selection/breeding/introduction;

- potential of pay-off for enhancement;
- regional, national and international importance; and
- need for concentration research and development.

Based on these criteria, they identified the following thirteen fruit species as being endangered with their extinction constituting a threat to the Nigerian fruit security. *Tamariadus indica* (African tamarind), *Dacroyodes edulis* (African pear). *Treculia Africana* (African breadfruit). *Irvingia gabonensis* (African mango), *Dialium guineense, Adansonia digitata, Cola accuminata, Cola nitida, Tetracarpidium conophorum, Uacarpa kikiana, Sclerocarpa birrea, Artocarpus artilis* (Breadfruit), and *Chrysophyllum albidum* (African star apple). Other threatened and endangered crops are presented in Table 1-4 below while Table 5 gives the list of endangered livestock species

Table 1: List of Endangered Fruits Crop Species and their Main Uses

S/N	Botanical Name	English Name	Local Name (Yoruba)	Major Uses
	Fruit tree			
1	*Acacia nilotica*	Egyptian thorn		Fodder, live fence, green manure, soil fertility, fuel conservation.
2	Adansonia digitata	Baobab	Ose	food and fruits, medicinal and bee forage
3	Albizia adianthifolia	West African albizia	Bana-bana	Shade tree, construction and craft making, fuel wood and medicinal.
4	Alchornea cordifolia		Ewe-Ifa	Fuel wood. medicinal and fodder.
5	Alstonia boonei		Ahun	Medicinal and timber.
6	Artocarpus communis	Bread fruit	Gbere oniyan	Food and fruit, timber, soil conservation.
7	Artocarpus	Bread fruit	Gbere elepa	Food and fruit, timber,

	altilis			soil conservation.
8	Azadirachta indica	Neem	Dongo-yaro	Medicinal, wind breaks and fuel wood.
9.	Blighia sapida		Isin	food and fruit, construction and craft making, fuel wood and wind break.
10	Chrysophyllum albidum	African star apple	Agbalumo	Food and fruit, income and fuel wood.
11.	Cocos nuçifera	Coconut	Agbon	Food and fruit, income and medicinal.
12	Coffea arabica	Coffee	Kofi	Income, food, staking and stimulant.
13	Cola acuminate	Cola nut	Obi gbanja	Income, social, food, culture, medicinal, environmental protection and timber.
14	Cola nitida	Cola nut	Obi abata	Income, social, food, culture, medicinal, environmental protection and timber.
15	Dacryodes edulis	African pear	Pia	Food and fruit, medicinal and income.
16	Dialium guineense	Velvet tamarind	Awin	Food and fruit, wind break, soil fertility and waste land reclamation.
17	Garcinia cola	Bitter cola	Orogbo	Social, income, culture, food and fruit, construction and craftmaking, bee forage, environmental protection and medicinal.
18	Hevea brasilensis	Rubber	Roba	Income, tyre, timber and fuel wood.
19	Irvingia gabonensis var. excels	Dika nut	Apon	Food and fruit, fuel wood, income, medicinal, timber and construction and craft

				making.
20	Irvingia gabonensis var. dulcis	Bush mango	Oro	Food and fruit, fuel wood, income, medicinal, timber and construction and craft making.
21	Moringa oleifera	Horse radish tree	Ewe-igbale	Live fence, bee forage, fodder, water purifier and food.
22	Parkia biglobosa	African locust beans	Iru-igba	Food and fruit, fodder, timber, income, waste land reclamation, soil conservation, soil fertility improvement, construction and craft making, wind break, bee forage, shade tree and termite control.
23	Raphia hookeri	Raphia palm	Pako-oguro	Social, culture and medicinal.
24	Synsepalum albidum		Agbayum	Sweetener.
25	Tetracarpidium conophorium	Wall nut	Awusa	Food and fruit, dyes and medicinal.
26	Thaumatococcus danielli		Ewe-iran	Sweetener.
27	Vitex doniana	Black plum	Oori	Food and fruit, timber, fuel wood, construction and craft making bee forage and leaves as vegetables.
28	Vittelaria paradoxa	Shea butter tree	Emi	Food and fruit, fuel wood, timber, fodder and construction and craft making.

