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Comparative Organic Grass-cutter Farming in Benin and Nigeria – A Cursory Review

Banjo, O.S.*, Sodique, F.R. and Ettu, R.O.
Department of Agricultural Production and Management Science,
Tai Solarin University of Education, P.M.B. 2118, Ijagun, Ogun State, Nigeria.
*E-mail for correspondence:banjowolepolo@yahoo.com

Abstract

This paper examines the exiting principles and practice of grasscutter production in Nigeria and Benin Republic. It also examines the level of awareness of organic grasscutter production in the two countries. The paper identifies that the level of awareness and enlightenment in organic grasscutter in Nigeria compared to Republic of Benin low, when compared with other African countries like Ghana, Egypt, Tanzania, Ethiopia, organic farming in both countries is relatively low. This papers further attempts to discuss the issues and challenges of adopting and propagating organic grasscutter farming in Nigeria and Benin Republic.

Keyword: Organic farming, agro chemicals, issues, challenges, grass-cutter and awareness.

1. Introduction

The grasscutter *Thryonomys swinderiames* is a wild herbivorous rodent found in Africa (Rosevear, 1999, Baptist and Mensah, 2001; Adoun, 2007). In West Africa field-grass provides its main habitat and food. Apart from grass, grasscutter also thrives well when they are fed with kitchen wastes, plant debris collected after clearing and harvesting especially the leaves and stems of crops like maize, sugarcane and cassava. Baoku and Ogntana (1997), Banjo (2011) showed that higher growth rate and feed utilization were recorded for grasscutter fed multi-nutrient supplements, kitchen wastes and water hyacinth over pelleted diet.

Organic agriculture or organic farming as defined by Olabiyi *et al* (2000) is a system that sustains the ecology, while Akinlade et al (2009) defined organic livestock farming, as one that deals with production of agricultural products and by-products using entirely or almost entirely natural or non-synthetic inputs. Grasscutter farming is an inseparable and important aspect of organic agriculture.

Grasscutters are usually raised with conventional methods of housing, feeds and feeding regimes, however with the concept of organic animal farming techniques, the standards set locally by the two countries should be used.

In grasscutter feeding, the use of synthetic growth promoters and feed additives in fattening operation as well as the use of oxytocin and other synthetic hormones should be strictly avoided. Natural growth promoters like *Moringa oleifera* and non-synthetic drugs like extract from herbs which have been proved effective in the treatment of many diseases should be used. For example, sheep fed on a basal diet of *Panicum maximum*, supplemented with leaves of *Philotigma tongii* as reported by Akinlade *et al* (2009) are unlikely to come down with any bacteria or viral infections. This can also be applied to grasscutters. Based on this, the purpose of this paper is to take an overview of comparative organic grasscutter farming in Benin Republic and Nigeria, with a view to encouraging prospective farmers in organic grasscutter farming.

2. Organic animal production

Taking a look at the world production of organic products, forty per cent of the world's organic producers are in Asia, followed by Africa (28%) and Latin America (16%). The countries with the most producers are India (677,257), Uganda (187,893) and Mexico (128,862). Yet animal products are still a small share of the organic market, compared to fruits, cereals and herbs, and, in terms of exports, they are almost negligible in developing countries (35). Under organic livestock production systems, consumers expect organic milk, meat, poultry, eggs,

leather products, etc. to come from farms that have been inspected to verify that they meet rigorous standards, which mandate the use of organic feed, prohibit the use of prophylactic antibiotics (though in fact all antibiotics are discouraged except in medical emergencies) and gives animals access to the outdoors, fresh air and sunlight (Chander et al. 2010). The primary characteristics of organic livestock production systems as iterated by Chander et la. 2010 are:

1. well-defined standards and practices which can be verified
2. greater attention to animal welfare
3. no routine use of growth promoters, animal offal, prophylactic antibiotics or any other additives
4. at least 80% of the animal feed grown according to organic standards, without the use of artificial fertilizers or pesticides on crops or grass.

To be precise, organic meat, milk and eggs are produced, harvested, preserved and processed according to verified organic standards (Chander et al. 2010). The key considerations in organic animal husbandry that producers and other stakeholders need to take into account are listed below:

a) the origins of livestock,
b) livestock feed,
c) living conditions,
d) waste management,
e) health care, and
f) record keeping/the audit trail (Chander et al. 2010).

