Malawi: journey through the land of white maize

the EC food security and food aid programme
Cover picture: Longitudinal view of the national strategic cereal reserve of the ADMARC parastatal company, with a storage capacity of 240,000 tonnes. The complex is directly linked to the country's railway network.
Malawi is without doubt the greenest country of southern Africa.
Malawi — described on postcards as being "the warm heart of Africa" — is a small land-locked state perched at high altitude in southern Africa. Bordered on the north by Tanzania, to the west by Zambia, and surrounded by Mozambique to the south and east, the country stretches to some 800 kilometres long, with a width of 100 to 180 kilometres maximum. The eastern edge of Malawi is defined by an immense lake of 30,000 square kilometres which bears the same name and forms part of the national territory (118,484 km²). An extension of lake Tanganyika, lake Malawi occupies the southern part of the great tectonic crevasse — the rift valley — which cuts through East Africa.

Malawi, then known as Nyasaland, was colonised by the Scottish Presbyterian church before becoming a British protectorate in 1891. Nyasaland gained its independence (and changed its name) in 1964 under the driving forces of Dr Banda and the Nyasaland African Congress which he led and which campaigned against the integration of the country into a federation of the two Rhodesias (now Zimbabwe and Zambia).

At the same time as he established an efficient policy of socio-economic development which gained the confidence of international bodies, Doctor Banda (Hastings Kamuzu Banda had studied medicine in the United States) quickly showed himself to have a leaning to authoritarianism (he proclaimed a one party republic in 1966) which then developed into full blown dictatorship (he became President for life in 1971). Opposition was no longer tolerated and human rights abuses as well as the physical elimination of opponents became more and more frequent. Control of the population was guaranteed by a paramilitary organisation — the Malawi Young Pioneers — at the heart of which was the Youth League which regulated the smallest detail of Malawian daily life. Political domination was added to economic domination through the creation of the Press Corporation which was directly controlled by the President.
In 1992, in the face of an increasingly dire human rights record, the major donors (including the European Community) decided on a partial freeze of aid. The Malawian population also began to show signs of unrest and in June 1993 a referendum approved a return to multi-party democracy. This led to presidential and parliamentary elections in May 1994 and effectively brought to an end the thirty year old regime, replacing it with a new President — Bakili Muzili — and his party the Union Democratic Front - UDF.
An economy based on agriculture

With a per capita GNP of approximately US$230, Malawi falls into the category of least developed countries. Although endowed with a certain amount of exploitable mineral wealth — coal, bauxite, and even uranium — the country has not yet begun to develop these assets. Malawi imports its total consumption of hydrocarbons and depends on firewood for 95% of its energy needs — with a resulting deforestation rate of 2% per year.

The principle source of revenue remains agriculture which provides 80% of total employment, 90% of exports and represents 35% of gross domestic product. More than anything else, Malawi is a rural country. Processing and industrial production account for less than 14% of gross domestic product. Moreover, the existing processing industries are very closely linked to agricultural cash crops. Trade and services are barely developed. The balance of payments has been in deficit (to the tune of 150 to 170 million dollars) since 1992 because of the constant importation of food (due to recurrent drought) and the high cost of transport (due to the lack of sea access). The civil war in Mozambique greatly added to transport costs because it made the railway lines to Beira and Nacala (Mozambique’s two principal ports) virtually unusable, and forced goods to be routed through Zimbabwe and Tanzania.

Despite the change of government in 1994, the economy, if anything, is doing worse. The GNP has shrunk by 9% in real terms, consumer prices have gone up 40%, the national currency — the kwacha — has been devalued and overall inflation is running at 20%. Two billion dollars of external debt weighs heavily on the economy.
and repayments soak up 25% of export earnings. Massive external financial aid, as grants or loans, provides around 80% of the state's investment budget (about 90 million ECU). In December 1995, at the last consultative meeting of the World Bank and donors, the international community agreed to provide 330 million dollars for Malawi. In this context, the European Community allocated an initial amount of 26.1 million ECU to support the programme of reforms.

Living conditions for the Malawian population are not easy. This is illustrated by the health statistics: the rate of infant mortality is 234 for every 1,000, average life expectancy is 48 years and, since the beginning of the nineties, approximately 30% of the urban and semi-urban population is HIV positive. The effect of AIDS is such that for a Malawian, a week rarely goes by without an attendance at the funeral of someone in their social circle.