Table 2: List of Endangered Spices Crop Species and their Main Uses

S/N	Botanical Name	English Name	Local Name (Yoruba)	Major Uses
1	Afranomum melegueta	Melegueta pepper	Atare	Medicinal, social, food and cultural.
2	Allium fistulosum	Onion	Alubosa elewe	Medicinal, food and income.
3	Monodora myristica	African nutmeg	Notmeegi or ila-osin	Food and fruit, medicinal and bee forage.
4	Ocimum basilicum	Basil	Efirin wewe	Medicinal and food.
5	Ocimum gratissimum	Basil	Efirin nla	Medicinal and food.
6	Piper guineensis	Black pepper	Iyere	Medicinal, food and income
7	Tetrapleura tetraptera		Aidan	Food and fruit, dyes and medicinal.
8	Xylopia aethiopia	African spice tree	Eeru	Food and fruit, fuel wood, construction and craft making and medicinal.
9	Zingiber offinale	Ginger	Atale	Food and fruit, income and medicinal.
10	Capsicum fruitescens	Pepper	Ata-ijosin	Food and medicinal.

Table 3: List of Endangered Legume Crop Species and their Main Uses

S/N	Botanical Name	English Name	Local Name (Yoruba)	Major Uses
1	Adenanthera pavonina	Bead tree	Ijokun	Waste land reclamation, green manure, construction and craft making, soil conservation, soil fertility, bee forage, fuel wood.
2	Sphenostylis	African yam	Sese	Food, fodder and soil

	stenocarpa	beans		fertility improvement
3	Phaseolus lunatus	Lima beans	Awuje	Food, fodder and soil fertility improvement
4	Cajanus cajan	Pigeon pea	Otili	Food, medicinal, boundary demarcation, fodder and soil fertility.
5	Glycine max	Soya bean	Ewa-soya	Food, milk, fodder and soil fertility improvement

Table 4: List of Endangered Vegetable Crop Species and their Main Uses

S/N	Botanical Name	English Name	Local Name (Yoruba)	Major Uses
1	Adanisonia digitata	Baobab	Ose	Food and fruit, medicinal and bee forage.
2	Abelmoschus esculentus	Okro	Ila-iroko	Food and medicinal
3	Basella alba		Amunututu	Food and medicinal
4	Celosia argentea		Sokoyokoto	Food and medicinal
5	Celosia trigyna			Food and medicinal
6	Crassocephalum biafrae		Ebolo	Food and medicinal
7	Crassocephalum crepidioides			Food and medicinal
8	Crassocephalum togense			Food and medicinal
9	Ceratotheca sesamoides			Food and medicinal
10	Justica insularis			Food and medicinal
11	Launaea taraxacifolia		Yanrin	Food and medicinal
12	Momordica charantia			Food and medicinal
13	Piper umbelatum			Food and medicinal
14	Solanum marocarpon		Osun	Food and medicinal
15	Solanum		Igbagba	Food

	incanum			
16	Solanum scabrum mill			Food and medicinal
17	Vernonia amygdalina		Ewuro-odo	Food and medicinal
18	Vitex doniana	Black plum	Oori	Food and fruit, timber, fuel wood, construction and craft making, bee forage and leaves as vegetable.

Table 5: List of Endangered Livestock Species

S/N	Botanical Name	English Name	Local Name (Yoruba)	Major Uses
1		Duck	Pepeye	Consumption.
2		Turkey	Tolo-tolo	Consumption, Income.
3		Pigeon	Eye'le	Consumption, Pet, income.
4		Dove	Eye adaba	Consumption, Pet
5		Guinea rat	Emo oyinbo	Consumption, Income.
6			Eye awo	Consumption, Income.
7		Rabbit	Ehoro	Consumption, Income and medicinal.
8		Pig	Elede	Consumption, Income.
9		Parrot	Aye kooto	Income, Pet
10		Cat	Ologbo	Pet, Consumption
11		Dog	AJa	Pet, Consumption
12		monkey	Obo	Pet, Consumption

Causes of the crops and livestock endangerment

The gradual disappearance of crop species from their natural habitat

nd medicinal
and medicinal
od and fruit, mber, fuel wood, construction and craft making, bee forage and leaves as vegetable.

