

‘ALDEP Re-designated as ISPAAD’: An Appraisal of Continued Stagnation of Crop Production in Post-Independence Botswana

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Abstract

This paper studies two agrarian schemes in Botswana from Independence in 1966 to the present, namely the Arable Lands Development Programme (ALDEP) which was introduced in 1979 and Integrated Support Programme for Arable Agricultural Development (ISPAAD), which started in 2008. It intends finding out why the programmes were initiated, the target groups of farmers, the packages involved and some of the bottlenecks that were experienced during the implementation of the programmes. The study adopted a comparative approach of the two programmes, and argues that shortage of draught power and inadequate extension services were the major obstacles to their implementation. It concludes that these programmes were characterised by a top-down approach and they duplicated each other. A key recommendation would be that policy formulation in agriculture should begin with thorough consultation with the various stakeholders, especially at local level before implementation.

Introduction

Crop production programmes were initiated in different parts of colonial Africa. In these programmes ‘new regulations about seeds, contouring, cattle dipping, and marketing went along with massive efforts to get Africans to produce more’ (Cooper 1993:127). In colonial Zambia Jonathan Momba (1985) writes about the way in which the programmes accentuated peasant differentiation. Ackson Kanduzi (1984), also writing on Zambia, shows that the schemes targeted the well-off farmers called ‘Improved Farmers’ by supporting them through seed subsidies and agricultural equipment, enabling these farmers to purchase more ploughs, tractors and harrows, and leading to an increase in acreages and yields. In Botswana the programmes started initially in the mid-1930s with the ‘pupil co-operator’ scheme in the Bakgatla Reserve. Here, demonstration plots were used to show selected farmers the good results of using new methods such as row planting, fertiliser and new implements. The programme was stopped in 1939 owing to the outbreak of the Second World War but resumed after the war in 1945. Just like in the earlier programme, selected well-off farmers were supplied with improved seed, fertiliser and new farming implements. The programme produced ‘progressive’ and ‘master’ farmers who increased their acreage and yields, accentuating societal differentiation (Morapedi 2006). One such ‘master’ farmer was Botswana’s second president, Sir Ketumile Masire (Masire 2006).

Most studies on post-independence agrarian Botswana largely discuss a single programme, and only make references to others in passing (Shrestha 1986; Mayende 1990; Monatshana 2006; Tshwarelo 2005; Manatsha 2004; Miti and Chipasula 1989; Tshekiso 1990 and Borhaug 1992). Farrington and Marsh (1987) concentrate on the Arable Rainfed Agricultural Programme (ARAP) which was launched in 1985 to cater for medium-scale farmers who were not covered by ALDEP, but later it catered for all categories of farmers. ARAP’s major objective was to encourage arable farmers to increase production by providing cash to those who destumped, row planted and weeded their fields (Borhaug 1992; Tshekiso 1990; Makepe 2005). Makgala (2005) focuses on the National Master Plan for Arable Agricultural and Dairy Development (NAMPAAD) which was introduced in 2002 as part of government’s initiative to diversify the economy and reduce dependence on the diamond-led economy. The aim was to increase agricultural productivity through the promotion of dairy development, irrigation agriculture, insurance cover for farmers and

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infrastructural development (Makgala 2005 and Sekwati 2010). There are a few studies that are general and briefly discuss ALDEP, ARAP and NAMPAAD as well as schemes in the pastoral sector. Examples are Magang (2015) and Masire (2006). Makepe (2005) largely discusses both ALDEP and ARAP and the contribution of agriculture to the economy of Botswana in general. The present study attempts to make a comparative analysis of ALDEP and ISPAAD. Although the physical ecology has always been harsh, Botswana have continued to produce food even during the colonial period.

In Botswana, the physical ecology has always been harsh but Botswana have been producing food under these hostile conditions even during the colonial period. Evidence suggests that from the 1920s until 1966 local food production was almost near self-sufficiency (almost 98%) except in years of drought (Tshekiso 1990). However, since Independence self-sufficiency in food production has not exceeded 50% except only in two years (Opschoor 1983). The National Development Plan (NDP) 8 (1997/98–2002/3) echoed the same sentiment and emphasized the importance of agriculture:

The agricultural sector's contribution to Gross Domestic Product (GDP) has declined from 40% at independence to 4% during NDP 7.... Despite this decline, the agricultural sector remains an important source of food, income, employment and capital formation for the majority of the population living in the rural areas. About 2% of formal employment and a significant proportion of informal sector employment comes from the agricultural sector (Republic of Botswana 1997:227).

