

## RE-TRAINING NEEDS OF VILLAGE EXTENSION AGENTS IN NIGERIA: A STUDY OF BENUE STATE

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### ABSTRACT

*The unified extension system introduced in 1990 necessitated the delivery of extension services through a single line of command and the use of one agent in disseminating varied innovations to farmers. This study, which involved 106 village extension agents, was aimed at determining the adequacy of agents' training in vocational agriculture and their level of competency in the subject matter areas of agriculture. One major finding of this study was that most of the agents were trained mainly in General Agriculture (46.67%) with little or no emphasis on many other areas of specialisation. Areas agents felt they had highest competence were principles of crop production ( $X=2.75$ ) and Animal Nutrition ( $X=2.57$ ). Subject matter areas of relevance and competence have been identified. There are several areas in agriculture in which the agents need functional training.*

**Key words:** *Re-Training Extension Agents, Benue state.*

### INTRODUCTION

Since organised vocational agriculture began in Nigeria, there have been various forms and modifications of agricultural research and extension. Extension education sensitizes farmers on the value of change, disseminates the results of agricultural research to farmers and helps them to make decisions in farm management.

Over the years, parallel extension services were carried out by the various departments of the State and Federal Ministries of Agriculture, specialized development schemes and the Agricultural Development programmes (ADPs). Under the conventional, multiple channel extension

system, an extension agent was expected to be technically skilled in his subject matter area, and this meant being knowledgeable in production, processing and marketing of a particular crop or livestock. This system tended to emphasize more of competency in subject matter discipline than extension skills. The extension agent is the individual whose responsibility is to motivate, encourage and help the farmer to solve his farm problems. The parallel extension system was later re-organised with the ADP. This organization was charged with the responsibility for full administration and control over the entire extension services covering crops, livestock, fisheries and agro forestry (Mijindadi, 1991). The field extension staff was also to

concentrate exclusively on extension activities - including encouraging farmers to adopt research findings and improved farm practices which are adapted to their local conditions. The implication of this re-organisation is that one extension agent carries all relevant messages on crops, livestock, fisheries and agro-forestry to the farmer.

Unification of agricultural extension services implies homogeneity of extension message and removal of parallel cost. This is different from the practice under the conventional extension system whereby the village extension agents were specialized in one aspect of vocational agriculture. This high specialization does not permit a complete package of information to the farmer by one agent.

A single line of command to "reach" farmers implies using a multi-disciplinary extension agent (one agent with messages in different disciplines) through the Agricultural Development Programme (ADP) as the basic institutional umbrella for unification. The extension agent is to disseminate information on crop and livestock production, among others. The aim is to eliminate the frequent delivery of conflicting extension messages through different agents and also avoid duplication of efforts as well as reduce wastes in terms of time, cost and other resources. The expectation is that every extension worker would be re trained or trained in all aspects of agriculture in order to be competent, up-to-date and effective (Arokoyo, 1991; Adewumi, 1991; Adenola, 1991).

To what extent is the extension agency carrying extension messages containing substantial disciplinary biases (crops and animals)? One requires to determine the degree of preparedness of our extension agents, particularly those in the "food

basket" zone of the country, for the added responsibility of disseminating complete agricultural message to farmers with varying interests.

For an extension agent to be allowed to work with farmers, it is essential that he has self-confidence and competence in agriculture to do a good job. This would come from his initial training and subsequent in-service training. The ADP organizes fortnightly training sessions for extension workers. Areas of training needs include technical knowledge, communication skills, human relationship and behaviour, understanding the culture of farmers, and community leadership structure.

The impact of a programme may be determined first on the basis of what has happened and second, on the basis of what has not happened. Olson and Fruin (1979) describe two important approaches to include (1) measuring learning, and (2) measuring behavioural change. They argue that it is possible to identify training effectiveness by examining the comparative frequencies of what is called "already knew" versus the "know now" versus the "need more help". The success of development programmes depends much upon the degree to which the village level worker (the extension agent) performs his job effectively (Choukidar, 1973).

Patel and Singh (1968), have suggested essential components of the professional competence of a teacher of agriculture to include, among other:

- (1) thorough grounding in the theory and practice of the subject matter and possession of knowledge and skills necessary for teaching theory and practical in an integrated manner;

- (2) creating appropriate teaching - learning situation; and
- (3) development, selection and use of instructional materials.

