ZIMBABWE'S AGRICULTURAL REVOLUTION REVISITED

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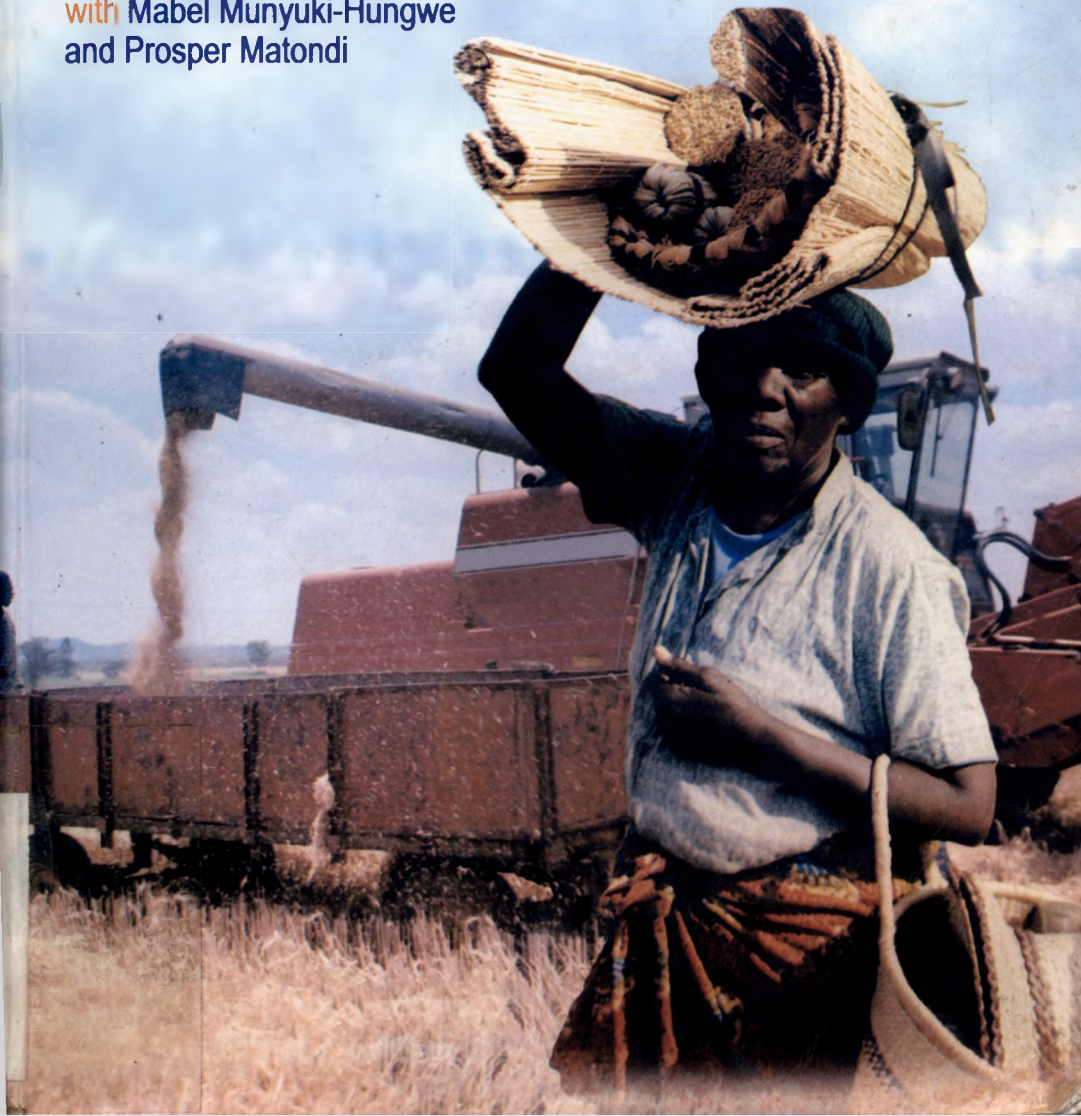

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Zimbabwe
Publications

PART III THE PRIME MOVERS

Extension agents need to be capacitated to provide necessary knowledge to new farmers

