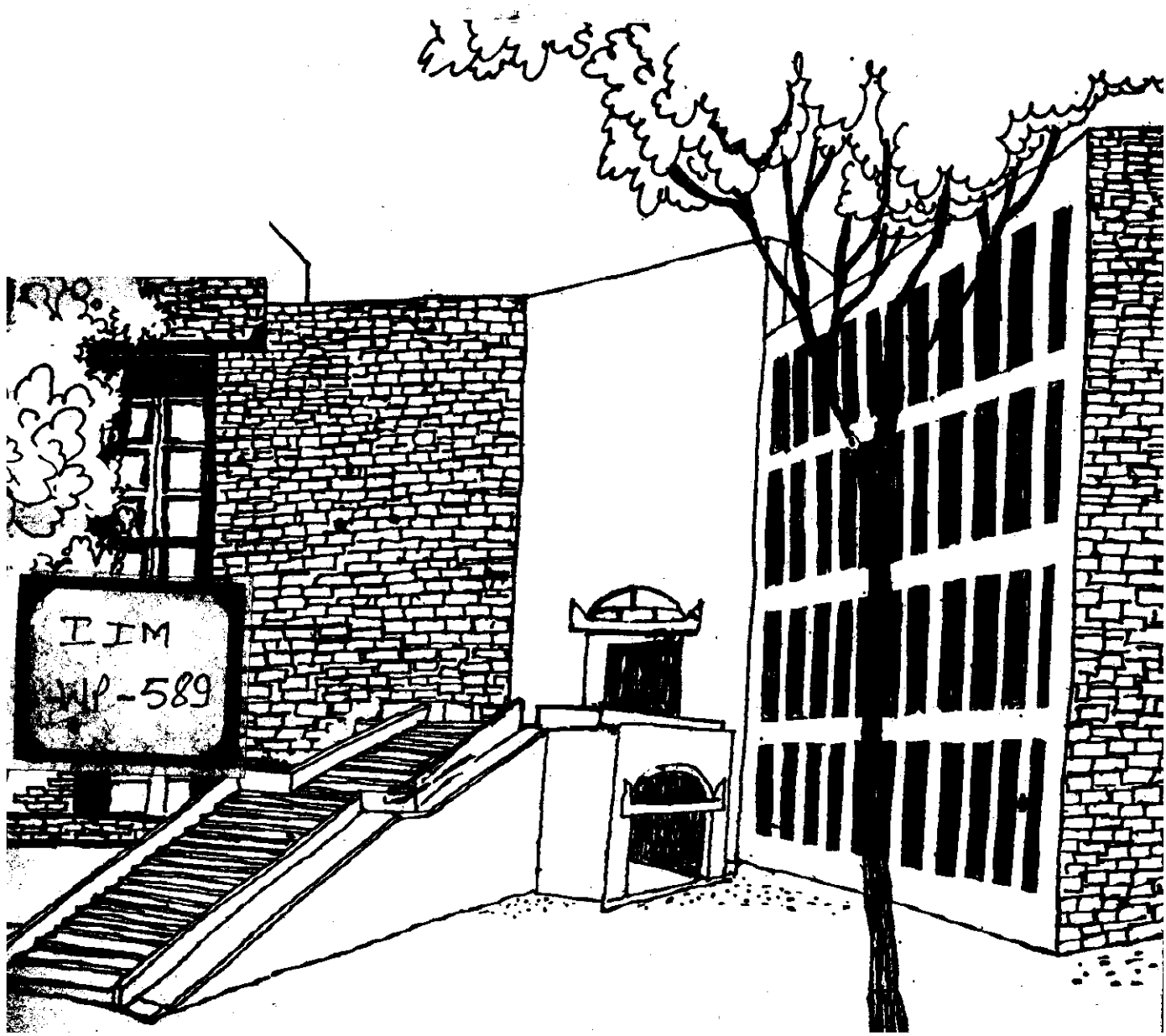
Working Paper



SUPPORT SYSTEMS FOR AGRICULTURAL DEVELOPMENT IN SUB-SAHARAN AFRICA

By

Gunvant M. Desai

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INDIAN INSTITUTE OF MANAGEMENT
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SUPPORT SYSTEMS FOR AGRICULTURAL DEVELOPMENT IN SUB-SAHARAN AFRICA*

Gunvant M. Desai
Centre for Management in Agriculture
Indian Institute of Management, Ahmedabad

Poor agricultural growth in sub-Saharan Africa is sometimes attributed to the absence of major technological breakthroughs suited to its agroclimatic environment. This implies that there is little room for growth in agricultural production in the existing technological environment. Viewed in this way, development of superior technologies becomes the most important issue in policies for accelerating agricultural growth in sub-Saharan Africa. Without belittling the importance of improved technology, the two papers under discussion caution against this position.

The single most important message of the two papers is that agricultural growth in sub-Saharan Africa has been constrained by many deficiencies in the agricultural output marketing and input supply systems. The implied presence of a slack in the production system cannot be overemphasized. Experience shows that developing superior technologies for the difficult and varied agroclimatic environment of sub-Saharan Africa will be neither easy nor quick. While this calls for sizeable sustained

*Comments on paper by Malcolm Blackie ("Restructuring Marketing Systems for Smallholders: Cases in Zimbabwe"), and S.Olayide and Francis Idachaba ("Input and Output Marketing Systems: A Nigerian Case") made in the Conference on Accelerating Food Production in Sub-Saharan Africa. The conference was sponsored by International Food Policy Research Institute, Washington D.C., and the Department of Land Management, University of Zimbabwe. It was held in August 1983 at Victoria Falls, Zimbabwe.

efforts to improve technologies, policies which remove various deficiencies in the output marketing and input supply systems are equally important. In the short-run they are required to improve agricultural performance by utilizing the slack in the production systems. They are also important in the long run context of technological change. Experiences of many Asian countries reveal that the eventual success of new technologies in accelerating growth of agricultural production will crucially depend on well developed output marketing and input supply systems.