Obinne (1992) required his respondents (extension agents) to rate the adequacy of field extension facilities such as irrigation facilities and farm machinery as well as rating themselves on their performance level (competence) in vocational agriculture and teaching competence.

The objectives of this study are to (1) ascertain the level of knowledge of village extension workers within the context of the unified extension system and (2) determine their competence in the various subject matter areas in agriculture. Thus, the study focuses on the need for re-training of extension agents to enable them cope with the demands of the unified extension concepts. A pertinent question is, to what extent is the extension agent carrying messages containing substantial disciplinary biases (crops and livestock)? Do the agents perceive their earlier training as sufficiently relevant in the new dispensation?

#### METHODOLOGY

This study covers Benue State (a major food producing zone in Nigeria), using the State Agricultural and Rural Development Authority (BNARDA) as a unit of study. The population consisted of all village extension agents in the three zones of BNARDA. A survey research was found suitable for this study because of our interest in the opinions and attitudes of the practitioners and questionnaire was used for data collection. Respondents were required to appraise their level of technical agricultural

competence following the model by Olson and Fruin (1979), Patel and Singh (1968) and Obinne (1992).

The data collected from the respondents (the agents) included personal and socio-economic characteristics as well as the contents of the courses in vocational agriculture taught to the agents while in training. Other questions sought to determine the agents' level of understanding and competence in the courses as well as their felt relevance in relation to the practical (field) work being done by the agents. One hundred and six village extension workers were randomly selected from BNARDA staff list and they participated in the study which covered the East, Central and Northern zones of BNARDA. The general information on the agents is presented in the form of frequencies and percentages while the courses and their contents are analysed using calculated means of the responses. Correlational analysis was performed between the level of knowledge and competence.

#### RESULTS AND DISCUSSION

Most of the agents (61.53%) fell within the age range of 21 to 35; the active youthful years, and male agents were more in number (83%). About 52% had worked for ten years or less and most of them (94%) were married (Table 1). The OND and HND were the certificates frequently stated as being possessed by the agents. Going by their ages and qualification, the agents are expected to be hardworking. The finding showed that many of the extension agents (46.67%) graduated in General Agriculture. Fisheries extension, Poultry Science and horticulture were some of the many areas in which the agents were not well trained (Table 2). Thus, one can infer that most of

the extension agents were not adequately prepared in many agricultural disciplines required for problem solving on the field while in College. A mere course in General Agriculture does not get into enough details to equip the learners adequately in all disciplines; therefore, agents needed to be properly trained in all other areas of agriculture.

The level of competence of the agents and their perception of relevance of each course offered in school are presented in Table 3, 4 and 5. Weed Management, Principles of Crop Production and Introduction to Agriculture ranked 1st, 2nd and 3rd respectively in the agents' perception of relevance. A similar result is observed in terms of competence (Table 3). Most agents were competent in Animal Nutrition and Sheep and Goat Production but felt that the most relevant courses were Animal Health as well as Sheep and Goat Production (Table 4). According to data in Table 5, the agents felt most competent in Extension methods and considered the course as most relevant for their jobs. This finding confirms the fact that Extension Teaching and Communication is central and crucial in ensuring early adoption of recommended innovations by farmers. A strong positive correlation coefficient (0.77) was calculated for the relationship between "knowledge" and "competence".

Advice on Crop Production often given to farmers by extension agents included practices like fertilizer application at the right time (80.26%), adoption of improved crop varieties (65.79%), plant spacing (48.68%) and weeding of crop farms (43.42%) as shown in Table 6. Village extension agents tended to emphasize the above areas of extension information package probably because of the belief that such areas were important factors enough

crop yield to farmers. If the farmers had a say in deciding what agricultural information they needed, more areas of interest would probably have been indicated than the four mentioned above.

The types of advice most often emphasized by extension agents on livestock extension services were provision and cure (57.33%), routine vaccination (53.33%) as well as housing and stocking rate advice to farmers on many other important concepts and practices including livestock selection, management, fish pond construction, castration, deworming and adoption of improved breeds.