Major Uses
Consumption.
Consumption, Income.
Consumption, Pet, income.
Consumption, Pet
Consumption, Income.
Consumption, Income.
Consumption, Income and medicinal.
Consumption, Income.
Income, Pet
Pet, Consumption
Pet, Consumption
Pet, Consumption

ent
m their natural habitat

is not unconnected with the varying degree of actions taken at individuals, groups and community, and government levels. The causes are therefore discussed under the following subheadings: Habitat destruction, replacement of exotic species over local ones and other species related characteristics, environmental pollution and degradation, overexploitation of certain species, institutional factors, and belief system and breakdown in indigenous knowledge system.

Habitat destruction .

This is the single greatest threat to species around the globe. Natural habitat are vulnerable and subjected to natural disaster and destruction of vital areas that includes the breeding sites, nutrients, physical features, and environment that species need to survive. Humans have altered, degraded, and destroyed habitat in many different ways. Logging around the world has destroyed forests that are habitat to many species. This has a great impact in tropical areas, where species diversity is highest. While it may be argued that, cut forests often regroup; nonetheless, forests are destroyed much faster than they can regenerate. The rate of forest destruction in Nigeria has been enormous even as far back as three decades. NARESCON (1991) reported annual forest fires by man, which led to incalculable losses, especially of those species with low degree of fire tolerance. Ola-Adams and Iyamabo (1977) estimated that about 26,000 hectares were destroyed annually, in the forest zone alone, during conversion of natural forests to artificial plantations and other forms of land development. Recent estimates are that over 90 percent of the natural vegetation has already been cleared in Nigeria (WWF, 1989) and up to 350,000 hectares of forest and natural vegetation is still being lost annually, over the whole country (NEST, 1991).

Due to continuous increase in man's population and quest for man's survival, several of man's actions have contributed to the destruction of natural habitat of endangered species. Development and expansion of settlement housing have been responsible for loss of large areas of natural habitat. Also, agriculture and mining has destroyed habitat

because the landscape often must be altered in order to access the minerals, and vegetations along rivers are dried up due to depiction of water for human use (usually for agriculture), subsequently leaving many aquatic species with insufficient water. Other causes, due to man's activities, responsible for degradation of natural habitats include urbanization, Industrialization and road and dam construction.

Preference for Improved Varieties over Local Ones and other Species Characteristic

Another crucial issue that has contributed to extinction of most endangered crop species is neglect of local food plant in favour of exotic species: The Food and Agriculture Organisation (FAO) (1998) identified a singular cause of genetic erosion in crops as replacement of local varieties by improved or exotic varieties and species. The world market has been tailored to focus on only a few crops to the extent that industrial growth globally is dependent on continued supply of those few elite crops at the expense of the locally available varieties. Some features of certain crop species have also contributed to their being left unexploited and their potential unharnessed. These, as noted by Okafor (1975), include difficulty in collecting from the wild, and of replacement or regeneration of certain plant resources, long gestation period before fruiting, and lack of adequate knowledge of methods of propagation for most wild plants.

Environmental pollution and degradation

Pollution, natural disasters and climate change have all contributed to the degradation of the environment and endangerment of livestock species. Direct harm often occurs when pollutants make water uninhabitable for aquatic organisms (plants and animals). Examples abound in the Niger delta regions of Nigeria where thousands of aquatic creatures were killed and gone into extinction due to oil spillage. Agriculture and industrial production cause chemicals such as fertilizers and pesticides to reach water-ways. Lakes have

become too acidic from acid rain. Other human activities such as logging, grazing, agriculture, and housing development cause siltation in waterways. Kiambi and Atta-Krah (2003) reported that while natural disasters, including drought, floods, pests, and diseases have led to widespread losses of plant diversity from farmers' field and natural habitats; climate change poses a threat to diversity, as many plants are unable to cope or adapt to changing temperatures and moisture gradients caused by global warming and the associated climate change. Also gas flaring, animal forest fires and resulting gully erosion, where coal, tin, iron were mined, have all contributed to environmental degradation and pollution, and subsequently promote endangerment of livestock and crop species.

Overexploitation

Many species have become endangered or extinct from killing by humans throughout their ranges, for example, the passenger pigeon, formerly one of the most abundant birds in the United States, became extinct largely because of overexploitation. This overexploitation is especially a threat for species that reproduce slowly, such as large mammals such as elephant and lion; and some bird species. Overfishing by large commercial fisheries is a threat to numerous marine and fresh-water species.