During the above plan period crop production was low because 'Total domestic production of the major cereals was on average 37,000 metric tonnes annually and total cereal imports were 230,000 metric tonnes annually' (Republic of Botswana 1997:235). In 2009, Botswana's cereal imports mainly from South Africa reached 290 metric tonnes (NDP 10 2009-2016:187). In fact, Botswana has been experiencing cereal production deficits since Independence because by then, agriculture was the major economic undertaking contributing about 42.7% to the GDP. Nevertheless, since the discovery of diamonds in the 1970s, this contribution has been declining, averaging less than 3% since 2000 (Sekwati 2010). Table 1 below shows that during 2003 to 2008 Botswana's food production could not meet the national demand, hence food deficits.

Table 1: Declining food production in Botswana in the new millennium

Year:	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Cereals:					
National Demand:	148,000	196,000	190,000	191,000	177,000
Annual Production:	41,000 (27.7%)	24,000 (12.2%)	34,000 (17.1%)	27,000 (14.1%)	43,000 (24.2%)
Deficit:	107,000	172,000	156,000	164,000	134,000

Source: Republic of Botswana (2009:187).

This situation prompted the Botswana government to launch interventionist programmes aimed at increasing crop production. It was stated in 1985 that 'Although agriculture is no longer the largest sector of Botswana's economy in terms of contribution to Gross Domestic Product, and despite rapid urbanisation, four fifths of the total population are still rural and agricultural production remain the core of the rural economy' (Republic of Botswana 1985:168).

In 1966 the agricultural sector contributed about 40 % to the GDP and it was the leading employment sector, employing about 27.3% of the country's workforce. By 1976/1977 this contribution had dropped to 24.0% (Makepe 2005 and Magang 2015). This implied that poverty was growing in the rural areas because most Batswana lived there and largely depended on agriculture. Thus, Chipasula and Miti aver that 'The growing poverty in the rural areas and the growing unemployment both in the urban and rural areas prompted the government to start the Arable Lands Development Programme which was conceived in 1977' (Chipasula and Miti 1989:59).

This paper proceeds to briefly recount the aims and objectives of ALDEP and ISPAAD before discussing the target group of farmers, providing reasons why a specific group of farmers was targeted. This is followed by an account of the manner in which the programmes were implemented, showing some of the shortcomings of the top-down planning model and the obstacles that were met during the implementation phase.

The Top-down Planning Model in Botswana

In 1966 Botswana adopted a liberal multi-party democratic system. Since then, the country's development planning model has been the top-down approach in which policy decision making is made by the top bureaucrats or senior civil servants. Therefore, the top-down planning model is not peculiar to the agricultural sector in Botswana. Scholars like Mpho Molomo and Patrick Molutsi (1989) have, in addition to demonstrating the use of the model in agriculture, discussed it in other sectors such as the Accelerated Rural Development Programme (ARDP) (Molutsi 1989 and Molomo 1989). The two scholars posit that a small dominant section of the ruling class makes or influences government decisions and policies. Top bureaucrats direct the formulation and implementation of public policy by using the national development plan which is 'a technical document drafted by experts better informed on the vast array of interacting variables' (Molutsi 1989:112). This has resulted in non-experts making little or no contribution to this policy document although everyone is supposed to participate (Molutsi 1989). In describing the architecture of the top-down planning model in Botswana, Molutsi writes that the ruling class can be categorised into five big sub-sections. These are elected representatives such as members of parliament, councillors, village development committee members, traditional leaders (chiefs and headman), the bureaucracy in the form of senior officers in the public service, parastatal and private sectors, the business elite and top livestock and crop farmers (Molutsi 1989).

Among the five sub-groups, the bureaucracy is dominant in the decision making process. Molutsi (1989) states that the bureaucracy is:

a large and heterogeneous group of Western educated people who by virtue of high levels of education occupy important positions in government ministries. They include the professional cadres of planners, administrators, engineers, medics, academics, teachers, members of the army and the police force. They also include senior level council employees. Outside the local and central government sectors, the bureaucracy includes directors of private and parastatal companies such as Debswana, Botswana Telecomms, BP Botswana, and Botswana Meat Commission (Molutsi 1989:106).