Agricultural extension

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Agricultural extension is the process of transferring agricultural information and technology to farmers for use in production and marketing decisions and similarly transferring information from farmers to researchers (Swanson, 1984; Eicher, 2002). It is essentially a two-way link where extension agents transfer knowledge and ideas to farmers and their families in an advisory role. By the same token, extension agents should be receptive to farmers' ideas, suggestions and problems so these can be incorporated into the extension message and passed on to researchers. For an agricultural revolution to succeed and be sustainable, farmers should have proper skills and access to knowledge that can be generated through research and imparted through extension. The agrarian structure that has emerged since 2000 possesses new challenges for the capacity of both public and private institutions to meet the extension demands presented by the massive land transfers.[126]

Historically, the public sector provided most of the extension services but the economic structural adjustment programmes implemented in the 1990s reduced funding for public extension and emphasized cost recovery and privatization. Extension was weakened by increasing fiscal constraints whilst extension providers covered too wide an area and range of activities amidst poor linkages with research. Institutional reforms that took place in 2002 were designed to ameliorate weak research–extension linkages. This chapter recaps the role of extension before independence and in the first two decades of independence, discusses its current status and provides pointers to the future of extension in the next decade.

Extension before independence

The first attempts to develop extension in the communal lands (then the tribal trust lands) were made by the government in 1926 through the Department of Native Agriculture under the Ministry of Internal Affairs (MacDermot, 1980). African agricultural extension workers (then known as demonstrators) were

[126] The demand for extension has been high in the communal areas and old resettlement schemes, without including the demand by new A1 and A2 farmers.

trained to be general agricultural advisors. A coercive, prescriptive approach to extension was used during the colonial era.[127] The coercive approach changed significantly as the more learning-oriented master farmer training scheme took root. An in-service training branch was established in 1975. The training branch was set up specifically to train staff who would then train farmers in the field. Part of the branch's mandate was to design service training courses.

The Department of Conservation and Extension was set up in 1949 to provide extension services to commercial farmers. Commercial farming areas were organized along intensive conservation areas. Each intensive conservation area was a group of between 20 and 25 farms, managed by a group extension officer, with three to five extension officers plus additional specialist back-up from head office. The farmer to extension officer ratio was one to five or less depending on the number of farms in each intensive conservation area. Because of this intensive extension coverage, commercial farmers enjoyed an almost personal service from the extension department. This also explains why the level of performance in agricultural production was high in the commercial farming areas. The policy in the Department of Conservation and Extension was to work closely with farmer organizations and associations. The department also had strong links with the Department of Research and Specialist Services. The strong research–extension linkage ensured that commercial farmers were provided with the latest research results and that the farmers provided immediate feedback to the researchers. However, communal farmers did not benefit as much as large-scale farmers from research results until after independence.

Similarly the small-scale commercial farmers, though deriving their agricultural extension service from the Department of Conservation and Extension, did not enjoy the same level of extension coverage and extension personnel were not properly equipped with transport. The performance of small-scale commercial farmers was affected by inadequate provision of extension. But performance of the small-scale commercial farms was not an issue because, with a few exceptions, small-scale commercial farms appear to have been set up as buffer zones to stop the encroachment of communal area people and their livestock onto the large-scale commercial farms. The spatial distribution of the small-scale commercial farms in relation to communal and large-scale commercial farms lends credibility to this observation.

The Department of Agricultural Development was established in 1969 as the successor to the Department of Native Agriculture to provide extension advice to communal farmers. The new department now included subject matter

[127] The Native Land Husbandry Act of 1951 imposed command type measures for extension through livestock husbandry (stocking capacity) and 'good farming practices' on arable land. This was complemented with forced conservation works under the 1942 Natural Resources Act.

specialists in a number of areas such as crop production, livestock production, farm management, irrigation, conservation, and monitoring and evaluation. The specialists provided back-up with more specialized and up-to-date information in subject matter areas for field staff. Furthermore, extension coverage in the communal areas was improved to about one extension worker to 1,000–1,500 farmers, depending on the population density in the given communal land. The strong thrust in staff development in the new department increased the number of subject matter specialists. The department was exclusively set up to service communal lands and in its short period of existence, it managed to put together a strong agricultural extension force which was to prove its worth at independence. The majority of extension personnel in the department were trained either as demonstrators or extension assistants at Mlezu, Esigodini, Gloag, Domboshawa, Waddilove and, later, at Kushinga Pikhelela and Rio Tinto agricultural institutes. The training policy was to prove critical in terms of sustaining agricultural productivity in the communal lands of Zimbabwe after independence in 1980.

