REPÚBLICA DE MOÇAMBIQUE

MINISTÉRIO DA AGRICULTURA
INSTITUTO DO ALGODÃO DE MOÇAMBIQUE

AGRICULTURAL DIVERSIFICATION AND CROP ALTERNATIVE TO TOBACCO: PERSPECTIVE AND EXPERIENCE OF THE TOBACCO SUB-SECTOR IN MOZAMBIQUE

The Ministry of Agriculture of Mozambique is undergoing a reform, which is why the Tobacco sub-sector is currently under control of the Cotton Institute.

CURRENT TOBACCO PRODUCTION

Production of tobacco has steadily increased since the engagement of tobacco buying companies in Mozambique. This is shown in the table below:

	Green weight total in tons			
Season	Burley	Dark fired	Flue cured	Total
1997	671,90	533,60	300,0	1.505,40
1998	3.034,80	598,90	300,0	3.933,70
1999	4.254,40	1.550,30	300,0	6.104,60
2000	7.651,20	4.173,20	300,0	12.124,40
2001	12.698,40	2.627,90	300,0	15.626,30
2002	19.005,50	3.301,40	425,2	22.732,10
2003	23.400,00	4.250,00	630,0	28.280,00
2004	40.633,00	2.316,00	5.420,0	48.369,00
2005	52.329,00	3.645,00	4.050,0	60.024,00
2006 preliminar	49.960,00	2.750,00	1.940,00	56.590,00

Number of farmers

With the increase in production and the expansion into more areas and provinces the number of farmers participating in tobacco production has steadily been on the increase. In 1996 the total number of farmers was about 6,000, currently there are approximately 150,000 farmers directly engaged in tobacco production.

Impact on rural economies

Since the 1996/97 seasons, there has been a marked improvement in the livelihoods of the rural population that was previously only involved in subsistence farming. The income generated from sales of tobacco leaf has been used to purchase food requirements for the family, to buy clothing and pay fees for much needed education.

Telef. 258 – 21 – 431015/6, Fax 258 – 21 430678, E-mail: sgouveia@iam.gov.mz, C.P. 806
Av. Eduardo Mondlane Nr. 2221, 1º Andar - Maputo – Moçambique

There also has been increased material well-being by way of bicycles, radios available for farmers from their sales of leaf tobacco as well as many houses being built with roofs made of iron sheets – a phenomenon which was previously unheard of in the subsistence sector.

As farmer livelihoods, improved demand for more **services** has arisen and many service providers have come into the tobacco producing areas to meet these demands. These areas have also attracted many institutions to provide parallel services due to the increase in economic activities.

With production increasing annually, there has been a subsequent demand for labor and other assistance, thereby providing opportunities for addressing the rural urban Diaspora. Furthermore, the **labor employed** by tobacco growers acquire good agronomic skills with good agricultural practices – a natural way of training and imparting the necessary skills that many can take back to their own areas and homes for further development of the crop.

Tobacco production has also enhanced **food security** for the rural poor. The current credit packages of some companies actually include fertilizers and hybrid Maize seed for 0.5 of a hectare. This ensures adequate food supply for the farming families. By growing tobacco, farmers acquire skill, which they use in the growing and management of other crops such as groundnut, pigeon peas and paprika. The tobacco-maize rotation also improves maize yields, which utilize the residual fertilizer left over from the previous year's tobacco grown in these fields. In periods where there are food shortages, tobacco farmers have used their income from leaf sales to access food in times of need.

Spill over services to provide requirements and meet demand for goods after sales have increased in all tobacco growing areas. There has been an explosion of entrepreneurial spirit in the non-tobacco sector, which has created micro economic expansion with small business in the form of general dealerships, shops, manufacturing of basic farmer requirements such as tinsmiths, and many other services for the direct tobacco income sector. Seed companies and NGOs have targeted tobacco-producing areas.
Infrastructure weaknesses have been highlighted within the rural economics and these necessary amenities such as road network, educational institutions, and health services, are being addressed, albeit minimally.

GOOD AGRICULTURE PRACTICES

Good Agriculture Practices (GAP) are a set of activities and practices that lead to a sustainable agriculture i.e. agriculture activities and practices that are selected due to the contribution to production and productivity without harmful effects to productive resources such as soil, water, labor and capital.

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GAP and crop diversification have been most times used interchangeably, but the underlying point on both cases is to ensure a sustainable agriculture through a combination of techniques and technologies that lead to the maintenance of continued availability of quality productive agriculture that benefits the farmers and the environment.

Although GAP encompasses a variety of options for farming, selected activities have proved to have strong mitigating effects where danger of resource depletion is imminent. This is the case of monoculture, i.e.: tobacco and cotton in general and particularly in areas where these crops, due to high returns, are major cash crop of farmer preference. In the absence of technical assistance, the production of high input cash crops has been detrimental for long term productivity.

