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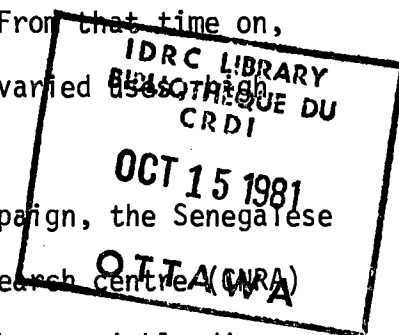
SOYBEANS IN THE SAHEL?

by Aliou Barry

It is 1943. The whole world is ablaze. Food shortages are evident everywhere, especially in Europe where the war effort is given the most support. The United States has just entered the war on the side of the allies, but everything is happening outside its territory. This allows American agronomists to develop a crop, the soybean, which is already known for its nutritive value, but until then has not been widely cultivated.

The development of the soybean made it possible to feed troops fighting all over Europe, Asia and Africa, and today Americans are still the major producers of this increasingly popular food. Assured of practically having a monopoly, the American government was even going to put an embargo on soybean exports in the seventies. From that time on, this crop became a "strategic weapon" because of its varied protein content and relatively low price.

In 1972, as part of its crop diversification campaign, the Senegalese government commissioned the national agricultural research centre in Bambey to do research on the soybean. The researchers quickly discovered that the soybean, an unfamiliar plant of Asian origin, lent itself very well to cultivation in Senegal. The only prerequisite was that there be at least



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900 mm of precipitation, which was the case in 1973 in half of Sine-Saloum, Sénégal Oriental and Casamance.

According to Jacques Larcher, one of the CNRA research team, the first problem confronting the scientists was the adaptability of American, Tanzanian and South African varieties, and to establish which combination would do best in the harsh Senegal environment, yet still provide high yields. A hybrid was found which yielded two tonnes per hectare. The researchers then set out to improve this variety, attempting to adapt it to a wider range of soil and climates without reducing the yield.

The desired variety was to be suitable not only for Senegal but also for Mali and Ivory Coast. To obtain a better yield in Guinea, where the soil is poorer, short, large-seed varieties had to be developed. Research has since made possible the creation of new varieties and work is being continued to obtain more stable and higher-yield hybrids, says Jacques Larcher. To ensure stability, tests are carried out — 16 are in progress at present, not only in Senegal but also in French Guiana, Ivory Coast and Togo.

Three years ago, Senegal began the introductory extension phase. Forty smallholder farmers in Sénégal Oriental, Casamance and Sine-Saloum are involved in this stage of the soybean cultivation programme.

In his outline of the soybean programme, Mr Larcher emphasizes that cultivation is relatively demanding. He adds that sowing must be done at a specific time, when the moisture content of the soil is fifty percent, as compared with thirty percent for other crops; late sowing actually reduces the yield. Proper storage of the seeds is also very important;

if soybean seeds are not stored properly, sprouting is slow. A cold storage room would be ideal; in its absence, proper packing may be sufficient.

The CNRA in Bambey is also studying the best-suited inoculants. A good inoculation will enable the plant to produce 65 percent of its nitrogen requirements. The state of health of the plant, as well as weeds and parasites common to the soybean, are not overlooked in Bambey. Before the large-scale extension stage, the researchers want to take every precaution to avoid disappointment.

However, this is perhaps not the major problem. The Senegalese people are not familiar with the soybean and consequently they do not use it. Even though its nutritive value has been proven, eating habits nonetheless remain a difficult obstacle to overcome. Furthermore, special technology would be required since, contrary to popular belief, the more familiar soybean oil is only a secondary product. The CNRA has already obtained the co-operation of the institute of food technology in Dakar looking for the recipe best suited to local eating habits.

Since the main motivation for research on the soybean is to help make Senegal self-sufficient in terms of food, there would no point in producing this crop if it were not to be consumed by the local people. For the time being, at least, Senegal has no thoughts of going into competition with the USA which has virtually cornered the export market for soybean.

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