By the time the war of liberation started, extension networks were well established in the then tribal trust lands. The link between the predominantly black extension assistants in the rural areas and their largely white supervisors in the urban areas put the extension assistants into an invidious position politically. To the majority of the people in the rural areas, the extension worker was regarded as a collaborator of the colonial regime and an informer. Freedom fighters also targeted the extension assistants for elimination because they not only informed the enemy but also forced people to carry out some unpopular tasks, such as working on conservation projects. Extension therefore suffered in the fight for independence. By 1975 it had become common practice to recall extension staff from the war areas and in some cases extension services were not restored in these areas until after independence.

Major achievements and weaknesses of the extension services before independence

There were some notable achievements of the extension services before independence that provide lessons for the restructuring of extension following the land reform programme from 2000. Some awareness of the benefits of agricultural extension had been established. The major expansion in crop production in communal areas soon after independence was a result of the build-up of extension before independence. The expansion of maize and cotton production can be attributed directly to the awareness created by the extension services before independence.

A significant human resource base for national extension coverage had been trained and put to some extensive use and despite the looming war of liberation, extension personnel had established a niche in agricultural service provision for the country. This niche was to provide a good launching pad for a

national extension service. A network of training colleges and institutions for extension personnel as well as basic syllabuses had been established and could be modified and improved after independence. The existence of training infrastructure proved critical as expansion of extension services was sought after independence.

Yet beyond this success, agricultural extension before independence had its pitfalls. The extension system had created a less intensive extension service for communal farmers. The existence of two national extension services (Department of Conservation and Extension, and Department of Agricultural Development) promoted unnecessary inter-institutional rivalry. The coercive approach to extension generated pockets of resistance. Agricultural extension widened the disparities between the communal lands and the commercial areas and fuelled land hunger among the indigenous people. There was a need to establish equity in extension support to agriculture throughout the country and this was the motivating factor behind the merging of the Department of Conservation and Extension and the Department of Agricultural Development into the Department of Agricultural, Technical and Extension Services after independence. Extension support and provision to the communal lands was poorly funded and equipped so massive resources had to be provided to upgrade the extension services in communal lands after independence.

Extension services after independence

After independence, there were swift changes in the agricultural sector. The first phase of the land reform and resettlement exercise added a new dimension to extension. As acquired commercial farms were converted into resettlement schemes, with more small farmers on the ground, the need for greater numbers of extension personnel became obvious. Government was forced to face the daunting challenge of providing not only personnel but also the infrastructure in the newly resettled areas. The pace at which resettlement took place required swift response. Part of the response was the establishment of additional training colleges for agriculture to provide extension personnel. This period also saw the University of Zimbabwe establishing a Faculty of Agriculture to provide support to the Department of Agricultural, Technical and Extension Services.

Although Mlezu and Esigodini agricultural institutes produced extension assistants at the certificate level, two new institutes, Rio Tinto and Kushinga Pikhelela were also established. Existing institutes were expanded to take more people and the length of training of agricultural extension personnel at certificate level was reduced from three years to two years. These measures were intended to provide enough personnel to service the needs of the large number of smallholders.

Table 9.1 Training institutes established after independence

Universities	Colleges	Others: farmer training institutions
Africa University	Chibero	Blackfordby
University of Zimbabwe	Gwebi	Trelawney
Midlands State University	Mlezu	Kushinga Phikelela
Bindura University	Esigodini	Dozmary
Chinhoyi University of Technical Education	Mazowe/Henderson	Wensleydale
Proposed Lupane University of Agriculture	Rio Tinto	Nyamazura
Great Zimbabwe University		Provincial training centres for example, Mupfure
Zimbabwe Open University		Cotton training centre
Masvingo State University		Nyamasinga
		Panorama
		Hlekweni Rural Friends

Due to the resettlement exercise, the number of commercial farmers was shrinking. At the same time, commercial farming was marked with a steady increase towards diversification and specialization unparalleled in the history of Zimbabwe. Most commercial farms concentrated on the production of non-food crops as well as export-oriented crops. This development resulted in significant reduction in maize production on commercial farms. Communal farmers who required a strong extension service to maintain and sustain production of the staple crop filled the production gap. This posed a new challenge for the extension services.