The literacy rate is one of the lowest in southern Africa — 40% of the population is able to read and write. This figure drops to only 29% for the female population. There is only one university and in the primary school system, there is one teacher for every 131 pupils. Until 1992, practically 90% of the rural population did not have access to basic education.

### Agricultural production

Tobacco, tea, sugar and white maize are the major agricultural products. Tobacco, tea and sugar are cash crops whose trade represents between 85% and 90% of the country's exports. This means that the country's access to foreign currency is very dependent on this sector. As well as white maize, which has become the main food crop, cassava, millet and vegetables are also grown.

Agriculture is split into two systems which is the direct consequence of the old Banda regime and, before him, the colonial period. Before independence, only cash crops were developed, in the absence of mineral resources (these were only discovered later on). In fact, at this time Nyasaland served as a reservoir of labour for the rich mines of the neighbouring territories (Rhodesia and South Africa), and also provided them with cereal from its vast agricultural plantations. Banda perpetuated this system but deepened the divide between the big plantations owned by supporters of the regime and the small producers struggling for survival.
In an attempt to ensure the country's food self-sufficiency, the old regime invested heavily in the mass production of white maize (by all necessary means, including intimidation and imprisonment of small producers who showed signs of resistance) but without taking account of agro-climatic conditions and nutritional requirements. Hybrid seeds were introduced which gave an increased yield but which were more fragile and needed pesticides and fertiliser. This formula did not work for the small subsistence farmer who could not afford to buy the necessary inputs for this type of seed. Under these conditions, the slightest climatic upset could have serious consequences for the small producer's harvest. Furthermore, small producers were obliged to buy new seeds every year — the second generation of hybrid maize could not be used for germination because of the loss in its reproductive capacity.

Rather than increasing the country's agricultural production, this policy marginalised 80% of agricultural producers (a large majority of whom were women) and enriched the big plantations. Even worse, because of the weak purchasing power of both urban and rural populations, the price of white maize was held artificially low. The inevitable consequence of this was the maintenance of prices to producers at a lower level than world market prices. This disastrous policy was clearly unable to offer an incentive to production and small farmers concentrated on subsistence needs rather than producing a surplus, which was left to the big plantations. Furthermore, a significant amount of the production from the big plantations was exported illegally for higher prices in neighbouring countries. This aggravated even further the national food deficit.

The maintenance of the buying and selling prices of white maize at an artificially low price was made possible by the establishment of a parastatal organism (ADMARC) which until recently had the monopoly of distribution, stocking, purchase and sale of maize on the markets. This body operates stores across the country, including the strategic cereal reserve in Lilongwe which has a total capacity of 240,000 tonnes. Following the liberalisation of the economy, ADMARC lost its monopoly and private operators can now buy, sell and stock cereals. However, at the present time the commercial strength of these small operators is far less than that of ADMARC.
Food security in Malawi is fundamentally based on the consumption of white maize which represents over 80% of the average national food basket and 96% of total cereal production. Due to the structural deficiencies of the Malawian system of production already mentioned above, cereal production declined during the last decade, from 168 kgs per inhabitant in 1985 to 140 per inhabitant in 1995. Whilst the total annual production of cereals between 1987 and 1991 was 1,474,000 tonnes of which 1,420,000 tonnes was white maize, a drought across the whole of southern Africa in 1992 pushed production down to 697,000 tonnes (against a national requirement of 1,859,000 tonnes for that year). It demonstrates the weakness of a system of agricultural production based on the use of hybrid maize and fertilisers when there is a lack of water and problems of access to the necessary inputs. This food insecurity is further aggravated by a population growth rate of 3.45% per year, which represents an increase of one million people every three years (for an initial population of 9.78 million).

Weaknesses in the system are further exacerbated by the inability of the great majority of farmers to produce a surplus. 70% of the country's farmers, some 1.6 million peasants, are small producers sharing 1.8 million hectares of land. Of these, 1.3 million (one third of whom are single women) cultivate less than one hectare. These farmers' production is mainly for their own consumption. Their total production is estimated to be 40% of total national production. Each farmer produces an average of 120 kgs per year. These small producers therefore find themselves in a situation of chronic food deficit and dependence on outside assistance to cover their minimum food needs of about 180 kgs per year.