In this architecture the political leadership (elected representatives) has remained generally weak and 'relatively uninformed' (Molutsi 1989:108). They have less years of formal education compared to bureaucrats and they endorse policy decisions by the latter, with little practical control over policy. The traditional leadership are part of the ruling class due to their influence at local level on development policy, and they also participate at national level. However, their role in the policy making process has been declining since

Independence (Molutsi 1989). Emphasizing the dominant role of the bureaucracy in Botswana's top-down planning model, Molutsi argues that 'In a democracy, decision-making is supposed to be made by elected representatives, that is the politicians... the rest of the state institutions are supposed to advise and carry out policies and decisions made by elected representatives' (Molutsi 1989:108). However, this democratic arrangement is rarely practised because on many occasions un-elected officials make decisions for politicians as is the case with Botswana (Molutsi 1989).

It seems that to a large extent, the domination of policy decision making by the leading bureaucrats observed by Molutsi and Molomo has persisted to the present day. Writing recently, Paul-Sewa Thovoethin observes that expatriates who dominated the bureaucracy in Botswana just after Independence were largely responsible for policy formulation and implementation. They briefed cabinet and parliamentarians 'on the technicalities and potentialities of macro policy' and that this tradition, set up at Independence by expatriates remains to date (Thovoethin 2014:262). Thovoethin illustrates his case by giving the example of the Ministry of Finance and Development Planning which is the driving force behind Botswana's development having been headed and dominated by leading bureaucrats such as Baledzi Gaolathe, Ponatshego Kedikilwe and Solomon Sekwakwa. He also states that critical ministries such as the Ministry of Energy and Water Resources and parastatals and boards relevant for the formulation and implementation of policies for economic development have been headed by technocrats and bureaucrats who also dominated the composition of their boards. Examples are the Bank of Botswana and Debswana Board of Directors where chief government bureaucrats sit (Thevoethin 2014:262-264).

Louis Picard, who wrote before Molutsi, Molomo and Thovoethin argues that policy making in Botswana has been left to bureaucrats who remain critical actors in central government ministries and that day to day policy making is their work (Picard 1977). Although there are educated politicians today in cabinet and parliament some even possessing graduate university degrees, they are either misplaced in the positions they hold, or are still largely dependent on the bureaucrats. For example, in 2016 the Minister of Education and Skills Development was a trained lawyer and not an educationist, and similarly the Minister of Justice, Defence and Security is a trained sports person with no background in law and defence. Although there could be conflict amongst the elite which could be in the form of inter or intra party or any other form (Makgala 2006), there is a 'coalescence of economic and political power by the elite in Botswana' (Good 1994:516). So, even when the bureaucrats dominate policy decision making, the interests of the other elites are always catered for.

Below we show how Botswana's bureaucratic decision-making model has hampered the successful implementation of ALDEP and ISPAAD.

Aims and Objectives of ALDEP and ISPAAD

The first major crop production programme after Independence was ALDEP which was formulated in 1979. The programme was initially funded at P23,000,000. Technical assistance was provided by the Food and Agricultural Organisation (FAO) of the United Nations (Mayende 1990). ALDEP was designed to assist small holders who were not able to produce enough food for their needs, and who constituted the majority 70-75% of the traditional arable farmers. It was believed that this would increase the country's food production and enable it to achieve self-sufficiency in food staples (Makepe 2005 and Magang 2015). Agricultural officials stated that, the aims of ALDEP were to lift poor subsistence and below subsistence farmers to achieve higher levels of productivity to enable them to be self-sufficient in meeting their food requirements. The programme also intended to raise farm income and employment. The latter aim was in accordance with the government's new food policy (Republic of Botswana 1990).

Another major goal of ALDEP was to increase arable production with the aim of reducing the annual 20% to 40% cereal deficit and achieve self-sufficiency in the long term (Makepe 2005). ALDEP was

devised to raise low income farmers' cereal production and incomes, and reduce the country's dependence on imported food which was about 50% at that time by enabling these farmers to produce marketable surpluses. The generation of income through improving agricultural productivity would create employment in the rural areas, thus absorbing the unemployed and reducing rural-urban migration (Magang 2015; Makepe 2005 and Siphambe 2005).

ALDEP was a poverty alleviation programme which targeted farmers with less than 40 cattle or nothing at all, and cultivated less than ten hectares. Some cultivators had no cattle but still hired or loaned cattle for cultivation. The programme had three categories in its target group called 'models'. Model I farmers were those who did not own cattle at all. Model II farmers were those owning 1 to 20 herd of cattle while Model III included those owning 20 to 40 (Republic of Botswana 1992). The primary objectives of ALDEP were to 'augment small holder production and create rural employment that is stable and remunerative enough to be a source of livelihood' (Kerapeletswe 1981:5).