But the extension services at independence were not properly organized to meet the new challenge because neither the Department of Agricultural Development nor the Department of Conservation and Extension could claim a truly national character. Although both departments had a reputation for being among the finest extension services in Africa, resources were not shared equitably because commercial farmers derived more benefits and privileges than communal farmers. This did not augur well for the new government which wanted to assist the previously neglected communal farmers. It was hoped that a unified extension service would be more effective and affordable to the nation.

Towards the end of 1980, government issued a directive that the Department of Agricultural Development and the Department of Conservation and Extension should be merged. Negotiations for the merger were rather protracted as two fundamental principles had to be adhered to.[128]

After a year and following protracted negotiations internally and with the Public Service Commission, the Department of Agricultural, Technical and Extension Services was eventually established as the unified national extension service in July 1981. Its objective was to stimulate the adoption of proven agricultural practices leading to increased, sustained and profitable production. The new department was assigned new responsibilities, including resettlement, land-use planning, servicing of resettlement areas, and conservation and forestation extension in communal lands. These new responsibilities meant that the department had to expand to fulfil its new mandate. The department had to devise an internal response to this new challenge and so established a proactive training branch.

The training branch can be regarded as the prime mover and champion of change in the department. It had to develop and manage a complex in-service staff development programme specifically adapted to Zimbabwean conditions, provide training directly to all levels of staff, as well as implement a wider staff development initiative based on the identified skills gaps in the department. The branch also established a publications section with important agricultural messages suitably translated into the main vernacular languages for effective uptake. Publications from the department constitute one of the significant success stories for extension in Africa.

Extension approaches

The current extension worker to farmer ratio of 1:800 makes it difficult for extension workers to pay attention to individual farmers. In addition, the agricultural sector is diverse in terms of crops grown. The scale of agricultural production and the diverse clientele and production systems have necessitated the use of a variety of extension approaches. There are many extension approaches available worldwide (Defaut, 1998) but only a few have been used extensively in Zimbabwe, largely because of their suitability in reaching the majority of farmers (Department of Agricultural, Technical and Extension Services, 1998; Hakutangwi, 1998).

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[128] The new national extension service was to focus on the communal lands to ensure that agriculture was improved to the level of the commercial sector. Also the new department had to include black officers in its senior and middle management ranks who were of long-standing service and experience but had previously been denied promotion. These two principles were incompatible with the then leadership of both Department of Agricultural Development and Department of Conservation and Extension.

TYPE	OBJECTIVES	APPROACH	AGENCY
Individual			
One to one extension-farmer interaction	Extension officers visit individual farmers on a regular basis	Extension worker visits	AREX model
Farmer innovators	Farmers trying out new things, without the direct support or formal research and extension	Farmer approaching the relevant extension agents for information	Individual farmers
Skilled workers	To retrain skilled workers on farms that they are managing	Farm owners sending manager and workers to refresher courses	Private individual led
Group			
Farmer groups	To reach many people in difficult areas	Individual farmers form groups	AREX
Farmer to farmer learning	To learn from those who are doing	Look and learn/exchange visits	AREX
Tenant scheme	To create a cadre of commercial farmers through on-farm training	Training by institutions with trainees allocated land at institutions during training period	ZTA, FDT CFU model and NGOs
Institutional training			
Master farmer	To train farmers through focused field-based learning	Oral and written examination	AREX
Farmer field schools	where farmers exchange with extension experts	Scheduled learning on field by farmers	AREX
Field training			
Demonstration/ field days/ competition	To inculcate a spirit of competition among farmers and for them to emulate others	Competition carried out on sites at successful farms or at regular agricultural shows	AREX, NGOs, show societies
Exchange visits	To facilitate farmers learning by seeing and interacting with other successful farmers	Farmers visit others doing similar or different	Facilitated by state and NGOs
Study circle concept	To create an interactive forum for farmers to exchange ideas and help them learn. Use of self study materials.	Farmers meet regularly to constitute a group and seek expert advice	ZFU and Swedish Coop led initiatives
Participatory research approaches	Action oriented research in which farmers benefit from on-site work by researchers	The extension worker and farmer interact in the field; popular education	Academia led