#### Implications for Extension Policy

If the unified agricultural extension system is to work, there should be an urgent rethinking on the part of Government as well as agricultural policy planners and executors. The system is quickly grinding to a halt. Definitely, farmers would not get a good deal in this arrangement. Government needs to take up the matter of low adoption of improved agricultural innovations by farmers seriously in Nigeria, to buttress the usually eloquent policy statements by Government through national budgets and government functionaries.

There are several areas in agriculture in which the agents need functional training. The important areas are particularly the animal production and animal health courses.

Government should urgently address this issue by directing a re-training programme through short-duration courses nationwide.

The various agricultural research and training institutions should be charged with this exercise which should be organized in zones. The training is necessary

particularly for the agents trained in the old generation training colleges of agriculture. One of the major means of continuously up-dating the professional skill of village extension agents is the fortnightly training organised by the Agricultural Development Programme (ADPs). At the training, the agents review farmers' reactions to previous recommendations which were taught to the farmers during the preceding two weeks. Field problems and conditions are also reported for attention by research scientists. The fortnightly training sessions are organized by subdivisional extension officers and the trainers are subject matter specialists drawn from universities and research institutes.

#### CONCLUSION

The relevance of extension methods has been established even as this study has shown. However, extension agents cannot succeed at work without adequate logistic support. One probable reason for poor-technical support of the agent is that most extension outfits/organizations in Nigeria are headed by non-professional extensionists (experts in extension). Government should reorganize all extension organisations immediately to put qualified extension professionals in charge of extension administration.

This study needs to be replicated in all the states to establish a national situation about the adequacy of the training of agents and make a case for a retraining programme, particularly in technical subjects, Communication Skills and Extension Principles.

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**Agrosearch**

Vol. 2, Nos. 1 & 2, 1996

**Table 1: Personal Characteristics of Village Extension Agents**

Characteristics	Group	Number	Percentage
<b>A. Age Group (years)</b>	21-25	3	2.88
	26-30	16	15.38
	31-35	45	43.27
	36-40	28	26.92
	41-45	8	7.69
	46-50	2	1.92
	51-55	2	1.92
<b>B. Sex</b>	Male	88	83.02
	Female	18	16.98
<b>C. Experience in Extension work (Years)</b>	0-5	18	16.98
	6-10	37	34.91
	11-15	23	21.7
	16-20	25	23.58
	21-25	2	1.87
	26-30	1	0.94
<b>D. Marital Status</b>	Married	99	94.29
	Single	6	5.71
<b>E. Highest Educational qualification</b>	Certificate	7	6.60
	NCE	3	2.83
	OND	36	33.96
	HND	60	56.60

Source: Field Survey, 1993.

Table 2: Areas of Specialization/Discipline of Village Extension Agents

Area of Specialization		N = 105	
		Number	%
i	Agricultural Extension	5	4.76
ii	Animal Husbandry	4	3.81
iii	Animal Production	2	1.90
iv	Animal Science	8	7.62
v	Crop Production	5	4.76
vi	Crop Science	2	1.90
vii	Extension Education	3	2.86
viii	Fisheries	4	3.81
ix	Fisheries Extension	1	0.95
x	General Agriculture	49	46.67
xi	Horticulture	1	0.95
xii	Home Economics	5	4.76
xiii	Livestock Production	4	3.81
xiv	Poultry Production	4	3.81
xv	Poultry Science	1	0.95
xvi	Soil Science	5	4.76
xvii	Livestock Extension	2	1.90

Source: Field Survey Data, 1993.

Table 3: Perception of Village Extension Agents on their competence and Relevance of Crop Production courses offered.

