

CASSAVA PROGRAM REVIEW CONFERENCE

C.I.A.T. C.I.D.A. I.D.R.C.
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MEMORANDUM ON CASSAVA IN MALAGASY REPUBLIC

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1.- Actual status of Cassava production and utilization

In 1971, about 330,000 ha (815,000 acres) are cultivated, with a production in the region of 1,000,000 tons, the mean yield being about 3 T/ha. As a matter of fact, as well areas as particularly production are very difficult to estimate, on account of their dispersion - family contribution cultivation - and of companion crops high frequency. This yield is nevertheless very variable : less than 2 T/ha in mixed cultivation - with Leguminous or Gramineaceous plants - in south dry areas to more than 35 T/ha in modern cultivation fields.

Cultivated for direct consumption in all regions from which altitude in less than 4,500 feet and more often with traditional methods (low manuring, high planting density, long cuttings), it is forming the subject of industrial cultivation to obtain starch and tapioca - respectively 2,000 and 6,000 tons produced - only in very localized areas round the three actually working factories.

Consumption is essentially family one, forming frequently the subject of buying in the markets - from 2 to 5 FMG (1 to 2 cents) the kilo -. It is also essentially a product to bridge the gap during dry seasons and used to serve as substitute. As a matter of fact, it is a valuable in soil reserve which takes the place of the rice when this one is scarce. In cattle nutrition, it is sometimes fresh used, but only in small quantities. Dried, it is mixed with corn and rice bran, particularly for pigs and sometimes for poultry.

It should be observed that generally, sweet cassavas, having frequently, according to regions, particular flavours, are only appreciated by population who does not submit it to special preparations (as steeping) before consumption. Taken sometimes raw, more often commonly boiled, roots being only peeled and cut into pieces.

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2.- Principal factors limiting cassava production and induced problems

2.1.- Quantitatively

Three series of factors are called into play:

* On the one hand, these connected with ecology

- Drought in the south (problems of resistance to drought)
- Soil often poor and being deficiency (problems of plant nutrition) in all regions.

* Then again these connected with cultural practices

- Essentially manuring. If our knowledge with regards to basic ingredients (N, P and K) is relatively extensive, those with regards to another ones have practically not been yet studied (Ca and trace elements in particular). Now it is probable deficiencies in these last ones are sometimes the cause of some low yields (Zn, Mg, B ...).

* Finally these connected with plant.

- Essentially diseases and more particularly virus (mosaic), just as root rots (elementary studies in progress on mosaic).
- Its morphology (habit, leaves, ...), the importance of which is probably to study again.

2.2.- Qualitatively

* Amount of dry matter rather low, starch storage speed rather slow and starch amount rarely high.

* Amount of hydrocyanic acid, inducing a redhibitory bitterness.

* Low protein amount.

2.3.- Popularization and officering problems, including theirs relating to interisting varieties multiplication.

3.- Status of cassava research and ability with respect to cooperation

3.1.- Present status of cassava research

- Advanced with regards to gross yield (our best popularized varieties at 80 T/ha, some studied hybrids at 150 T/ha on experimental plots), basic criterion, with when it is possible, mosaic and rots resistance association.

- Fertilization : basic common formulae have taken shape.
- Mosaic disease : seeds coming from natural hybridizations are growing and screened in very infected areas : 20.000 hybrids are thus observed each year.

3.2.- Ability with respect to cooperation

Madagascar, somewhere its geographic location, is a very interesting study center for cassava (cultivation very spread, very diversified ecological conditions, ...). Moreover, existing varieties, either in collection or popularized, are forming a valuable plant material and, for some of theirs, proving already or now a high yield in local areas and even sometimes in Africa.

What may provide this country with respect to international cooperation is above all consequently this plant material, just as a trial places understructure, in several island regions, these places being able to join with a more extent entirety. The Institut de Recherches Agronomiques à Madagascar (Local Institut de Recherches Agronomiques Tropicales - I.R.A.T.-Agency) is understanding this problem in this way.

- Plant material transfer contribution and, possibly, stranger varieties introduced trials. In that last case, phytosanitary barriers problems will be doubtless set up.

- If a financial support, in the form of staff and budgetary assistance, will permit to extend the relatively small actual program, it will be possible to supply a laboratories rest center basic structure to study next problems which are considered as having priority :

- Mosaic resistance
- Drought resistance
- Food value and especially :
 - o dry matter amount, without woody roots
 - o protein amount
 - o taste qualities.