Key AREX = Department of Agricultural Research and Extension
CFU = Commercial Farmers' Union
FDT = Farm Development Trust
NGO = non-governmental organization
ZFU = Zimbabwe Farmers' Union
ZTA = Zimbabwe Tobacco Association

The group extension approach

This approach involves giving extension advice to groups of farmers. It assumes that farmers are a homogeneous group with similar problems. The group approach was established in the 1960s and 1970s in Mashonaland East province. The group development area concept allowed the extension service to penetrate difficult areas and introduce agricultural extension technology. The concept also allowed the introduction of other associated development initiatives closely related to agriculture and strengthened the spirit of community participation. The experience in Zimbabwe showed that the group extension approach only managed to reach the average farmer. Farmers with a higher entrepreneurial disposition found little benefit from the group approach while the less progressive derived limited benefit. Despite its limitations, however, the group approaches to extension remained the most widely used approach in Zimbabwe (Department of Agricultural, Technical and Extension Services, 1992; Hakutangwi, 1998).

The master farmer training scheme

The master farmer training scheme has a primary objective of producing a critical mass of farmers to occupy small-scale commercial farms. However, since the demand for this type of farm would outstrip the supply, the goal shifted to training leaders among smallholders as an alternative. The master farmer training scheme takes the farmer through a series of crops and required competencies over a two to three year period. Farmers are examined periodically either orally or through written examinations depending on their levels of literacy. At the end of the period, the farmers are awarded a certificate and a master farmer badge. This is a prestigious qualification that is used to gain access to services and other privileges. For the more literate farmers, there is an opportunity to further specialize through the advanced master farmer training scheme where one acquires an advanced master farmer qualification with its own badge and certificate. The Department of Agricultural, Technical and Extension Services and its predecessors have trained in excess of 300,000 master farmers and up to 50,000 advanced master farmers.

The training and visit approach

Another extension approach is the training and visit system which has been aggressively promoted by the World Bank (Benor and Baxter, 1984; Howell 1988). The training and visit approach is a highly decentralized scheme which offers intensive training and follow-ups by the extension worker. Because of Zimbabwe's relatively advanced extension service at independence, the training and visit approach has not been adopted on a wholesale basis. A pilot training and visit extension programme was implemented in the Gweru district of the Midlands province; the lessons learnt from the Gweru experience were:

- The system lacked the flexibility to make it more relevant to the needs and environment of the small-scale farmer;
- The system was too mechanical in its implementation;
- The training and visit system was heavy on resources such as transport. Although Zimbabwe has a good network of rural roads, the provision of adequate transport for the extension services is still to be achieved.

The training and visit system (often shortened to T & V) experienced limited success in the Midlands province. The Department of Agricultural, Technical and Extension Services observed that the approach needed to be modified to suit clientele needs by being more flexible in order to match available resources. There was also over-training of extension officers – unlike many other extension services in Africa, Zimbabwe has strong in-service training programmes which have ensured a higher level of technical proficiency than the level that the training and visit approach could provide to the extension service. Budget constraints made it impossible for the training and visit system to be implemented in its prescribed form so it was modified and scaled down to suit available resources. Recent research has shown, however, that the cost of the training and visit model was 25–40 per cent higher than the models it replaced (Anderson and Feder, 2004).

Extension information

Extension provision is just as important as the form and type of information that is packaged and provided to farmers. It is thus important to package and disseminate agricultural information to farmers in the language they understand. Following the restructuring of the information machinery of government in 2000, agricultural issues were given prominence by the public broadcaster, both through electronic communication (radio and television) and in print. Special programmes focusing on agricultural issues were regularly featured on television. The Zimbabwe Broadcasting Corporation provided airtime on radio and television for policy clarification and extension in languages that ordinary farmers understood. Several types of partnerships were created with the Department of Agricultural Research and Extension, Department of Livestock Development, and so on, as part of the public service. A significant number of farmers listened to the programmes where they had the necessary electronic receivers.