The major aim of ALDEP was to increase production and achieve sustained self-sufficiency in basic legumes and grains at rural and national levels and export surpluses including cash crops in all good years. It was believed that this would raise arable income and create self-employment.

Botswana was facing challenges such as unemployment, underemployment, economic inequities and widespread poverty. Thus, ALDEP was seen as a solution to the constraints facing the development of arable agriculture in the country. The 'production targets' objective of ALDEP was to increase arable production by 4% to 6% per annum. According to the Ministry of Agriculture, the average crop yield was expected to double from the then 200 kilogrammes per hectare to 400 kilograms per hectare (Republic of Botswana 1981). An increment production of about 3000 metric tonnes of grain was to be marketed directly to generate about P500,000 per annum. This would be followed by the expansion of the land under cultivation by small producers from approximately 40,000 hectares to 64,000 by the eighth year of ALDEP (Republic of Botswana 1981).

The second series of ALDEP aims, which were called 'income targets', focused on raising average rural incomes from the estimated level of P460 a year to P1060 by the year 2000 (Republic of Botswana 1978). Under the third series of targets called 'employment creation', it was envisaged that agriculture would create about 2,500 jobs per annum in the form of self-employment created by the commercialisation of small holder production. Farmers in the scheme were expected to gradually abandon the traditional system of planting by broadcasting seeds and they were advised to do minimal weeding. It was hoped that farmers would now produce about 18,500 metric tonnes of grain and pulses (leguminous crops such as beans, lentils, chicken peas and peas) valued at P3,600 000. This would, in addition to guaranteeing them subsistence, also lead to the realisation of the envisaged 'substantial marketable surplus to improve their income' (Mayende 1990:143).

ALDEP was terminated in 2008 after it proved to be a failure in achieving its intended goals (Republic of Botswana 2008:1). ISPAAD was then introduced in a bid to save the situation with the objective of increasing 'grain production, to promote food security both at household and national levels, to commercialise agriculture through mechanisation, to facilitate access to farm inputs and credit and improving extension outreach' (Republic of Botswana 2008:3). ISPAAD was introduced the year Ian Khama became Botswana's fourth president and, in some quarters, especially among the ruling Botswana Democratic Party (BDP) politicians, the programme was hailed as his brainchild, with Assistant Minister of Agriculture Shaw Kgati saying 'the expected improved yield (from ISPAAD) in the country is all thanks to Khama's bold decision to re-invigorate and re-energise the farming community' (*Mmegi* 9 June 2009).

In 2008/2009 cabinet ministers held various *kgotla* meetings throughout the country explaining the objectives of ISPAAD. In Mathangwane, Assistant Minister Kgathi told his listeners that food had become more expensive worldwide due to high fuel prices and other related factors hence the introduction

of ISPAAD in a bid to make the country self-sufficient in food production (*Botswana Daily News*, 26 September 2008). During the 2007/2008 season the country imported 19,047,415 metric tonnes of cereals at P73,199,160 and in the 2008/2009 season this had gone up to 21,881,212 metric tonnes at P93,047,415. At the beginning of the 2008/2009 ploughing season the Ministry of Agriculture vowed to triple food production from 30,000 to 90,000 metric tonnes and it expected to spend P181 million under ISPAAD. According to statistics from the Ministry of Agriculture 89,000 farmers enrolled in the 2008/2009 ploughing season, and they were expected to plough 274,000 hectares (*Mmegi* 18 June 2009).

Packages and Target Groups for ALDEP and ISPAAD

As noted above ALDEP targeted 'resource poor farmers' cultivating less than 10 hectares and owning less than 40 herd of cattle. These comprised 60,000 to 70,000 traditional farmers in Botswana (Monatshana 2006). Under ALDEP, small farmers got agricultural implements and inputs under a credit scheme which was changed three years later to a down payment or grant scheme. Under this arrangement the farmer was supposed to pay 15% of the cost of a particular package while the government covered the remaining 85% (Magang 2015). This requirement and the targeted group illustrate the shortcomings of the top-down decision making policy in Botswana because the majority of the 60,000 to 70,000 targeted farmers could not afford the required 15% down-payment.

