

## THE ROLE OF GOVERNMENT AND UNIVERSITIES OF AGRICULTURE IN IMPROVING ANIMAL PRODUCTION AND CONSUMPTION IN NIGERIA

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The role of any responsible Government of a country is to seek after the welfare of its citizens. The improvement of animal production and consumption falls within this broad objective since it borders on the provision of adequate nourishment for the normal growth and productivity of citizens, which are key elements for social harmony and economic development. As the saying goes, *suffering is minimal for anyone with food to eat*. In Nigeria the daily animal protein intake from livestock in 1993 for which data is available was 3.245 g/caput/day, compared with the value of 27.2 g/caput/day recommended by the FAO. In as much as such a huge gap exists between recommended and actual intakes of livestock products, Government still has a major role to play.

The role of Government in livestock production and consumption has not been static but has evolved from colonial times to the present day. At various times, such role has included formulation and implementation of relevant policies and statutes, provision of essential infrastructure, institution of livestock support services and even involvement in direct production. It has also involved promotional activities to encourage livestock production.

The three Universities of Agriculture at Abeokuta, Makurdi and Umudike were established between 1988 and 1992 and constitute a key element of Government's strategy to achieve a transformation of Nigerian agriculture including livestock production. This is being achieved by the Universities through their tripodal mandate of teaching, research and extension.

It should be made clear at the outset that other groups, organisations and individuals, apart from Government, play major roles in the livestock industry. These include the farmers who control the overwhelming proportion of the national herd, livestock feed and inputs manufacturers and marketers, individuals and Companies involved with livestock products processing and marketing, Farmers' organisations and Professional bodies such as the Nigerian Society for Animal Production, Nigerian Veterinary Medical Association and the Animal Science Association of Nigeria. This underlies the fact that livestock development is a collective responsibility.

The objective of this paper is to highlight Government role in livestock production and consumption and to show the relevance of the Universities of Agriculture within that role.

### ANIMAL PRODUCTION AND CONSUMPTION PATTERNS

Livestock production is an activity common to all parts of Nigeria though for some species there is regional concentration. While poultry, sheep and goats are found everywhere, cattle is largely concentrated in the Northern Guinea and Sudan Savanna zones while pigs are mostly produced in parts of the Middle-belt, North Central and Southern States. The estimated 1993 population of the major livestock species, their off-take rates and animal protein supply are presented in Table 1.

Given the Nigerian population estimate of 93.3 million in 1993, the animal protein supply situation for the same year, shown in Table 1, translates to a daily per capita protein intake of 3.245 g, or allowing for a 20 % rise due to additional consumption of fish and bush-meat, 3.894g, which is far below FAO recommended level of 34 g/caput/day. This represents a shortfall of about 88.5% in minimum requirements. By the year 2000 the Nigerian population is expected to be about 117.5 million and it would take a revolution in production methods to bridge the animal protein gap even by the year 2010.

### PRODUCTION SYSTEMS

Ruminant livestock, namely cattle, sheep and goats, are still largely produced under traditional systems of husbandry. More than 90% of the cattle and 45% of the small ruminants are owned and controlled by the pastoral Fulani who graze the animals in the natural pastures across the rangelands of Northern Nigeria and the Derived Savannah/Forest fringes of the South.

Table 1. National herd population, off-take rates and animal protein supply estimates for Nigeria in 1993

| Item                                    | Poultry | Goats  | Sheep  | Cattle  | Pigs    | Poultry<br>eggs |
|---|---------|--------|--------|---------|---------|-----------------|
| Herd population ('000)                  | 117,832 | 34,495 | 22,104 | 13,947  | 4,410   | 5,891,600       |
| Off-take rate (%)                       | 75      | 35     | 35     | 12      | 75      | 100             |
| Carcass weight/unit (kg)                | 1.0     | 6.0    | 8.0    | 125.0   | 40.0    | 0.05            |
| Total product yield ('000 kg)           | 88,374  | 72,439 | 61,891 | 209,205 | 132,300 | 294,580         |
| Animal protein<br>yield/annum ('000 kg) | 10,605  | 10,214 | 7,365  | 30,753  | 12,965  | 32,403          |

Source: Shaib *et al.* (eds.) 1997. *Nigeria: National Agricultural Research Strategy Plan, 1996-2010*.