	Courses offered	Competence		Relevance	
		Grand mean	Rank	Grand mean	Rank
i	Introduction to agriculture	2.74	3rd	1.92	3rd
ii	Principle of crop Production	2.75	1st	1.94	2nd
iii	Permanent crop production	2.67	4th	1.85	7th
iv	Crop protection	2.51	8th	1.91	4th
v	Cropping systems	2.58	6th	1.86	6th
vi	Soil chemistry, Physics & Biology	2.22	14th	1.68	15th
vii	Mineralogy	1.90	21st	1.50	21st
viii	Soil Genesis & Morphology	2.14	15th	1.57	20th
ix	Soil conservation	2.64	5th	1.91	4th
x	Introductory Hydrology & hydraulics	2.12	16th	1.65	16th
xi	Irrigation Technology	1.97	20th	1.63	19th
xii	Drainage Technology	1.98	18th	1.65	16th
xiii	Weed management	2.75	1st	1.95	1st
xiv	Agricultural entomology	2.33	11th	1.83	11th
xv	Plant pathology	2.33	11th	1.84	9th
xvi	Plant breeding	2.11	17th	1.72	14th
xvii	Horticulture	2.56	7th	1.85	7th
xviii	Pasture agronomy	2.37	10th	1.80	13th
xix	Soil fertility & Crop nutrition	2.49	9th	1.84	9th
xx	Cartography	1.70	22nd	1.42	22nd
xxi	Agroclimatology	1.98	18th	1.65	16th
xxii	Farm Mechanization	2.33	11th	1.83	11th

Source: Field survey Data, 1993.



Table 4. Perception of Village Extension Agents on their competence and Relevance of livestock production courses offered.

	Courses offered in school	Competence		Relevance	
		Grand mean	Rank	Grand mean	Rank
i	Sheep and Goat production	2.56	2nd	1.92	1st
ii	Beef and dairy cattle production	2.30	5th	1.80	5th
iii	Non-Ruminants(Rabbit, Swine & poultry) production	2.47	4th	1.87	4th
iv	Animal Nutrition	2.57	1st	1.88	3rd
v	Animal Health	2.53	3rd	1.92	1st

Source: Field Survey Data, 1993.

Table 5: Perception of Village Extension Agents on their competence and Relevance of Agricultural Economics and Extension Courses offered when they were in school.

	Courses offered in school	Competence		relevance	
		Grand mean	Rank	Grand mean	Rank
i	Principles of Agricultural Economics	2.04	11th	1.65	11th
ii	Principles of Economics	1.92	13th	1.73	8th
iii	Marketing and Prices	2.05	10th	1.68	10th
iv	Farm Management, Production Economics and accounts	2.16	7th	1.78	5th
v	statistics, Data Processing and Research method	2.08	9th	1.58	13th
vi	diffusion of innovations	2.18	6th	1.75	6th
vii	Extension methods	2.79	1st	1.98	1st
viii	Extension Teaching, learning process and methods	2.67	2nd	1.95	2nd
ix	Agricultural Resources use and project evaluation	2.24	5th	1.74	7th
x	Agricultural project Appraisal, management and Evaluation	1.95	12th	1.63	12th
xi	Administration and programme planning extension	2.13	8th	1.73	8th
xii	Extension organisation, management and supervision	2.35	4th	1.84	4th
xiii	Rural Sociology	2.53	3rd	1.88	3rd

Source: Field Survey data, 1993.

Table 6: Percentage distribution of Types of Advice given to farmers on crop production.

	Area of information given	Percentage
1.	Land preparation and site selection	32.89
2.	Method of cultivation	15.79
3.	Time of planting	38.16
4.	Plant spacing	48.68
5.	Selection of seeds before planting, and viability test	5.26
6.	seeds dressing before planting	11.84
7.	Adoption of improved crop varieties	65.79
8.	Fertilizer application at the right	80.26
9.	Weeding of crop plots	43.42
10.	Disease and pest control	15.79
11.	Protection of crops using agrochemicals	14.47
12.	Use of yam miniset	7.89
13.	Staking of yam vine	3.95
14.	Time of harvesting	26.32
15.	How to store crops efficiently	21.05
16.	Processing of crops	11.84

Source: Field Survey data, 1993.

Table 7: Percentage distribution of Types of Advice given to farmers on livestock production

	Area of information given	Percentage
1.	Housing and stock rate	50.67
2.	Provision of good feed and clean water for livestock	58.67
3.	Feed formulation	24.00
4.	Disease prevention and cure	57.33
5.	Routine vaccination of livestock	53.33
6.	Adoption of improved technology of rearing livestock	4.00
7.	Deworming of livestock	2.67
8.	Castration	1.33
9.	Fish pond construction and fishing methods	9.33
10.	Marketing of livestock and their products	13.33
11.	Management practices	5.33
12.	Quarantine Services	1.33
13.	Stock selection	2.67
14.	Adoption of improved breeds of livestock and breeding methods	22.67

Source: Field Survey data, 1993.