Institutional Factors

These include contribution of both governmental and research institutions to endangerment of crop and livestock species. The issue of inadequate policy guidelines and lack of practicable conservation measures, regarding the research, development and utilization of endangered crops in Nigeria have immensely contributed to the endangerment of these crop species. This has led to under-utilization of the potential species, thus making them gone into extinction. Also, the research mandates of most institutions focus on the routinely cultivated staples at the expenses of the endangered crop species. Thus, at present greater attention is paid to the development of exotic crops to the neglect of the locally available ones. Also, the activities

of gatherers who specializes in the search and gathering of plant leaves, bark and root for economic reasons and herbal purposes without necessarily replanting the plant have contributed to extinction of many useful plants and shrubs in Nigeria. Nigeria government is not making adequate investment in the area of conservation of 'endangered' plant heritage. Political instability, civil unrest and insurgence that led to loss of genetic resources in fields as farmers flee from war torn areas and *ex-situ* conservation facilities are destroyed, have all aggravated extinction of endangered livestock and crop species. In addition, Okafor (1975) noted that lack of information on the resource use base and on sustained yield arising from lack of up to date resource inventory, inefficient use and waste of materials due to lack of appropriate technology and knowledge for processing, preservation and storage are all contributory factors to extinction of endangered species.

Belief System and Breakdown in Indigenous Knowledge System

Emerging belief system of the people influences their attitude towards the utilization of some endangered species. Some religion prohibits the consumption and utilization of certain crops and livestock species, thus making the adherent of these religious beliefs abandon these crops and livestock. Gradually over the years, later generation lost cognizance of useful plants and their range of uses, thereby leading to disappearance of local knowledge of these crop species and their uses. Examples of these are bitter cola and kolanut. Also, erosion of culture and breakdown of traditional (indigenous) knowledge system of plant resources management result in the loss of locally available varieties.

Protection Measures of Endangered Crop species

In order to preserve the wide diversity of the 'endangered' crop in Nigeria, it will be necessary to take positive steps to remove those factors that are threatening their survival. Some of these were opined by Okafor (1993) as follows:

(a) Survey to determine the status of the different 'endangered' crop species concerning uses, distribution and the danger facing each of them, in the country's eco-systems. In this way, the crops can be categorized in order of priority for action that will ensure their survival and improvement. Such plant census would be necessary in all the agro ecological zones of the country and it should be undertaken at a time when the crops can be fully identified. Towards this end, it will be necessary to know the time of the year when the crop would be flowering and fruiting to allow for adequate identification.

(b) A few institutions of higher learning and research institutes have in the past undertaken germplasm collection and maintenance of 'endangered' crop genetic materials. It will be necessary to determine the state of the current collections in the institutions with a view to preventing duplication and occurrence of past errors made by such institution towards proper maintenance of the genetic materials.

(c) Germplasm collection of the 'endangered' crop should be undertaken and maintained in suitable centers where they can regularly be multiplied and utilized for genetic improvement and breeding of new types. The conservation can be *in-situ* whereby the crops are maintained in their natural environments or *ex-situ* where the collection will be maintained outside the crops environments in specially prepared structures, for example cold rooms, refrigerators and collection blocks.

(d) It is important that immediate steps be taken to encourage in-depth studies on the mode of propagation of 'endangered' crops in order to provide information that will encourage large-scale propagation and production of the crops.

(e) There are many government-reserved forests in the country. The regulations preventing the exploitation of crops in these zones are often abused and crops, which ought not to have been harvested from the zones, are regularly removed for various uses.

Adequate steps should be taken to enforce these laws for the maintenance of the crop species.

(f) There is an urgent need for the citizens to be educated on the importance of 'endangered' crop as compared to the exotic ones. Such education will be required at all levels and it should start from the primary schools. The study on the advantages of plant conservation should be included in the curriculum of the higher institutions in the country. Deliberate effort should be made to popularize the 'endangered' crops outside the localities where they are not commonly used (Denton and Ojeifor, 1993).