3. Methodology

The source of information for this paper was secondary information. Information were gathered from literature, journals, conference proceedings, Songhai Centre, Benin; the National Organic Agriculture Network (NOAN) and other supporting institutions. Discussions were held with agricultural researchers, government agencies, non-governmental organisations (NGOs), grasscutter farmers. Songhai Centre was chosen as a representative grasscutter farming organisation for Benin while few selected farmers were chosen for observation in Nigeria.

4. Results and discussion

4.1 Organic agricultural production in Benin Republic and Nigeria

Benin with a population of about 8 million has the potential of adopting organic farming faster and better than Nigeria. From a cursory review, the adoption rate in both countries seems low; none-the-less there is no adequate statistics to back this up. What is important is that both countries are undergoing a transition period in organic farming. The most developed organic product in Benin is Cotton, which is major source of foreign exchange aside manufactured products'.

In Benin, the damage to both human health and the environment has prompted the widespread introduction of organic farming methods. Organic farming has almost doubled since 2003. Organisations such as the Pesticide Action Network, based in the UK, together with local partner OBEPAB, (Organisation Beninoise pour la Promotion de l'Agriculture Biologique), have trained local farmers - particularly women - in Integrated Pest Management (IPM) and organic cotton farming through Farmer Field Schools. We also have the West African Network on Organic Agriculture Research and Training (WANOART) it is a transnational network of Higher Education Institutions in Nigeria, Ghana, Sierra Leone and Benin Republic founded in March, 2009 to build capacity and expertise in organic agriculture in the West Africa sub- region of Africa.

4.2 Organisations in Benin involved in Organic agriculture:

1. Réseau de Développement d'Agriculture Durable (REDAD)
2. Organisation Beninoise pour la Promotion de l'Agriculture Biologique (OBEPAB)
3. Karethic

About 70 per cent of the Nigerian farmers practice organic agriculture by default because of the prohibitive costs of chemical fertilisers and other agrochemicals. "They are not touched by government policies on input supply and

other incentives to optimise agricultural productivity Adeoye, 2011. The Director of Research and Development at Olusegun Obasanjo Center for Organic Research and Development (OOCORD), Prof Jiire Adeoye, in collaboration with agronomists at the University of Ibadan have developed organic fertiliser from waste products generated in large quantities in urban centers and raised the awareness of the importance of organic produce to their health. With funding support from the MTN Foundation (a mobile telecommunications giant), Nigeria now has integrated organic fertiliser processing plants at strategic places in Oyo and Ondo states. And with the intervention of the Nigeria Network for Awareness and Action for Environment (NINAFFE), a local non-governmental organisation, the products are being distributed to small scale farmers to "create wealth from waste". The products are now in high demand among farmers in Ondo State, Nigeria's largest cocoa producing state.

Organic farming in Nigeria is emerging; from a cursory review, we have very few farmers adopting the practices under the tutelage of some institutions like universities, research institutes and some private organisations. But adequate research is required to have appropriate information and data on this.

Presently, certified agricultural products in Nigeria are: ginger, turmeric and lemon grass tea. In the case of livestock production, the standards for certification are being developed, while few farms are in transition.

Supporting institutions on Organic farming in Nigeria are;

i. Organic Agriculture Projects in Tertiary Institutions (OAPTIN)
ii. Nigerian Organic Agriculture Network (NOAN)
iii. Olusegun Obasanjo Center for Organic Research and Development (OOCORD)
iv. Ladoke Akintola University of Technology, Ogbomosho (LAUTECH) Organic Farm.

As in most West African countries, the organic sector in Nigeria is still under developed. Estimates of certified organic production (Table 1) as reported by IFOAM and FiBL, 2010 suggests that 3,042, 3,154 and 3, 073 hectares of land were under organic management in the year 2006, 2007 and 2008 respectively, accounting for 0.00% of the total agricultural land (IFOAM and FiBL, 2010). The reports of Age *et al,* (2010) indicated that organic farming is on the increase due to the efforts of the National Organic Agriculture Network (NOAN) and government agencies such as Ladoke Akintola University of Technology, Ogbomosho (LAUTECH).

