

**AGRICULTURAL RESEARCH IN SENEGAL:
ECONOMIC SURPLUS EVALUATION OF THE ADOPTION OF VARIETY LA
FLEUR 11 BY PEANUT FARMERS**

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ABSTRACT

Peanut production has been decreasing in Senegal over the past decades for historical, political, economic and environmental reasons. One of the solutions proposed by recent Senegalese administrations is to increase production through agricultural research and the development of peanut varieties that are adapted to the environmental constraints in Senegal. The last variety developed is La Fleur 11, which is very drought tolerant.

The purpose of the study is to assess the economic impact of research on La Fleur 11 on the Senegalese economy through an ex-ante evaluation of the net social benefits from the adoption of this new variety. In order to fulfill this objective, an economic surplus analysis is conducted within the framework of a partial equilibrium model.

Results indicate that the net social benefits from the adoption of La Fleur 11 are positive. Assuming that all peanut supply is sold to SONACOS at a producer base price and that research evaluation is conducted at the farm-level, Consumers (SONACOS) are the main beneficiaries from research. Their benefits are on average 6 times producers' (farmers). The research-induced increase in the government cost of the subsidy represents 84 percent on average of consumers' and producers' benefits; the research-induced increase in net social welfare represents 16 percent on average of consumers' and producers' benefits. The internal rate of return averages around 43 percent.

When peanut markets are disaggregated, research benefits consumers (SONACOS) 3 times more than producers (farmers) at the farm level. Most of producers' benefits come from farm household consumption (47 percent of total farm-level benefits) and most of consumers' benefits come from the official seed market. At the SONACOS-level where peanut oil and cakes are exported, research benefits producers (SONACOS) only; consumers (rest of the world) do not benefit from research at this level. The IRR is more likely to be about 42 percent.

This study suggests that future investments in agricultural research in Senegal can result in a positive economic impact provided that other actions are undertaken regarding extension, credit, and input distribution in order to enhance adoption and take advantage of the yield potential of the new peanut varieties. Also, this study provides a procedure of research evaluation for future use in Senegal and West Africa.