(g) A secure future for 'endangered' crop varieties depends on their continued use. This depends upon the recognition and affirmation of the crops nutritional, economic and cultural benefits. One essential component of revitalization is the promotion of their processing, consumption and the development of a strategy that would support their cultivation. Education campaigns strategy that will make urban and rural people aware of the importance of these 'endangered' crop food products needs to be developed and implemented.

(h) Changes are also necessary at policy level. The modification of national food policy in order to be supportive of 'endangered' crops is important. If government agencies guaranteed minimum prices to producers and regular price controlled supplies to consumers, these would have a better market chance.

(i) International and nationally administered food aid programmes should base their activities on local food products and not on poor quality leftovers from developed countries. This would have a strengthening rather than a destabilizing effect on local production (Padulosi and Hoeschle-Zeledon, 2004).

Sociological Issues Involved in Production of Endangered Crops and Livestock

In spite of the nutritional, medicinal, cultural and genetic resource

values of the endangered crops and livestock, and their immense contribution to food security and economic growth in Nigeria. Some sociological issues influencing their going into extinction persist. Some of the societal and social behavioural issues involved in production and rearing of the endangered crops and livestock are as follow:

(i) Devilish phobia attributed to production and rearing of some crops

This refers to irrational fear associated with production of some crops and livestock. For example, the fear of being blind if someone sees *Aframomum melgueta* (Alligator pepper) in the nursery within the first seven days of germination prevents nursery establishment and consequently unavailability of its seedling. Also planting of *Cocos nucifera* (Coconut) is being inhibited by the source of the planting material. It is believed that if the seedling is from a tree planted by a person who died before the plant started fruiting, then whosoever plant from such a tree will also die. The only seedling safe to plant is from a tree, which the person that planted it, survived to eat of its fruit. Also, fetishism associated with some plants, for example, *Blighia sapida* being planted around houses as shade and wind breaker are being endangered by cutting them down for possessing evil spirits when bad happening ensued in the community.

(ii) Belief system prevents the use of some crops

Religion of the people prevents the utilization of some crops, such as *Aframomum melegueta, Garcinia cola, cola accuminata, cola nitida, Zingiber officinale, Piper guineensis* for naming ceremonies, chieftaincy title ceremonies and other social uses. This action diminished the interest of the farmers from producing these crops. The question usually raised by the farmers is 'how can I plant what I can not use or sell openly'. Also, rearing pigs and dogs is not found in Muslim dominated areas, due to religious belief forbidding the consumption of the animals.

(iii) Generational loss of indigenous knowledge associated with production and utilization of some crops.

The break down in the family roles of transferring the indigenous knowledge on production and utilization of certain crops and livestock from one generation to another, through training and socialization of children, has brought drastic reduction in the production of such crops and livestock. This is not unconnected with the disintegration of nuclear family ties and the death of elderly ones, who have the knowledge of production and utilization. It is imperative to resuscitate the social network at the extended level and survey the local knowledge of production and utilization for proper documentation.

(iv) Cultural taboos associated with cultivation of some crops and livestock.

Some cultural taboos also prevent the farmers from production of some endangered crops and livestock species. Practice of planting at sitting position by young children of age less than ten years of Cocos *nucifera, in* order to grow dwarf and mature early. It is believed that only old aged women can rear the pigeon birds, and after the demise of the person rearing it, the birds will fly away. In addition, old women are the one cultivating and producing Allium fistulosum at Ire in Boripe Local Government Areas of Osun State. Pitifully, most of these women are dead and gone with the production technology, or living with their children and wards in cities. Cat rearing is attached with evil spirit and whosoever rears cat is regarded devilish under the pretence that cat is easily used in possession and demonstration of evil spirits.

(v) Farmers' anticipation of quick returns from crops of long gestation period

Farmers' quick and high expectations of economic returns on planted crops prevent them from production of crops that take very long period before fruiting. For example, *Garcinia cola and* Shea butter (ori) tree take about 15 to 25 years from germination to first fruiting. Most of the endangered tree crop species belong to this category, hence reduction in the farmers' interest in their production

and their subsequent extinction. Again, low market value for the produce and products of endangered crops is also a great challenge for their production. For example, *Coffee spp* has no market in Osun state, where there is, the value is so small to the extent that most of the farmers at Ifewara in Atakumosa LGA in the State have resulted to cutting of the stem for yam staking, hence resulting in their extinction.