4.3 Organic Grass-cutter production in Benin and Nigeria

Talking about organic grass-cutter production, Nigeria and Benin are yet to get there. The case of Songhai Center's grass-cutter production in Benin, the Center is an integrated farm center which uses Zero Emission Research Initiative (ZERI), low input agricultural production system with focus on human resource development and use of indigenous knowledge which are expected to yield positive change that will create a new African Society. It is cost effective in that it does not make use of external inputs. This looks quite different from certified organic farming, for certified organic farming has laid down principles which must be followed and inspected as truth, get certified by product and not by farm; before such products can be termed 'organic product'. 'Organic' as observed is a trade mark for certified organic products. Grasscutter farming on the farm is subjected to intensive care system, whereby the animals are under confinement. Though the Centre follows most of the necessary steps in organic grasscutter production but the issue of confinement negates the principles of organic animal farming, where animals are given some freedom of movement.

4.4 Challenges of organic animal production

1. Limited export prospects for organic livestock products due to quality controls (that is the so-called 'trade barriers') and self-sufficiency in importing countries (Chander et al. 2010).
2. When we talk about livestock standards, there are significant variations in the interpretations and requirements. For instance, the EU requirements on organic feed and fodder, antibiotics, etc. differ from those of the USA, laid down in the National Organic Program (NOP,) (Chander et al. 2010).
3. To raise livestock organically, their fodder crops must also comply with strict organic standards. And thus, the need to surmount these barriers.
4. In terms of organic certification standards, many African countries are just developing their own. Of recent, Nigeria had a workshop on this and has gone a long way in developing one.
5. Meeting the certification requirements and quality standards of an external market for livestock can be extremely demanding.

6. Lack of training and certification facilities. Many hear about organic farming but for the details, they lack the knowledge.
7. Small farmers in tropical countries may find it difficult to pay for mandatory inspections which are often carried out by foreign certification agencies through their affiliates in producing countries.
8. Because consumers pay a high premium, the conditions for certification may very stringent.

4.5 Expected challenges in organic Grass-cutter production

Grass-cutters being rodents, farmers are likely to face more challenges in the area of accommodation, free access to range, outdoors, sunlight and fresh air. Generally speaking, efforts in domesticating the animal brought about grass-cutter farming; so the source if from the wild can be assumed pure. If from a farm, then the animal has to undergo a transitional period of between two to three years, while the above stated practices must obtain. Wastes from kitchens must be avoided, while the feed stuff must be of organic source. Being a rodent, keeping grass-cutter in free range will pose a problem; it may then require that the soil be fortified with cement for solidification and prevention of escape. Food and forage for grass-cutter must be organically produced, while such stock must be sourced from an organic farm or must have undergone a period of two to three years transition. Organic grass-cutter production requires that the farmer follow all the rules for organic livestock production as obtained in the region and backed by the EU, which is recipient region.

5. Recommendations

1. There should be government support for Nigerian and Beninour organic farmers in provision of fund for provision of adequate information, intensive training in organic production techniques and management strategies as well as in research.
2. Efforts should be intensified in creating awareness about organic products to consumers and farmers in both countries by the stakeholders and NGOs.
3. Cost of certification for organic products should be subsidized and therefore, reduced to affordable fee to encourage organic farmers by the government as part of their support to enhance food and nutrition safety.

6. Conclusion

Few consumers are indeed aware of the fact that food crops can be grown with organic inputs, but not enough seems to be known about certified organic foods and products in both countries and most farmers are not left out of this ignorance. There is therefore the need for widespread awareness programmes on what organic agriculture is and what it is not. Perhaps a step in this direction could be the use of distinct and property labeled packaging after the adoption and propagation of organic agriculture in all the agro ecological zones of Nigeria and Benin ranging from production of organic crop, fish and livestock.

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Table1: Nigerians' organic agricultural land (2006-2008)

Year	Organic land (ha)	Agricultural land (%)
2006	3,042	0.00
2007	3,154	0.00
2008	3,073	0.00

Source: ***IFOAM and FiBL, 2010***

Table 2: Common organic products and level of demand by respondents (n =150)

Organic product	*Common products	*Organic demand (frequency)	
		High	Low
Grass-cutter (bush meat)	110	130	20
Rabbits	70	95	25
Guinea pigs	40	30	120
Honey	105	145	5
Black soap	88	98	52
Root and tuber crops	90	85	65
Wood ash	85	40	110
Shear butter oil	75	80	70

Source: Age, *et al*, 2010

***Multiple responses exist**

Table: 2 indicates the common organic products and their level of demand by respondents as adopted from *Age et al.* (2010). It could be noted that all the organic products have high demand with the exception of guinea pigs and wood ash.

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