Dept. of Agric. Sciences, Abuja, p.269

In the post-harvest season, use is also made of crop residues such as fodder. About 55% of the small ruminant population is kept by crop farmers in villages across Nigeria. Many of these animals are left to forage freely around homesteads and fallow lands with some restriction during the cropping

season. Supplementary feeding is occasionally provided by way of food processing by-products such as cassava peels and cereal milling by-products. Poultry and pigs are increasingly being reared intensively on modern production farms though substantial proportions are still under traditional extensive production systems. Unlike the case with the ruminant stocks, poultry and pig production has been most responsive to commercialisation and offer the best bet for bridging the animal protein supply gap in the shortest possible time, along with fisheries.

### ROLE OF GOVERNMENT

Government's role in livestock production and consumption is mainly that of facilitation. This includes the formulation of appropriate policies, provision of infrastructure and support services. The livestock policy forms part of the agricultural policy. These policies are defined essentially by the macroeconomic policy of Nigeria with the objectives of economic growth and development, price stability, self-reliance and social equity. The agricultural sector policies are aimed at providing an enabling environment for the growth and development of the agricultural sector.

These include:

- Agricultural pricing policy
- Agricultural trade policy
- Agricultural land policy
- Agricultural credit policy
- Infrastructural development policy

In the Vision 2010 Report, two goals have been set for Nigerian Agriculture, while seven strategies to be adopted have been identified, as shown in Charts 1 & 2 respectively.

#### Chart 1. Goals of Nigerian Agriculture

- To produce food and agro-allied products at competitive prices and in sufficient quantities for local consumption, industries and export.
- To generate employment by the rapid expansion of the agricultural, agro-allied and associated services industries.

Government recognises that given the present state of Nigerian agriculture, it would require radical transformation of production systems and substantial alteration of socio-economic systems for the 2010 Vision to be realised.

Part of the support services provided by Government include livestock extension through the unified agricultural extension system of the State Agricultural Development Programmes, agricultural credit and livestock research through the National Agricultural Research System. A key element in this support is manpower training and development through the Colleges of Agriculture, Faculties of Agriculture in several conventional Nigerian Universities and more recently, the Universities of Agriculture.

One requirement which should be given proper attention urgently is the issue of professionalisation of Animal Science. Modern livestock farming requires specific knowledge and skills which can mainly be achieved through specialised training at the tertiary level. Courses in Animal Nutrition, Animal Breeding and Genetics, Animal Physiology, Livestock Socio-economics as well as Pasture and Range Management form essential components of this training. Those who have undergone such training are professionals and should be so recognised with appropriate regulations to guide the practice. In this move for recognition, the Animal Science Association of Nigeria should lead the way.

### **Chart 2. Strategies for the transformation of Nigerian Agriculture**

1. Protect development and growth by aligning macroeconomic policies to support the overall objectives of the agricultural economic sector.
2. Encourage the rapid expansion of private agro-allied service companies which provide technical, supply and support services to farm holdings.
3. Create an enabling environment to attract local and foreign investment and facilitate growth in the sector, e.g. by providing incentives, credit, insurance, infrastructure, education, rural development, effective loan recovery system, etc.
4. Increase productivity by applying improved management and technology, utilising improved inputs and equipment and by improving the effectiveness of extension services.
5. Expand productive hectareage through land reforms and by granting investors access to large holdings.
6. Encourage utilisation of agricultural produce for raw materials in local industries, and encourage export oriented enterprises.
7. Conserve natural resources and protect the environment through the adoption of modern practices which reduce soil degradation and deforestation.

### **ROLE OF THE UNIVERSITIES OF AGRICULTURE**

The Universities of Agriculture are the only Universities in Nigeria with an explicit mandate for agricultural research and extension as well as for manpower training. This makes them a unique instrument for the transformation of Nigerian agriculture as can be seen from their establishment objectives categorised in Chart 3. By design, these institutions are to play an active role in the training of graduate farmers equipped in every respect for modern agriculture, conduct of basic, applied, multi-disciplinary and adaptive research, agricultural extension, and in large scale agriculture production and food processing. In general, they are to be centres for the sustained generation of agricultural improved technologies appropriate to the peasant and modern farmers. Unlike other Federal Universities which are funded and controlled by the National Universities Commission, the Universities of Agriculture are under the Federal Ministry of Agriculture.