(vi) Unhealthy attribute of some livestock

Dirty habit, pest and disease-harboring traits of some of endangered livestock specie cause reduction in their production. Focal pig for example, is known for their dirty habit and spreading of chigoe-flea (Jigger), which enters under one's toenails and causes intense irritation among the dwellers of communities where they are reared. Also, the current global awareness trailing the recent outbreak of swine flu contributes to this. Ducks swim in and spoil potable water in the rural communities causing water borne diseases too. Also, whitish littering of pigeon feaces that disfigured the compound where they are reared is unhealthy for the environment.

(vii) Sudden loss of some livestock

Some of the endangered livestock are prone to loss and death, which serve as a great lost to the owners. For example duck while swimming in small rivers or run away water during the raining period could get lost by losing its way to bigger rivers. Also, some pigeon birds fly away without coming back. All these contribute to serve as discouraging factors for the intended farmers, hence their endangerment.

Conclusion

One major sociological issue on endangered crops and livestock is their re-establishment for cultural, nutritional, medicinal and genetic resource values. There is need for national survey of the endangered crops' germplasm and livestock breeds for breeding and multiplication for production. There is also need for national survey of the local knowledge of the production, processing and utilization of the

endangered crops and livestock for proper documentation. The cultural taboos and belief system associated with the production, processing and utilization of the crops and livestock should be removed and research should concentrate on their improvement for economic, medicinal, nutritional and genetic values. There should be clear cut policy on the re-establishment and conservation of the endangered crops and livestock in Nigeria, and these crops and livestock should be made part of the national mandate crops and livestock for National Research Institutions in Nigeria.

References

Adelaja, B. A. and Ojeifo, I. M (1993) Conservation of Endangered Fruit Species in Nigeria: Our Omission and Commission. In: Okojie J. A. and Okali, D. U. U. (eds) *Lost Crops of Nigeria: Implication for Food Security.* Conference Proceedings series No3. 21st-22nd May 1992. University of Agriculture Abeokuta. Pp. 203-207.

Dellon, 'I.anre and Ojeifo, I.M. (1993) The Neglected Vegetable Crop Species in Nigeria. In: Okojie J. A. and Okali, D. U. U. (eds) Lost *Crops of Nigeria: Implication for food Security.* Conference Proceedings series No3. 21st-22nd May 1992. University of Agriculture Abeokuta. Pp. 95-101.

FAO, (1998) The global plan of action on plant genetic resources for food and agriculture. Rome, Italy. Pp. 104.

Kiambi, D. and Atta-Krah K (2003) Plant Genetic resources in the global and African setting. Proceeding of the first PROTA. Int. workshop 23-25 September, 2002. Nairobi, Kenya. Pp. 269-270.

NARESCON (1991), Natural Resources Conservation Action Plan.

NEST (1991) Nigeria' Threatened Environment. A National Profile. Nigeria Environment Study / Action Team: (NEST). Ibadan. Pp. 1-10.

Okafor. J. C. (1975) The Place of Wild (uncultivated) fruits and Vegetables in the Nigeria diet. Proceedings of National Seminar on

fruits and Vegetables. Ibadan Pp. 153-171.

J. A. and Okali, D. U. U. (eds) *Lost Crops of Nigeria Implication for food Security.* Conference Proceedings series No3. 21st-22nd May 1992. University of Agriculture Abeokuta. Pp. 3-26.

Ola-Adams, B.A. and Iyamabo, D.E: (1977) Conservation of Natural Vegetation in Nigeria. *Environmental Conservation* 4 (3. Pp. 217-226.

Padulosi. S. and Hoeschle-Zeledon, I. (2004) Underutilized Plant Species: what are they? In: Erika V.D. J. Hollands, Ingevall, A. Minderhoud Jones, M. and Roem, W. (eds.) Valuing Crop Diversity. March 2004 volume 20 no1 Magazine on Low external Input Sustainable Agriculture. Pp. 1-5.

WWF (1989) Cross River National Park, Oban Division: A plan for Developing Park and its Support Zone. World Wide fund for Nature (WWF,Godalming).http://flatplanet.wikispaces.com/Group+10+Definition+of+Endangered+speciehttp://www.endangeredspecie.com/causes_of_endangerment.htm http://www.answers.com/topic/endangered-species