Input companies, agro-processors and equipment providers also bought airtime and space in the print media to reach out to farmers with their products. However, there has always been a gap with respect to the provision of information which warranted a variation in dissemination approaches used (table 9.3). Nevertheless in providing space for the private sector to lead in the provision of agricultural information there is a danger that the needs of smallholders

Table 9.3 Extension sources and dissemination of information

SOURCES	TYPE OF INFORMATION	MEDIUM
Media		
Radio programmes	• *Nhau dzevarimi* (Farming news) on Radio Zimbabwe • *Tirimurimi wanhasi* (Today's farmer) on radio • ZFU radio listening groups • Farmworker issues	ZBC in association with AREX ZFU FCTZ
Video units	Farming documentaries Livestock and agronomy videos	AREX
Television programmes	Talking farming	ZBC in association with AREX
Organizational based		
Publications	• 40,000 copies of *Kunzwa/Ukunzwa* (Listening) produced 3 times a year • ZFU publishes the *Murimi-Umlimi (Farmer)* bi-monthly magazine	AREX
Electronic information	• Internet-based information used by the well resourced farmers. • Government is promoting ZARnet for mass internet usage	Individuals Ministry of Science and Technology
Community radios	Rural dialogue with an emphasis on agricultural information	AREX
Public gatherings		
Agricultural shows	Agro-processors and government departments provide information to the public through publications and talks	Joint public-private sector partnerships
Community meetings	Regular community meetings where extensionists and other are invited by the community	AREX and private sector (for example, processors, Cottco, CSC, and so on)
Field days	Field-based examples where farmers learn from successful farmers	AREX, NGOs, agro-processors
Training and education		
Adult education	Study circles, books and materials	ZFU, SCC, Study Circle Alliance of Zimbabwe

Key:

AREX = Department of Agricultural Research and Extension
CSC = Cold Storage Commission
FCTZ = Farm Community Trust of Zimbabwe
NGO = non-governmental organization
SCC = Swedish Cooperative Centre
ZBC = Zimbabwe Broadcasting Corporation
ZFU = Zimbabwe Farmers' Union

might be neglected as investment in information technology is geared towards areas where they have appropriate benefits. A regulatory framework is therefore critical to establish an enabling environment for the private sector to participate in the provision of information necessary for extension.

The medium of communication is as important as the type of information. Some farmers do not have television sets, others do not have radio receivers. This warrants a variation in the medium of communication to the farmer. Farmer organizations provide information to their members and to the general public through regular publications and interaction with farmers at the field level.

Agro-processors and farming unions and associations play a critical role in coordinating the provision of information. Internet-based information is also becoming crucial both in the public and private sector as a medium of information. Organizations package such information for some farmers whilst other farmers may access such information directly from internet sources. However in developing information for extension purposes it should be realized that there has been a tendency to concentrate on particular areas. Being able to reach farmers in the remote areas of the country is critical. The issue is to avoid intransigence on what should be done by the state or the private sector and examine the sequencing and changing roles of the public and private sectors over time with respect to the provision of information for extension.

Private extension services

Farmers' unions and input supply and marketing companies have employed personnel with extension experience to either market their products or provide an exclusive service to members. Such extension services complement national extension services and allow the national service to concentrate their efforts and limited resources on communal farmers who were neglected in the past. But the private extension services recruit personnel from the national extension service, leaving it considerably weakened by this loss of experienced personnel. Private extension services have absorbed experienced extension personnel at a time when the extension service was not expanding.

Private extension services have played a significant role in maintaining and improving the production of certain specialized crops, particularly those with export potential, but there is no clear line of distinction between the areas where private extension services can work and those areas to be covered by the national extension service. There is a fear that if private companies were allowed to provide extension services, the country would be taken back to the pre-independence situation when there were two parallel extension services. Furthermore, the potential conflict and competition for limited resources between the private and public sectors could negatively impact on the gains made by public extension services. As a result, although not acknowledged, partisan extension services continue to exist through commodity associations, farmers'

unions, marketing agents or non-governmental organization supported projects. Furthermore, trained extension personnel have been given opportunities to diversify into other areas and still use extension as their knowledge base.