### Chart 3. Objectives of the Universities of Agriculture as contained in the enabling decree

#### Teaching

To encourage the advancement of learning and to hold out to all persons without distinction of race, creed, sex or political conviction, the opportunity of acquiring a higher education in agriculture;

To develop and offer academic and professional programmes leading to the award of diplomas, first degrees, postgraduate research and higher degrees which emphasise planning, adaptive, technical, maintenance, developmental and productive skills in agriculture, agricultural engineering and allied professional disciplines with the aim of producing socially mature persons with the capacity to improve on those disciplines and develop new ones, but also to contribute to the scientific transformation of agriculture in Nigeria;

To provide and promote sound basic scientific training as a foundation for the development of agriculture and allied disciplines, taking into account indigenous culture, the need to enhance national unity, the need to vastly increase the practical content of student training, and adequate preparation of graduates for self-employment in agriculture and allied professions;

To offer academic programmes in relation to the training of manpower for agriculture in Nigeria;

#### Research

To identify the agricultural problems and needs of Nigeria and to find solutions to them within the context of overall national development;

To organise research relevant to agriculture with emphasis on small-scale farming;

#### Teaching and Research

To act as agents and catalysts, through postgraduate training, research and innovation for the effective and economic utilisation, exploitation and conservation of Nigeria's natural agricultural, economic and human resources;

#### Teaching Research and Extension

To promote and emphasise teaching, research and extension of agricultural knowledge including agricultural extension services and outreach programmes, in-service training continuing education, and on adaptive research;

#### Extension

To offer to the general population, as a form of public service the results of training and research in agriculture and allied disciplines and to foster the practical application of those results;

To organise extension services and out-reach programmes for technology transfer;

#### Linkages

To establish appropriate relationships with other national institutions involved in training, research and development in agriculture;

To establish institutional linkages in order to foster collaboration and integration of training, research and extension activities; and

#### Other

To undertake any other activities appropriate for Universities of Agriculture.

In the case of the University of Agriculture, Abeokuta, established in 1988, the foundation has been solidly laid for the actualisation of its mandate with the proper establishment of its academic programmes, the Research and Development Centre (RESDEC) which co-ordinates its research and development efforts and the Agricultural Media Resources and Extension Centre (AMREC) which co-ordinates its extension services.

The University has been playing a very important role in the National Agricultural Research System and is participating in several Nationally Co-ordinated Research Projects. It has also been involved in Contract Research with some agro-allied industries in plant breeding and extension activities. Primary extension is carried out in adopted Model Villages in Ogun and Lagos States while numerous linkages exist with other national and international organisations engaged in agricultural research and development activities.

In the area of animal production the University has a College of Animal Science and Livestock Production which is comprised of the following four Departments:

- Department of Animal Breeding and Genetics
- Department of Animal Production and Health
- Department of Animal Nutrition
- Department of Pasture and Range Management

The University is also in the process of setting up a College of Veterinary Medicine which will take off during the 1999/2000 academic session. Other academic departments relevant to livestock training, research and extension in the University include the following:

- Department of Agricultural Economics and Farm Management
- Department of Agricultural Extension and Rural Development
- Department of Food Science and Technology
- Department of Biological Sciences
  
- Department of Home Science and Management
- Department of Forestry and Wildlife Management
- Department of Agro-meteorology and Water Management.

In terms of research, two out of the eight research programmes under RESDEC are exclusively livestock based. These are the Livestock Production and Improvement Research Programme, and the Peri-Urban Dairy, Goat Milk and Meat Research Programme. AMREC also has a Livestock Improvement Programme which spearheads its livestock extension activities in the Model Extension Villages.

The University has a Livestock Teaching and Research Farm which is well stocked with different breeds of Cattle, Pigs, Rabbits, Sheep and Goats as well as strains of indigenous and exotic Poultry. The Livestock Farm is utilised for the practical training of students in livestock production and for undergraduate, postgraduate and staff research.

Many staff of the University are members and play active roles in the activities of the livestock-based professional associations such as the Nigerian Society for Animal Production, the Animal Science Association of Nigeria and the

**Nigerian Veterinary Medical Association. The University was a major sponsor of the Silver Anniversary Conference of the Nigerian Society for Animal Production and the Inaugural Conference of the West African Society for Animal Production which took place partly on its campus in March 1998.**

### **CONCLUSION**

**The role of Government in the improvement of animal production and consumption is a multi-faceted one. With the withdrawal from direct production, government's role remains essentially that of facilitation in terms of creating an enabling environment for livestock production to thrive so as to contribute towards meeting the country's cardinal strategic objectives of attaining food security, stimulating industrial development and generally improving the welfare of its citizens through gainful employment and adequate nutrition.**

**The Universities of Agriculture, with their explicit mandate for agricultural training, research and extension offer unique possibilities for the transformation of Nigerian agriculture, including livestock production. In terms of their structure, development and achievements so far, these Universities appear well positioned to fulfil their historic mission.**