The European Community food security programme

Since 1994 the Food Security and Development Fund and Food security programmes have mainly been directed towards commencing the process of the structural adjustment in the maize market, as well as financing support essential to the food security of the country—namely:

- the sale of white maize on the market, while the small producers continue to rely totally on the official purchase system and the state's support on the production, processing and marketing of the maize produced,
- the implementation of support for food security financed by counterpart funds obtained from the sale of aid, a system of price and market information monitoring of the spread of the various uses of maize to ensure the necessary rise in demand.
- the improvement of seed support to NGO programmes for the generation and distribution of seeds, as well as the establishment of community seed banks, support for community forestry and pest or reduction programmes,
- institutional and advisory support to the Ministry of Agriculture through the financing of national seed multiplication programmes, and programmes for training agricultural and rural conservation technicians.
Besides this 70%, 10% of farmers are considered to be in a break-even situation. But they only produce on average one per cent of the tradable surplus. Finally, the remaining 20% of farmers produce 60% of the national total and generate almost all of the tradable surplus of maize.

However, despite the fragility of such an agricultural system, Malawi is capable of ensuring its own food security. In 1993, shortly after the great drought, national production reached 2,120,000 tonnes, thanks to normal rainfall and to a programme of extended access to credit which allowed wide scale use of inputs by small farmers. This record production covered the national food requirement (1,941,000 tonnes for that year). Unfortunately, the following year drought returned to the country and the credit system collapsed. These two disasters drove production down again to 1,100,000 tonnes, which left a food deficit of 900,000 tonnes to be met due to the inexorable rise, year after year, of national consumption. This rise is inextricably linked to the increase in population. The solution to the problem depends on a total restructuring of agricultural production in Malawi to make it more efficient and less vulnerable to outside forces (mostly agro-climatic).

Clearly, national production is very dependent upon the variable weather conditions, especially given the way in which the sector is structured. Moreover, even when there is good production (as in 1995) there is still a deficit to be met due to the inexorable rise, year after year, of national consumption. The solution to the problem depends on a total restructuring of agricultural production in Malawi to make it more efficient and less vulnerable to outside forces (mostly agro-climatic).

THE ROLE OF COMMUNITY FOOD AID

The EC has prioritised two overall objectives of its food aid and food security programme in Malawi. In the long term, the aim is to reinforce food security at national and household levels in the context of an ongoing liberalisation of the economy.

To this end the short term objective is to reactivate agricultural activity which will generate resources for the rural poor.
Improving food security

To improve food security in Malawi, the authorities will need to put in place a wide-ranging strategy for food security. This should provide for a rise in the income of farmers and in the production of food for domestic consumption. The strategy should include measures to improve access to seeds and experiences the increased demand for food products. The strategy should also provide for the establishment of efficient credit mechanisms, as well as an improvement in the soil fertility by the adoption of techniques for natural fertilizers, soil conservation, and agro-forestry.

This strategy is all the more important since the liberalization of the economy and the abandonment of price subsidies in the agricultural sector will have a negative impact on the costs of production. The cost of agricultural inputs will tend to rise whilst the selling price for producers will tend to fall because of the reduced size of the private sector able to buy. Furthermore, it is clear that the small producer will need time to adapt to an unprotected market governed solely by the laws of supply and demand.

During this period of transition, until the private sector reaches a state of maturity, the State should protect the interests of the small farmer by guaranteeing a minimum producer price in order to ensure that they do not go under in the new market. This would also be an incentive for production, reducing dependence upon imported cereals at the national and household level. This policy could be effected through a programme of State purchases immediately after the harvest which would also allow the State to maintain cereals stocks at a level sufficient to intervene immediately in a food crisis (this reserve is all the more important when we consider that Malawi is a landlocked State, difficult to reach, whose private sector is still in a very early stage of development). Without it, being the primary policy objective, this programme may also help to combat the rural exodus towards the towns, which has produced a 12% rate of urbanization and is fuelled by poor conditions in the countryside.