The objectives of ALDEP were to be attained by providing farming implements, draught power and seasonal inputs such as certified seeds and fertiliser. These were officially called 'investment packages'. Various on-farm investment packages were provided under ALDEP. Firstly, there was animal draught power comprising of donkeys, oxen and mules with donkeys going up to a maximum value of P1400 in 1979. Draught power was critical to crop production because 30,000 to 35,000 households in the country did not have access to it, and as a result they ploughed less acreage which meant lower yield. Secondly, animal-drawn implements consisting of ploughs, row planters, cultivators and harrows which cost up to P2120 were provided. These implements would enable farmers to plough and plant in time to take advantage of soil moisture, it was thought. The third package involved fencing materials for up to P4500. Fourthly, water storage tanks were included for a maximum value of P3600. Finally, factory-made donkey carts were later added to the package and these went for about P1900. In addition, the farmers benefited from extension services by agricultural demonstrators among other experts. The parastatal National Development Bank (NDB) provided credit and subsidies (Republic of Botswana 1979a).

Indeed, these inputs were crucial for increased crop production. The majority of small farmers, for instance, lacked draught power and as such it was difficult for them to plough and make maximum use of the moisture which often disappeared owing to intensive heat from the sun. The cultivators were an efficient device for removing weeds in row-planted fields and this substantially increased the yield. Indeed, some farmers did manage to increase their yields with the assistance of ALDEP. Some even managed to buy themselves cattle among other forms of property that improved their lives (Interviews with farmers in Mulambakwena 22 December 2015). However, many farmers did not manage to access the packages, while others could not utilise them for the intended purposes. 18 out of 46 interviewed farmers said that they did not know how to use the implements and 15 out of 46 farmers said they preferred using old methods (Republic of Botswana 2001).

ALDEP was terminated on 30 June 2008 and replaced with ISPAAD. Under ISPAAD eligible farmers were those 'aged 18 years and above in possession of the national identity card (*Omang*) or residence and work permits and those who have demonstrated to extension staff that they own fields or have the consent of the owners to use such fields' (Republic of Botswana 2008:2). The government's aim in introducing ISPAAD was to diversify the economy from minerals by boosting the agricultural sector (Malema 2012). Unlike ALDEP, ISPAAD was not discriminatory (*Daily News* 26 September 2008). The

packages of ISPAAD were cluster fencing, provision of portable water, provision of seeds and fertilisers, facilitation of access to credit, establishment of agricultural service centres and provision of draught power (Republic of Botswana 2008). When emphasizing the vitality of quality seeds and fertilisers for crop production in the country, the ISPAAD guidelines state that one of the major factors that contributed to low crop yields was poor soil fertility. Many farmers were unable to acquire and use fertiliser and lime because fertiliser was expensive.

It has been realised that commercialising the arable sub-sector could be achieved by availing critical high quality seeds. For a competitive arable sector to emerge and ensure food security at household and national levels, it was critical that government assisted farmers to acquire quality seeds. Under ISPAAD farmers would obtain free fertiliser for 'up to a maximum of 5 hectares at a rate of 200 kilogramme (kg) per hectare and additional fertiliser of up to a maximum of up to 11 hectares' would be provided at 50% subsidy (Republic of Botswana 2008:3-4).

In coming up with ISPAAD, it was noted that acute shortage of draught power and related implements for arable farming has contributed to decline in crop production in the past. Therefore, it was decided that agricultural service centres should be established to assist small scale farmers with draught power to enable them to undertake farming operations. Service centres would, among other things 'Provide farm machinery and associated implements to enable farmers to expedite and improve on timeliness of tillage operations; promote farm mechanisation so as to improve farm productivity and finally food security and to facilitate commercialisation of arable agriculture and help with providing agricultural inputs' (Republic of Botswana 2008:5-6). Under ISPAAD farmers were to be assisted to plough and plant a maximum of five hectares for free. In addition, farmers could be assisted to plough or plant additional land from 6 to 16 hectares at a subsidy of 50%. The Ministry of Agriculture would engage private contractors to plough and plant for farmers under the following conditions:

All contractors should register with the extension staff at the latest by 30th October every year. Contractors were encouraged to have a full range of farming implements of good quality such as plough, planter and harrow. ISPAAD shall pay for ploughing and planting irrespective of whether the farmer used a tractor or animal draft power as long as the seedbed preparation (ploughing) and planting were of acceptable standard. Those who broadcast were to be paid for ploughing and not planting, and the rates for ploughing/planting operations were to be as follows: ploughing (conventional tillage) P400.00 per hectare, minimum tillage (tinned tillage) P350.00 per hectare, planting P150.00 per hectare, and harrowing P150.00 per hectare. These rates were to be reviewed from time to time and be adjusted accordingly (Republic of Botswana 2008:9-10).

