



A new strategy for cassava



Cassava is often seen as a poor cousin in the world's family of staple crops. While admirably tolerant to drought and productive on poor soils, this hardy tropical root seems unsuited to modern farming. First, it is usually propagated vegetatively from stem cuttings that do not store well and are costly to cut and handle. Vegetative reproduction also means the rate of multiplication of new, improved varieties is slow, retarding their adoption. Harvesting cassava is labour-intensive, and its roots are bulky and highly perishable. Finally, the presence in some cassava varieties of toxic cyanogenic glucosides has done little to burnish its image.

Little wonder, therefore, that cassava is usually grown by poor farmers in marginal areas - and even there, it faces increasing competition as cereals are further improved to adapt them to local conditions. In fact, far less research and development has been devoted to cassava than to rice, maize and wheat. This lack of scientific interest has contributed to highly uneven cultivation and processing methods, and cassava products that often are of poor quality.

A new initiative launched in Rome seeks to change all that. At a forum at FAO headquarters, some 80 agricultural experts from 22 countries were asked whether cassava had the potential not only to meet the food security needs of the estimated 500 million farmers who grow it, but to provide a key to rural industrial development and higher incomes.

Production, trade are increasing. The consensus was positive. A study prepared for the forum showed that, at global level, Thailand has already placed cassava firmly on the trade map, with its cassava pellets now a common ingredient in Europe's animal feed. Production for domestic markets is also increasing. The world's cassava output was more than 160 million tonnes last year, and could reach nearly 210 million tonnes by 2005. In the 1961-95 period, production for human consumption rose by 50% in Africa and 70% in Asia, which also leads in production of cassava-derived starches. Use of cassava roots and leaves as animal feed



exceeds two million tonnes a year in Latin America, with Brazil using at least half of its production in swine, poultry and fish farming production.

The forum's conclusion: cassava could become the raw material base for an array of processed products that will effectively increase demand for cassava and contribute to agricultural transformation and economic growth in developing countries.

But how? The forum's answer was the Global Cassava Development Strategy, drafted through a series of consultations with cassava "stakeholders" - including international agencies, NGOs, farmer organizations, national institutions and the private sector - and designed to make cassava more competitive in domestic and international markets. Since achieving that will depend on stronger growth in demand for the crop, the strategy proposes to develop cassava-based industries through a synergy of national, regional and continental strategies and plans, supported by global efforts to identify and stimulate markets.

Market demand. For cassava to be a major contributor to development, its market must grow more rapidly than population. The strategy advises, as a first, essential step, identification of markets that are growing or have the potential to expand. The second step is to guarantee a

consistent supply of a relatively uniform product - Thailand made headway in Europe only after it began using improved pelleting equipment and concentrated on large volumes. Step three is to provide the market with competitively priced products that meet consumers' needs.

Because cassava roots are highly perishable, processing is central to the future of the crop. At present, most roots are consumed or sold close to where they are produced. But at CIAT in Colombia, researchers have found that preservative treatments - such as dipping fresh roots in wax or paraffin - can extend storage life for three to four weeks.

Home and village-level processed products, particularly toasted flour (known as *farinha* in Brazil and *gari* in West Africa), could be marketed more widely as convenience foods because they are easy to buy, store and prepare. Cassava flour (*foufou* in Central Africa) can be used as a partial substitute for wheat flour and may lead to different grades of breads - and prices - for the consumer. The product has potential in many developing countries, particularly Africa, where bread made entirely from imported wheat dominates the market. Research is being done at IITA, Nigeria to evaluate, in partnership with the bakery industry, different combinations of cassava/wheat flour.

Cassava starch also has high growth potential, both for industrial and human uses - its viscosity and resistance to shear stress and freezing make it attractive for manufacturers of speciality food products, carpets and rubber latex. To compete with starches derived from maize and sweet potato, the cassava starch industry will need to capitalize on special traits not available in other products.

Finally, animal feeds derived from cassava - mostly meal and pellets - have been a major success for Thailand. However, the main constraint to its greater use in animal feed is lack of reliable supply throughout the year and inconsistent quality. Above all, processed products must compete with grain products. Lowering the cost of production is, therefore, crucial to cassava's survival as an industrial crop.



The strategy, in a box

The Global Cassava Development Strategy Validation Forum, held in Rome on 26-28 April 2000, endorsed the strategy as essential for setting a research/development agenda and building a framework for technical co-operation in research and technology transfer. It will also serve to identify opportunities for private investments and for public intervention in response to market failure, and to set the scene for future debates on global issues affecting cassava.

The forum agreed that cassava development should be demand-driven, and take advantage of market opportunities for traditional and new products. It would follow an integrated approach, involving production, processing and marketing, and be applicable to a wide range of stakeholders. It should also encompass issues of gender and equity, sustainability and environmental protection, and address food security concerns. Participants agreed on follow-up proposals, including creation of a coordination group, led by FAO, directly linked with regional and national cassava networks. The forum was organized by FAO and IFAD.