Food Security Project

Aims: To improve food security, increase income, and nutritional status of households in Dowa West by:
- Crop diversification
- Use of low-cost sustainable agricultural technologies
- Improved storage and community empowerment

Objective 1: To enhance food security and improve household food basket through crop diversification by distributing seeds to 6,000 households in 3 months.

Objective 2: To improve soil fertility through the use of local and imported sustainable agricultural technologies, improved storage, and community empowerment.

Objective 3: To enhance crop productivity through the introduction of sustainable agricultural technologies, small-scale fertilizers, and community empowerment.

Objective 4: To improve access to seeds and improve household income through crop diversification by distributing seeds to 6,000 households in 3 months.

Objective 5: To strengthen the skills of FSP staff in crop diversification, use of local and imported sustainable agricultural technologies, improved storage, and community empowerment.

Objective 6: To improve access to seeds and improve household income through crop diversification by distributing seeds to 6,000 households in 3 months.

Activities:
- Seed distribution
- Training of farmers
- Improved storage
- Community empowerment

National description of a food security project implemented by an NGO and financed by the EC.
Since 1994 the EC has allocated food aid in the form of white maize to cover part of the country's food deficit. This deficit, as we have seen, is caused by a combination of variable climatic conditions and Malawi's inadequate system of agricultural production. Avoiding a "hand out" approach, the EC does not freely give out aid, the food is sold in order to avoid both a collapse in the price to producers — already low enough — and a situation of dependency. The aid is structural and is integrated into a wider policy of food security through the creation of counterpart funds which are used to finance other activities in support of food security. These counterpart funds are generated through the sale of food products allocated to the Malawian government as food aid.

In 1994 the EC allocated 70,000 tonnes of white maize to cover part of the internal cereal deficit. In 1995, 60,000 tonnes of white maize were granted for the same purpose (with a total value of EU 14.77 million, including transport). These amounts were equivalent to about 35% of Malawi's total internal cereal deficit. Because of Malawi's landlocked position, and the lack of alternative storage sites with adequate facilities, these quantities were delivered to the ADMARC central stores (transport costs charged to the Community).

Triangular operations were carried out in the region in order to get the type of white maize grown in southern Africa in sufficient quantities. The operation was carried out in several stages in order to avoid logistical problems which could be quite considerable and to cope with procurement problems caused by climatic conditions. The sale of these two allocations was carried out by ADMARC, the parastatal company, which already had a nationwide infrastructure. This enabled the entire population to have access to this basic commodity.
TRIANGULAR OPERATIONS AND LOCAL PURCHASES

Triangular operations carried out by the EC consist of purchases of food stocks destined to be used as aid in the markets of countries belonging to the same region as the country which will receive the food aid. Triangular operations are so-called because they involve three parties: the country which provides the required product, the country which benefits from it, and the financier of the operation.

Such operations have three distinct advantages. First of all, they provide foodstuffs which are as close as possible to the normal eating habits of the beneficiary population (in the case of Malawi, white maize, which is mostly grown in southern Africa). Also, it promotes integration and regional trade as well as the mobilisation of agricultural surpluses in certain countries. This is essential in regions such as southern Africa where producers often lack outlets for their products.

Local purchases involve a financing donor (the EC) and a beneficiary country which is also the seller. This type of operation is useful when a country’s tradable surplus is not readily marketable, or in order to encourage production by stimulating a rise of the minimum farm gate price (such as the case in Malawi).

As the only large donor to authorise and encourage these practices (local purchases and triangular operations), the Community dedicated in 1996 more than 40% of its financial resources for mobilisation of foodstuffs to the mechanisms of local and triangular purchases.

Partial view of the storage infrastructure of the ADMARC's national strategic cereal reserve in Lilongwe.
LOCAL PURCHASE OF WHITE MAIZE

Re-establishing the national strategic cereal reserve

Located not far from the capital Lilongwe, the parastatal company ADMARC's national strategic cereal reserve is an immense complex for storage of cereal grains with a total capacity of 240,000 tonnes. This facility consists of 54 silos (capacity 5,000 tonnes each), six of which are used for recycling. These are flanked by an enormous warehouse which can be used for storage of cereals in bags as well as for bagging up and the loading/unloading of trucks. The complex is linked to the country's road and rail networks. This facility was created in 1976 to store any surpluses of production in order to regulate the market and — in bad years — to supply the country in times of scarcity.