ISPAAD also undertook to facilitate the provision of free seed enough to cover a maximum of 16 hectares, and farmers with more than 16 hectares were encouraged to source additional seed from locally registered suppliers at a subsidy rate of 50%. Through ISPAAD the government would facilitate access to seasonal loans by providing funds to the NDB so that farmers could finance agricultural projects like farming inputs.

What emerges from an examination of ISPAAD packages and target group is that it duplicated many of the packages of ALDEP. It had the draught power component just like ALDEP. It also had the fertiliser and seeds aspects which also applied to ALDEP. It also had the subsidy aspect for seeds for farmers with more than 16 hectares. ISPAAD was not discriminatory in its eligibility criteria because it accommodated farmers from different categories, whilst ALDEP targeted 'poor resource' farmers. The packages provided by the two schemes were all crucial for increased food production and tackling the problem of food security in Botswana. This was because the majority of farmers lacked critical implements and inputs

such as ploughs, planters, fencing materials and draught power to undertake successful farming operations. However, the success of these programmes hinged on a number of factors such as planning, droughts and implementation as we discuss below.

Challenges Encountered by ALDEP and ISPADD

All the two major crop production programmes encountered testing challenges. One of the challenges was poor planning premised on the top-down approach. For instance, during the planning of ALDEP the relevant authorities made assurances that genuine consultation with the farmers was or will be made. However, during the formulation of ALDEP very little consultation was made with Botswana in the rural areas in general (Mayende 1990). Furthermore, very little consultation with the targeted groups was made despite the fact that authorities had initially emphasised the importance of participation by the latter. Mayende (1990:146) concludes that 'the failure of meaningful consultation with the people was to have severe consequences for the implementation of the programme as a whole'.

An example of top-down planning and inadequate consultation is that the bureaucrats at the Ministry of Agriculture decided that one of the answers to one of the major problems, which was the severe shortage of draught power, was the provision of donkeys. On the other hand, the intended recipients regarded donkeys as inefficient, slow and a humiliation and a haunting sign of some farmer's level of poverty in a country with a strong cattle-keeping culture (Mayende 1990). The uptake of the donkey package never exceeded 15% of the packages taken by participants in the programme (Mayende 1990). The donkeys were thus unpopular and many farmers seem to have rejected them because only 30 donkeys' draught power packages were distributed to 15 farmers in the 13 extension areas countrywide (Mayende 1990). Intensive consultation with the populace would have involved what Molomo called a form of citizen participation in politics. By this he meant 'consultation in which the views of the population are aggregated and then shaped into constituent elements of public policy' (Molomo 1989:239). Perhaps, this approach would have led to better understanding and implementation of ALDEP.

A long standing problem that faced the Botswana government services dealing with rural development administration was the shortage of trained manpower. There was a serious shortage of agricultural demonstrators in the Department of Agricultural Field Services (DAFS) which dealt with extension service. There was a high rate of attrition in that there were 617 posts in DAFS in 1979/1980 while only 160 extension areas had personnel out of a total of 210. This left 24% of extension areas vacant (Republic of Botswana 1979b:4). (An extension area meant village and the fields around it, and can include a village and a smaller one and surrounding fields with one agricultural demonstrator). ISPAAD has just undergone its first review, and no secondary literature on the deployment of agricultural demonstrators has emerged so far.

With ALDEP, technical assistants or agricultural demonstrators were supposed to work directly with the farmers on a daily basis and know them personally. Although some progress was made in ALDEP, inadequate administrative systems resulted in inconsistency in keeping of records, and in the appraisal and approval of application forms (Republic of Botswana 2001). In the different extension areas, farmers could not be sufficiently trained and supervised in the use of farm implements and this resulted in implements such as harrows, cultivators and planters remaining unutilised or wasted (Republic of Botswana 2001). This is shown by the fact that in an interview carried out by the Auditor General's office, out of 46 farmers interviewed, 18 (39%) of them said that they had no knowledge of how to use implements and some had never used them before (Republic of Botswana 2001). According to the same document, 15 farmers (33%) preferred using the old methods of planting because they felt that using the new implements took time, especially the use of planters. The report also observes that 'There was need for strengthening of the extension services so that it would provide efficient technology transfer to the target group' (Republic of Botswana 2001:23-24).