Research and extension linkages

The need for research and extension cooperation was recognized in the staff appraisal report of the World Bank in 1983 which led to the national agricultural extension and research project. Apart from the provisions for housing, vehicles, laboratory equipment and rehabilitation of war-damaged houses, the project proposed the establishment of a committee for on-farm research and extension to coordinate on-farm trials and demonstrations as well as give researchers and extensionists a chance to interact at the field level in real farm situations. It had been observed that the extensionist was largely a visitor at research stations while the researcher was unfamiliar with the realities under which the farmers operated.

The committee for on-farm research and extension was organized into commodity teams with a steering committee at both head office and provincial levels. It organized annual meetings where all on-farm trials and demonstration proposals were assessed, vetted and subsequently incorporated into a directory for that year. The assessment and vetting was intended to reduce duplication in trials and/or demonstrations. The national commodity committees assessed the trials in the field and the results were subsequently recorded in the directory. One of the major weaknesses of the committee was that it did not have a budget of its own and there was no clearly defined structure of reporting to either the Department of Research and Specialist Services or the Department of Agricultural, Technical and Extension Services. This together with the declining budgets in the two departments led to the demise of the committee in the early 1990s.

The merger of the research and extension services

The idea of merging the Department of Agricultural, Technical and Extension Services and the Department of Research and Specialist Services was mooted around 1997. The main reason for merging the two departments was to reduce administrative costs through the general government policy of reducing the size of the public service. The decision to merge was made in 1998 but the merging started in 2001 with the appointment of directors for the Department of Agricultural Research and Extension and the Department of Agricultural Engineering, and the appointment of a principal director to whom the departmental directors were to report. At the same time the posts of director for the two departments were abolished. From January 2002, a number of officers' workshops were held to explain the changes and agree on the new structure.

While this was going on, the ministry created a new Department of Livestock Production and Development and the director for this new department was appointed in mid-2002. The net result was that Department of Agricultural, Technical and Extension Services and Department of Research and Specialist Services had been replaced by three departments – the Department of Agricultural Research and Extension, the Department of Agricultural Engineering and the Department of Livestock Production and Development. In addition, what was previously the veterinary services section became the fourth department.

In July 2002, Cabinet resolved to do away with the position of principal director and the four departments reverted to reporting to the Permanent Secretary for Lands, Agriculture and Rural Resettlement, as was the case before the merger process. This arrangement was changed again in 2002 where two divisions exist, each headed by a principal director, namely:

- The Division of Agricultural Services, comprising the Department of Agricultural Research and Extension and the Department of Agricultural Engineering, with each department headed by a director.
- The Division of Livestock and Veterinary Services, comprising the Department of Livestock Production and Development and the Department of Veterinary Services, each department also headed by a director.

At the time of writing, there were plans and discussions to further split the previous veterinary services department into two, with one department responsible for field services and tsetse control and the other department responsible for veterinary research, laboratory work and public animal health services.

To summarize, instead of achieving the original objectives, the end result was the creation of a bigger establishment than envisaged. There was no clear decision taken on the mandate of the Division of Livestock and Veterinary Services and that of the Department of Agricultural Research and Extension in respect of livestock research and extension. The directors of both departments were unclear about their mandate as regards livestock extension. While livestock research services remained within Department of Agricultural Research and Extension, the general feeling among many stakeholders was that, ideally, livestock research and extension should fall under the Department of Livestock Production and Development.