Since the great famine which struck all of southern Africa, the fluctuations in Malawi's maize production have given rise, in addition to the EC's donated maize being sold on the markets, to an intensive use by the government of its national strategic cereal reserve in order to avoid major crises in the supply of maize to the markets — all this in a general context of political and economic transition which has the potential to generate social tensions. By the end of December 1995 the level of this reserve had fallen to about 25,000 tonnes.

In this context, and in agreement with other donors such as USAID, the EC decided, in January 1996, to contribute to the partial restocking of this national store, whilst participating in the considerations initiated by the government and the donor community on the future use of this institution in an era of liberalisation of cereal trade at national and regional level. Given the good prospects for the 1996 harvest (over 2,000,000 tonnes), the Community preferred to organise a campaign of local purchase designed to uphold prices paid to producers and promote a real transfer of resources to the agricultural sector, rather than a straightforward importation of cereals.

Overall view of the parastatal company ADMARC's national strategic cereal reserve in Lilongwe. This complex is composed of 54 silos with a capacity of 5,000 tonnes each.
To this end, the Commission decided on an allocation of 60,000 tonnes of white maize. An initial tranche of 20,000 tonnes was financed from the counterpart funds generated by the market sale of the 1995 allocation. This allowed for the purchase of maize direct from small producers through the ADMARC network. A second tranche of 40,000 tonnes was financed by the allocation of 10 million ECU from the Community's 1996 food security and food aid programme. This operation was carried out by a public call for tenders on the internal market (public and private). These quantities represent around 50% of the proposed restocking of the national strategic cereal reserve during the 1997 agricultural season.

According to the banded price system established by the government and revised upwards during the first quarter of 1996 (under pressure from the EC), the local purchases carried out by the EC were based on the minimum price to producers necessary to give a boost to the market, so as not to leave small producers at the mercy of a Malawian private sector which was still embryonic and so, therefore, enjoyed a situation of quasi-monopoly. This approach initiated a policy of encouraging production and transferring resources to the agricultural sector.
OPERATIONS IN SUPPORT OF FOOD SECURITY

Market and price information system, monitoring of the spread of the larger grain borer, project for educational radio broadcasts on agriculture

As already mentioned above, the market sale of maize provided through food aid generates counterpart funds which belong to Malawi. These are paid into a bank account which is controlled by two signatures (that of the mandated representative of the government and that of the Commission’s local head of delegation). The funds are used to finance other actions which complement the country’s food security policy. Implemented in collaboration with the technical assistance of the Commission in the field, the activities carried out in Malawi cover several areas.

Market and price information system

The ongoing process of liberalisation of the economy has made it necessary to have precise knowledge of the movements of prices of basic cereal commodities in the market. Since these prices are now subject to market forces, it is important to have an accurate idea of whether the producers — in times of scarcity — and consumers — throughout the year — have access to the goods which ensure their food security. We should not forget that food security is not just a question of productivity but also of accessibility. If the price of basic cereal commodities rises too much, food insecurity is created through the inability of poorer social classes to buy the food available in the market, which is so necessary to their survival.

In order to obtain this essential information, the counterpart funds were used to finance a pilot market and price information system throughout Malawi and the training of researchers. This work was carried out through a co-ordination of the EC’s technical assistance office and the planning division of the Malawian Ministry of Agriculture. Under the programme, thirty university graduates were trained in market analysis. They were dispatched throughout the country to collect and analyse data. The results of this survey were communicated to the donor community. In the next stage, personnel from the planning division underwent the same training as the temporary researchers in order to institutionalise the pilot project.
Monitoring the spread of the larger grain borer

The larger grain borer is a member of the coleopter family of insects which attacks maize and cassava in the field and in storage. Previously unknown in Africa, this voracious insect was introduced mainly through maize imports from South America. Since then a strict set of phyto-sanitary rules has governed the importation and exportation of maize from country to country. However, the risk of contamination is ever present, given the rapid spread of the insect, whether across the countryside or through cross-border trade which avoids official controls.