Another challenge that faced ALDEP was the bureaucratic red-tape or excessive delays in dealing with the farmers and private entrepreneurs who were input suppliers. Some farmers had to wait for as many as 341 working days (almost the whole year) for their applications to be approved, and for about 306 days after having made their down payments to receive the packages (Republic of Botswana 2001). It was stated that this was due to critical shortage of transport, inadequate funding and the delay by input suppliers. The suppliers of inputs complained that they had cash flow problems because their payments were not processed quickly having at times to wait for three to six months to get paid by the government. These delays were a great disadvantage to suppliers. In the words of the Auditor General, the 'Waiting time on approval of applications had adverse effects on farmers and resulted in the increase of prices by the time applications were approved' (Republic of Botswana 2001:23). The same source also observed that 'This led to higher down payments for farmers than would have been the case had the applications been approved timely. It led to farmers who had intended ploughing during the current season failing to plough and as such they were inconvenienced'.

Thus, it becomes clear that official red-tape was a major obstacle in the implementation of ALDEP. The delays in providing packages meant that some farmers missed the optimal ploughing times, or ploughed late with resultant low yields. Other challenges that faced ALDEP during its implementation were drought and ARAP. Drought was a major challenge for ALDEP for more than 6 years during its existence (1981/1982 season until the 1987/1988 ploughing season). Farmers were not willing to invest and adopt new methods when conditions were so severely unfavourable. The drought also affected thousands of farmers because their livestock died. Another negative effect of the drought was that the government ran the drought relief scheme (*namola leuba*) during this period. Some farmers abandoned their fields or did not plant at all, instead preferring to work in *namola leuba* where they were paid cash even though it was very low (Republic of Botswana 2001).

Critical extension service staff such as agricultural demonstrators, who were on the ground to provide advice and other assistance to farmers, were swamped with ARAP duties and this deprived ALDEP participants the much needed support since the two programmes ran parallel (Republic of Botswana 1987). ARAP was more appealing than ALDEP because it was not discriminatory as it catered for all groups of farmers. ARAP also had a cash incentive, in that farmers were actually paid cash for a number of hectares they cultivated. It has been argued that this kind of 'support' negatively affected the farmers' traditional work ethic as they became over-dependent on the state (Makgala 2005).

Another major constraint faced by farmers who wanted to take advantage ALDEP was the 15% down payment. Some 875 farmers who were sampled in Kerapeletswe's report on Model 1 female headed households for the Ministry of Agriculture indicated that this aspect of the programme was a major constraint to their participation (Kerapeletswe 1991). It would appear that there was miscalculation on the part of the ministry officials when coming up with the down payment arrangement because they thought farmers would afford it. Nonetheless, many farmers could not afford the down payment, hence they could not enlist in ALDEP. This is also a reflection of the inappropriateness of the top-down planning model because top bureaucrats could not appreciate the situation on the ground in rural Botswana. This dovetails with Molutsi's observation that the top bureaucrats hardly ever visited the districts but rather sent 'their juniors when necessary' (Molutsi 1989:109).

Unfortunately, ISPAAD seems to have inherited some if not most of the challenges faced by its predecessor –ALDEP. When ISPAAD started during the 2008/2009 season, 73,000 farmers participated and cultivated 237,000 hectares. On 25 February 2009, Shaw Kgathi stated that ISPAAD focused on serious farmers and that farmers who failed to manage their fields would be disqualified (*Mmegi* 25 February 2009). He further said that some farmers benefited from ISPAAD, but failed to manage their fields. Kgathi also indicated that the government intended to take drastic measures against negligent beneficiaries of

ISPAAD in a bid to enhance food security (*Sunday Standard* 22 February 2008).

However, for the eight years that ISPAAD has been running there is no evidence of any farmer who has failed to manage their fields being disqualified or facing stiff penalties. Many cultivated fields in the south eastern parts of Botswana have shown signs of negligence. There had been no weeding, no bird scaring and in most cases some fields have been abandoned after ploughing only for the owners to appear when something can be salvaged from those fields (Interviews with villagers at Ralekgetho and farmers at Tewane lands, 9 January 2016 and 6 March 2016). Just like it was the case with ALDEP some farmers also left their fields unattended and enlisted in the *Ipelegeng* programme (successor to *namola leuba*), arguing that *Ipelegeng* was their means of survival. Moreover, farmers seemed not to care for their fields since they obtain all inputs and packages free under ISPAAD (Interview with Ministry of Agriculture's Chief Agronomist 29 September 2016). The problems of negligence and *Ipelegeng* countrywide were echoed repeatedly by several commentators during a Radio Botswana call-in programme called 'Lifeline' in which they commented on a presentation by the Director of Crop Production at the Ministry of Agriculture on 11 January 2016 (Radio Botswana 11 January 2016).