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While reading the two papers, one is repeatedly struck by the similarities of chronic deficiencies in output marketing and input supply systems in sub-Saharan countries. One is also puzzled by the similarities in policy responses to problem areas and their ineffectiveness. What explains all this?

The most common answer has been in terms of inadequate physical infrastructure, lack of adequately trained manpower, absence of well managed cooperatives, distrust of the private sector and the consequent direct involvement of the governments in input supply and output marketing systems, and faulty price policies. But this still does not explain the persistence of such policy responses even though they have generally failed to accelerate growth in agricultural production. One possible answer is the similarities among countries with

respect to what has been expected of the agricultural sector (for example, cheap food supply and foreign exchange earnings) and limited fulfilment of the expectations. Inadequate performance of the agricultural sector creates similar stresses in other sectors. This in turn leads to comparable expediencies and compulsions in policy responses, especially if there is neither a breakthrough in production technologies nor a strong belief in the possibilities of rapid growth in production under the existing technological environment. Under such circumstances, output marketing and input supply policies would be more concerned with extracting the required contributions from agriculture than removing the deficiencies which obstruct acceleration of growth in production. That technological breakthroughs and policy-makers' perceptions of possibilities to raise production under given technologies influence the output marketing and input supply policies is confirmed by the Indian experience over the last three decades. It is also confirmed by Blackie's case study of the Zimbabwe Cotton Marketing Board. Viewed thus, objective assessment of the slack in the production system under the existing technological environment may be crucially important in generating meaningful policy responses to remove deficiencies in output marketing and input supply systems. Systematic assessment of the untapped production potential seems important, especially because substantial technological breakthroughs may take more time in sub-Saharan Africa than they took in Asia.

It seems useful to distinguish between output marketing and input supply systems in policy-oriented discussions, even though both are substantially influenced by similar policy responses and direct involvement of government agencies. Similarly, a distinction between marketing systems for food and those for commercial crops like cotton, tobacco, coffee, and cocoa also seems useful. Although deficiencies in all these systems may be similar, their origins and solutions could be quite different. The options available to policy-makers may also vary substantially across systems especially when there are chronic demand and supply imbalances and foreign exchange shortages. The two papers under discussion and experiences of many developing countries provide sufficient evidence of the usefulness of disaggregation. For instance, promoting traditional marketing systems may be a solution for food crops, but not for export crops like cotton as discussed by Blackie. Similarly, both a priori reasoning and empirical evidence indicate that informal markets do not develop as rapidly for modern agricultural inputs as for agricultural outputs in the early stages of agricultural development.

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The use of modern agricultural inputs in most sub-Saharan countries is quite low. For instance, fertilizer consumption in the early 1980s exceeded 15 kilograms of nutrients per hectare of arable land in only five out of 39 sub-Saharan countries covered by Paulino. It was less than five kilograms

in more than half. Furthermore, the bulk of the fertilizer consumption in many countries is concentrated in the large commercial farm sector or on such crops as groundnut, cotton, tobacco, cocoa, and coffee. Given the evidence on profitability of fertilizer use on many more crops and nonavailability of fertilizers to many farmers in the small-holder sector, it is clear that growth in fertilizer use has been constrained by deficiencies in the fertilizer supply systems.

However, it would be simplistic to assume that if the governments of sub-Saharan countries did not get involved in the supply systems for modern inputs, deficiencies of these systems would disappear. Evidence on fertilizer, pesticides and farm machinery distribution systems from many developing countries consistently suggest that the private sector involvement is concentrated where turnover is high. Available evidence from a few sub-Saharan countries also confirms that the distribution system in the private sector has effectively catered only to large commercial farms. The Indian experience reveals that appreciable fertilizer use outside the plantation sector did not begin until the government got directly involved in supply and distribution. Even after these systems were opened up for the private sector, the public sector had to play a substantial role in expanding the capacity of fertilizer industry. Furthermore, the private sector has not been able to displace the cooperatives nor improve on their performance in geographically expanding the fertilizer distribution network.

In fact, some micro-level evidence indicates that the number of private sector outlets grow in years of tight availability and shrinks in years of easy availability.

It is not our argument that all is well with input policies in sub-Saharan Africa. Poor growth in the use of inputs despite untapped potential under the prevailing technological environment clearly shows that it is not so. But the question of how to remove deficiencies in these policies is much larger and more complex than just that of government's direct involvement in input supply systems and faulty input price policies.

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Sustained growth in the use of modern agricultural inputs depends on generating knowledge about profitability of their use by crops and regions, use of this knowledge in extension systems, provision of credit to convert the potential of inputs' use into farmers' demand for them, widespread geographical expansion of input delivery systems and their efficient functioning, and continuous growth in aggregate supply of inputs. There are major lacunae in all these processes in sub-Saharan Africa. Thus, what is required is a well-coordinated set of policies covering all these areas.