This parasite has been detected in Malawi, even though the country had been considered to be untouched by the plague. In order to limit the spread of this dangerous insect, it was decided to finance with counterpart funds a monitoring programme co-ordinated by the Bwymbue research station to locate the spread of the insect and to develop appropriate prevention techniques, particularly for storage.

Project for educational radio broadcasts on agriculture

The principal source of information in Malawi is radio. Much valued as a social contact, there is at least one radio set in each village. In order to reach the countryside population, the Malawi Broadcasting Corporation broadcasts a radio programme four times a week which spreads messages concerning new agricultural techniques, the availability of seeds, etc. This very popular programme is produced by the communications branch of the Ministry of Agriculture. The food security of rural communities is greatly enhanced by advice given on this programme. This is why, following budgetary problems in the ministry, it was decided to finance this programme with counterpart funds in order to ensure its continuation.
PROMOTION OF SEED DIVERSIFICATION

The import of improved seeds, multiplication and distribution of seeds, combined agro-forestry programme

As mentioned earlier, white maize, for structural reasons, represents 80% of the Malawian population's food basket. It is mainly grown from hybrid seeds which are fragile, and which need various inputs. This white maize monoculture is ill-fated in terms of both food security and good nutrition. It is therefore essential to diversify production, to be less dependent upon the vagaries of the weather and to allow consumers access to a varied and nutritious diet. To support this approach, the EC in 1995 financed the importation into Malawi of 1,355 tonnes of hybrid maize seed, 2,498 tonnes of cross-pollinated maize seed, and 492 tonnes of sorghum, soja, bean and sunflower seeds, for a total value of one and a half million ECU. These seeds were in part sold on the markets through the commercial network of ADMARC, in part used in multiplication schemes, and in part made available to NGOs (Concern Universal, Evangelical Lutheran Development Programme) whose projects focused on sustainable diversification of production (community seed banks, linked to rural credit schemes). An information campaign was launched to promote these seeds through the publication of 400,000 leaflets and the broadcasting of information on the radio agricultural programme.

THE ADDFOOD PROJECT

In 1996 the revolving fund produced by the 1994 food aid programme provided a continuation of funding for the local expenditure of a pilot project set up by the European Development Fund (7th EDF). Launched in 1989, the purpose of the ADDfood project was to spread knowledge to poor rural communities of agro-forestry techniques which would combat soil erosion and the loss of soil fertility due to monocropping of white maize, as well as tackling deforestation. This programme, which was expanded into a rural poverty-reduction programme reached some 325,000 small producers on 116,000 hectares of land and included an improvement in the yields of maize (from 800 kgs per hectare to 1.8 tonnes), a diversification of crops grown (through the distribution of seeds and plants) and the training of 1,500 agricultural information agents (extensionists).
INSTITUTIONAL AND BUDGETARY SUPPORT TO THE MINISTRY OF AGRICULTURE

Financing seed multiplication programmes, the spreading of agricultural and soil conservation techniques

The Ministry of Agriculture is still operating according to the dictates of a control economy (the same as several years previously), focused on production destined for exportation. There is only a very limited capacity to intervene at the level of the small producer. For everything concerning the research and spreading of agricultural techniques there has to be a serious reform if the Ministry is to be able to reach these small producers. In the light of these problems the EC has decided to make a contribution of institutional and budgetary support to the reorganisation of the Ministry's capacity for research, public information and new approaches to marketing.

The EC supports the work of the agricultural research station in Chitedze (close to Lilongwe) employing almost 50 professionals in agriculture, multiplication of seeds, agro-forestry and research into natural fertilisers. For example, in seed multiplication, the station runs a multiplication project of a maize seed which is a possible long term replacement for the hybrid versions. The existing hybrid seeds are very expensive to use for the small producers since they have to buy new seeds each year. The seed merchants do not want to sell any other type of seed, so that they can continue to take big profits from their trade (to sell a seed which can be used in its second generation means the loss of a client for the dealer).

Research and public information are also carried out in agro-forestry to spread the usage of a shrub called faidherbia albida which has the ability to fix nitrates — essential for plant growth — in the soil by its roots. Planted sporadically in and around the fields, this plant can significantly improve the fertility of the soil. Furthermore, thanks to the fact that it loses its leaves in the rainy season, it provides an excellent natural compost for small producers fields.

Nursery at the agricultural research station in Chitedze.