Another problem which ISPAAD has faced is the shortage of draught power, especially tractors. A country survey in 2009 indicated that there were 2000 tractor owners in the country. In that year, the government purchased 60 tractors for distribution throughout the country (*Mmegi* 25 February 2009). The government also delivered a total of 75 ploughs, 45 harrows, 60 planters and 45 cultivators (*Mmegi* 09 April 2009). Nevertheless, the equipment as well as the tractors were woefully inadequate taking into account the over 70,000 farmers who had enlisted. Some tractor owners wanted to be paid upfront or more than the stipulated P400 per hectare and this hampered ISPAAD's progress. According to a Moshupa-based agricultural demonstrator the demand for more than the stipulated P400 per hectare also left some farmers, especially the less privileged, on the lurch (*Daily News* 15 February 2009). The slow payment process for tractor owners due to shortage of staff also delayed progress (*Mmegi* 25 February 2009). Some tractor owners demanded payment from farmers for diesel. At *kgotla* meetings held in 2011 in Borotsi and Matlhaku villages in the Tswapong area addressed by a new Assistant Minister of Agriculture, Oreeditse Molebatsi, farmers complained that tractor owners charged exorbitant fees before ploughing claiming to have no funds to buy fuel (*Daily News* 5 October 2011). They explained that they could not afford to pay upfront because they only survived on the *Ipelegeng* programme.

The shortage of agricultural demonstrators that characterised ALDEP has also been a major problem for ISPAAD. The ratio of agricultural demonstrators to farmers in the extension areas is highly disproportionate. For instance, during the 2008/2009 ploughing season there were 260 agricultural demonstrators serving more than 89,000 farmers countrywide, and this shows how inadequate the extension service staff was (*Mmegi* 10 November 2010). The duties of agricultural demonstrators included the processing of ISPAAD applications, supplying fertilisers and seeds, measuring fields and the normal extension services of advising farmers. These duties have been overwhelming to agricultural demonstrators and hampered the implementation of ISPAAD. Critics of ISPAAD have lambasted and dismissed it, arguing that there was nothing new in ISPAAD as it was a duplication of ALDEP and other failed agricultural programmes. In particular, former cabinet minister, David Magang, correctly sees 'ALDEP Re-designated as ISPAAD' (Magang 2015:12). Writing about Botswana's formal economic structure as a possible source of poverty, the economist Brothers Malema observes that whilst the intentions of the ISPAAD programme are clear and needed for creating employment, reducing poverty and diversifying growth, the means to achieve these goals have failed to identify the problems besetting the country's agriculture such as droughts and lack of irrigation (Malema 2012).

Criticism of ISPAAD seems valid because the programme is experiencing the same problems encountered by earlier programmes and it appears the major beneficiaries are the middle to large scale

farmers. According to the University of Botswana-based critic, Kenneth Dipholo, tractor owners represent medium to large scale farmers and these cultivate their fields first before ploughing the fields of their close relatives and friends (Dipholo 29 November 2009). Therefore, small farmers often have their fields cultivated very late into the rainy season and this leads to low harvests.

The findings of this paper indicate that as far as crop production is concerned, some of the aspirations of Botswana's blueprint for development 'Vision 2016' such as a prosperous, productive and innovative nation have not been achieved 50 years after the country's Independence. By 2016 and despite the lofty ambitions of ALDEP and ISPAAD, the nation cannot boast of prosperity and productivity when it has not achieved food self-sufficiency and is still heavily dependent on food imports.

Conclusion

It has been demonstrated that household and national food self-sufficiency, rural poverty and unemployment have been the main reasons why the Botswana government embarked on the ALDEP and ISPAAD agrarian programmes among others. Draught power, the most crucial component for crop production, was provided in all programmes. To a considerable extent, ISPAAD duplicated ALDEP. All the schemes faced a critical problem in the extension service because of the acute shortage of agricultural demonstrators and difficulties in sourcing equipment needed for farming. The on-going ISPAAD is still grappling with many of the problems experienced in previous programmes.

The top-down decision making model of planning in Botswana, which is dominated by top bureaucrats, hampered the successful implementation of both programmes because of lack of pro-active extensive consultation with critical stakeholders such as the elected local leadership, traditional authorities, and the largely impoverished small scale farmers. It seems over the years successive national leadership has not learned much from the mistakes of the past. Therefore, 50 after years of Independence, food production in the country has declined drastically and as such, the country cannot claim any pride when it is heavily dependent on food imports.

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