Actually, Mozambican government, public and private institutions and all agricultural concerns are taking sustainable agriculture on a serious note, since has been proved that bad agriculture practices can lead to the depletion of farming resources, compromising food safety and disturbing the ecosystems. For these reasons, it is required that the agriculture sector be strongly involved in the development and application of sound good agriculture practices as part of the social responsibility in its business plans.

IMPORTANTS FACTORS TO CONSIDER FOR A GAP PLAN

There are many factors to take into account when designing a GAP plan. The main are contained in the following categories:

Technical – the activity must be technically acceptable, i.e.: legumes should be the best choice to rotate with a non- leguminous crop like tobacco or cotton etc.

Economical – whatever activity must be cost effective. It is imperative to plan in advance the destiny of a crop selected to be used as part of GAP. Farmers may produce any crop if market is provided.

Social – the set of GAP activities must run on favor of socially acceptable practices.

ACTIVITIES

Tobacco and cotton are known as soil fertility “depletory and deforestation crops”. Where these crops are produced in large scale a GAP plan is required. The following activities should be included in the plan:

- Selection of crops for rotation.
- Selection of forestry crops and forestation plans especially for tobacco areas.

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- Training farmers and technicians on selected additional crops specifically on production techniques, integrated pest control and post harvest management
- On-farm demonstrations and field days
- Market search and linkage (with full knowledge of requirements)
- Other social activities influencing best practices.

INDICATORS

Indicators should be objectively verifiable and allow any one to understand what has been planned, the level of implementation and the reason for deviations from the original plan. Indicators help managers in keeping track, monitoring progress and take action whenever necessary. An indicator must provide means of quantitative and qualitative measurement for targeted results.

EXAMPLES OF GAP ACTIVITIES IN MOZAMBIQUE

Mozambique Leaf Tobacco Company's GAP activities with the assistance of ICRISAT (International Crops Research Institute for the Semi-Arid Tropics) were based in the following:

- Establishment of a rotation scheme, for the farmers involved in tobacco production in Angonia and Macanga districts of Tete province. Groundnut and beans was the main legume crop incorporated in the rotation and 240 tons were produced;
- Establishment of 100 on-station and on-farm demonstration plots with new crops and varieties suitable for the region;
- Organization of more than 60 field days with farmer's participation;
- Training of 78 leaf technicians on legume crops and IPM;
- One Radio phonic extension;
- A market research was carried and two major groundnut markets were identified (South Africa and UK);
- Maize is another crop which the government and Tobacco Companies incentive the farmers to produce, true giving the seed by credit. This incentive is for to guarantee the food Security;
- Other strong activity that the Tobacco Companies are carrying out is the reforestation programmer in the area where they produce tobacco due the massive use of the forest for building the burner;
- The Tobacco Companies also are involved in social aspects like: construction and rehabilitation of schools, health centers in rural areas, rehabilitation of small

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roods in rural areas for to facilitate the agricultural commercialization process, and other social activities in the District level.

The activities carried out by MLT with ICRISAT involvement; however, MLT had already been implementing GAP related activities.

All the above activities can be checked if indicators are set in advance, i.e. from seed purchase records, the list of farmers receiving seeds, and seedlings, the documentation of field visits, and reports etc.

GAP is not necessarily confined to crop rotation alone but to all other actions that can influence farmers and companies to follow a sound agriculture production practices thus guaranteeing sustainable agriculture. A GAP plan should indicate the institution's commitment to implement activities conducive to sustainable agriculture, by means of setting targets that can be checked for progress of implementation. In the bases of this analysis, lessons should be drowning for further actions.

Where GAP is institutionalized by a regulatory body such as the government, the plan should be able to clearly indicate what is intended, and how progress would be monitored.

CONCLUSION

- The relatively recent introduction of the tobacco crop in Mozambique allows one to analyze a "before and after" scenario in which tobacco has played a significant role as an important economic and social stimulant;
- In Mozambique, farmers growing tobacco frequently practice diversification already;
- Diversification should be encouraged but always following GAP models;
- Diversification or switching to other crops should always be a well-informed and voluntary decision by famers;
- The study group on alternative crops should continuously consult tobacco growers or their representatives in order to ensure that well-informed, objective decisions are taken;
- The Ministry of Agriculture of Mozambique, through the Institute of Cotton, remains available to provide further, more detailed information and data on its experience as a recent tobacco growing country.

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Mr. Sérgio J. Gouveia (Instituto do Algodão de Moçambique)
Av. Eduardo Mondlane, n° 2221 - 1° Andar, C.P. 806, Maputo – Moçambique
Tel: + 258 21 324264 (+ 258 21 431015/6)
Fax: + 258 21 430679
Email: sgouveia@iam.gov.mz (*sgouveia@intra.co.mz*)