The importance of agricultural extension under the Division of Agricultural Services was diluted as it was headed by a national extension coordinator whose authority was not clear. The national extension coordinator was supposed to coordinate extension activities throughout the country, reporting to either the director of the Department of Agricultural Research and Extension or the principal director for the Division of Agricultural Services. The relationship was often quite volatile and this resulted in confusion especially among the former Department of Agricultural, Technical and Extension Services staff

Table 9.4 New institutional structure for public extension

Department of Agricultural Research and Extension	• Responsible for research and extension for crops • Livestock research and extension • Agronomy services • Coordination of farmer requirements	Higher intensity of farmer to extension worker which was increased from one to six extension workers per ward
Department of Agricultural Engineering	• Ensures the engineering requirements of farmers • Farm power and machinery, • Farm structures and environmental engineering • Produce handling, training, engineering economics • Irrigation	• Irrigation specialist to help farmers in establishment and functioning of irrigation schemes. • Provide advice on farm equipment and machinery
Department of Veterinary Services	• Field services (animal health services) • Monitoring livestock movements • Procuring vaccines for animal diseases and providing dipping services	• Veterinary officers stationed at district level and in most livestock areas • Dipping services to all farmers
Department of Livestock Production and Development	• General animal husbandry • Technology transfer, multiplication and breeding of animals and forage • Breeding nucleus heads, gene banks for fodder and grass	800 livestock extension officers linking up with veterinary officers in the field

whose reporting structures appear to have been inadequately streamlined to conform with the reorganization that had taken place. Provincial structures, though left untouched, appeared out of line with the reorganization. Provincial heads were ambiguously placed, reporting to both the coordinator and the director. At the same time, no significant changes had taken place operationally at field level: researchers and extension agents effectively continued to work separately because of the lack of concurrent institutional and structural changes at field level.

One of the interesting observations with the structures was how the chief of extension (formerly of the Department of Agricultural, Technical and Extension Services) at provincial level would now link up with the head of the agri-

cultural research stations (formerly of the Department of Research and Specialist Services) both of the same grade with a new role of carrying out both research and extension in the province. By 2003 a tentative arrangement had been agreed upon to form a provincial committee with a chairperson. But past experience with the committee for on-farm research and extension showed that such committees had little impact if they were not properly constituted with a budget and executive authority. Clearly, there was need for further refinement of the merger so that all research and extension services fell under one roof at national, provincial and down to district level. Individual job descriptions also needed to be redefined.

The merger of the two departments resulted in some resignations and, to a lesser extent, retirements. This left the capacity of the ministry seriously impaired in meeting the demands for extension services. As a stopgap measure, the ministry advertised for the return of retired extension workers to address the capacity problem. Although a few responded positively, they went for months without pay and there was no transport and housing for them, particularly in the newly resettled areas. The anticipated contribution of extension to the land reform programme was threatened with inadequate capacity. Yet the land reform programme was predicated against a background where extension services would have to be provided with increased capacity in order to address the production challenge. While the uncertainty continued, it was evident that production would be constrained due to inadequate extension coverage. Further debates on reorganization ended up with the separation of irrigation from agricultural engineering and the creation of a new Department of Irrigation.

Conclusion

Zimbabwe had developed a strong agricultural extension service that was a champion of development in the communal lands. Since independence, the extension service has contributed to the increase in production of crops such as cotton and maize by communal farmers. Zimbabwe's national development through participation and initiation of rural development projects has been based on investment in extension. Such an investment made it expedient that national planning services for the resettlement programmes be conditioned by extension. The physical development of irrigation schemes for both subsistence and cash cropping largely benefited from extension provision. Zimbabwe has the necessary human resources, infrastructure and experience that could be used to jump-start another agricultural revolution.

Recent developments, however, are cause for great concern over the future of extension and unless some of the destructive institutional changes are reversed, this could mark the start of a period of long-term decline of the extension service in Zimbabwe. The institutional development process can pose risks

or opportunities in the service delivery performance of new departments and there is need to pay attention to the organizational interface between farmers and service providers. Farmers should ensure that extension and research institutions are accountable in terms of performance and standards. The assumption is that farmers will contribute to their own development since they are aware of their needs, rights and duties. All stakeholders, including farming associations, agro-processors and government, have a duty to provide the policy conditions under which extension can flourish.

The research and extension linkage should be strengthened. While extension requires a strong link with research, institutional arrangements should not compromise extension. Government should take steps to strengthen research services in its human resource capacity, funding and equipment so that the very useful work that the Department of Research and Specialist Services has done in the past can be continued. There is need to think through the relationship between research and extension in the light of the land reform programme. It would be preferable to build strong institutions with the capacity to fully service the requirements of the land reform programme so that the production revolution achieved in the past can be sustained.

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