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CEREALS PROTECTION AND AGRICULTURAL DEVELOPMENT STRATEGY IN THE SAHEL

by

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Cereals Protection and Agricultural Development Strategy in the Sahel

I. Cereals Protection as a Development Strategy

Many persons have noted the decline in cereals self-sufficiency in the Sahelian countries over the past twenty years, illustrated for Burkina Faso in Table 1. For West Africa as a whole, rice and wheat consumption increased on average by 16 kg./capita/year and millet-sorghum declined by 22 kg./capita/year over the 1960-1983 period. Influential voices at the Club du Sahel\CILSS policy conferences at Mindelo (1986) and Lomé (1989) then suggested that the visible stagnation of Sahelian agriculture and the rise of rice and wheat consumption in the Sahel are linked. They are seen as the joint outcome of discriminatory pricing policies against local cereals, the latter being implemented by cheap imports of "dumped" cereals at overvalued exchange rates. This led to the conclusion -- widely held in Europe, especially among non-Governmental organizations in the development field -- that higher cereals prices through protection to cereals alone, in the absence of other feasible options, is the key to revitalizing Sahelian smallholder development (see Pradelle).

For cereals protection to be a viable development strategy in the Sahel the following five points must be valid.

(a) Shifts in cereals consumption patterns are driven by relative prices between rice and coarse grains; such shifts can therefore easily be reversed by price policy alone. Work by both Delgado (1989)

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and Reardon (1989) suggests that this is not the case.

(b) Major cereals price increases will improve both welfare and food security in most rural areas of the Sahel. The briefs by Reardon show that this is not true in Burkina Faso; other work has shown that it is not true either in Mali or Senegal.

(c) Coastal people in West Africa will provide an elastic market for periodic surpluses of millet and sorghum in the Sahel. Unfortunately, consumption shifts in the coastal countries also suggest that this will not be the case. Furthermore, the rapid development of hybrid maize in these countries is providing a cheaper and more reliable alternative source of supply for coastal consumers and stockraisers.

(d) Raising the price of cereals relative to all other rural income sources does not raise production costs and reduce employment in other farm activities such as livestock production, artisanal activities, and cash crops. Unfortunately, IFPRI research shows that people in semi-arid West Africa typically spend 70 to 90% of total income on basic food staples. There is a close link between cereals prices and wage costs. A development strategy based on raising cereals prices relative to all other prices must face the fact that this will discourage labor absorption outside cereals production.

(e) Sahelian farmers do not have better alternatives for engaging in economically viable and environmentally sustainable activities to generate incomes and food entitlement than production of millet and sorghum for export. Reardon, Delgado and Matlon show that farmers in rural Burkina Faso are in fact heavily engaged in livestock, cash

cropping and non-agricultural activities. The issue then becomes whether these activities can provide a viable basis for agricultural growth if the demand prospects for millet and sorghum as a food crop are limited.

II. The Search for A Viable Strategy for Sahelian Smallholder Development Based on Regional Trade

Historically, export flows from the Sahel consisted primarily of annual non-food crops and their derivatives, such as cotton and groundnut oil exported to outside the region, and livestock flows, consisting primarily of animals on the hoof, to the coastal countries. This trade expanded rapidly during the 1960's.

However, disruption of world commodity markets has led to pessimism in the Sahel about export-led agriculture. Besides the recent very low world cereals prices after the 1985 U.S. Farm Bill, the West African coastal countries have been flooded since the mid-1970's with meat dumped first by Latin America and then by the EEC, milk products from the latter, cheap vegetable oil from Malaysia, and low world cotton prices after China's emergence as a major producer. Table 2 shows that in Côte d'Ivoire, for example, the Sahelian market share for meat has fallen from the historical mean of 85 percent to less than 40 percent. In the 1984-87 period, Côte d'Ivoire imported about 2 kg./capita of meat and 6 kg./capita of liquid milk equivalents from the EEC.

The competitiveness of Sahelian agriculture has become severely compromised over the past fifteen years, a process strengthened by the progressive overvaluation of the CFA franc (currently estimated to be

about 40% in several Sahelian countries). The effects of this became especially notable on a West African regional basis with the effective devaluation of the currencies of Ghana (1984 onwards) and Nigeria (1986), leaving the Sahelian countries with high effective demand for imports, but uncompetitive exports on a regional basis.

This can be seen within the Franc zone in the case of relative beef and starch prices in Mali and Côte d'Ivoire. Table 3 shows the evolution of each retail price series relative to the 1979/82 average for that series. In both countries, West African beef became more expensive relative to cereals in the period prior to 1979/82 and less expensive thereafter. Put differently, the real returns to beef production in Mali increased in the 1970's and fell sharply in the 1980's.

In Abidjan, non-African frozen beef sold for almost the same price in nominal CFA in 1986 and 1987 as it did in the 1974 to 1976 period, despite the fact that the local consumer price index increased threefold. In Mali between 1974-76 and 1984-85 (two drought periods) local beef prices increased by roughly 75 percent, while the consumer price index increased by 125 percent, and the price of rice increased by more than 130 percent. In Burkina Faso, the real price of a basket of foods consumed by low income people increased by nearly 90 percent between 1967-69 and 1984-86. However, real local beef prices increased by less than one-third over the same period. The supply-side problem of higher labor costs compounds the demand problem of competition from non-African sources.

Ecologically, virtually every technological recommendation for

maintaining or improving soil fertility in the Sahel emphasizes the need to increase the organic content of soils through mixed farming practices (Ruthenberg, Kowal and Kassam, Matlon). The latter have been considerably hindered by the unfavorable price trends for livestock products relative to cereals. Furthermore, the present situation is an incentive to growing cereals in fragile livestock areas and to decreased off-take from semi-nomadic herds on the common range. Both of these phenomena have been increasingly observed in the Sahel and are environmentally destructive.

It is striking that West Africa is virtually the only region of the world where cattle can live that does not have a viable local dairy industry. Even in Bamako, where notable progress has been made in this regard, 80 percent of milk consumed is imported, despite an estimated national dairy herd of roughly one milk cow per three inhabitants (Von Massow, 1989).

The demand prospects for Sahelian exports to the coast have been further hurt by the debt crisis affecting the richer coastal countries. It is testimony to the extraordinary market potential for livestock products in Côte d'Ivoire that meat consumption per capita has nearly doubled over the last decade, despite the very difficult economic situation (table 2). This is consistent with research by Hazell and Roell that estimated expenditure elasticities for the late 1970's in a community of rural Northern Nigeria of 1.32 for fresh beef, 1.52 for milk, 1.83 for eggs and 2.82 for butter. Analyses of FAO data by the Secretariat of the Consultative Group for International Agricultural Research (CGIAR) show that West African

diets are much lower in calories from livestock products (about 3 %) than is the case in all other developing countries (more than 6 %). This situation appears to be changing rapidly.

Livestock products still accounted for 3 and 7 percent of the total value of imports to Nigeria and Cote d'Ivoire, respectively, in the depressed period from 1980 to 1985. In the Nigerian case, this accounted for well in excess of U.S.$ 400 million annually in terms of 1980 dollars--a sum of the same order of magnitude as the agricultural GDP of its northern neighbor, Niger, during the same period. Actual -- as opposed to recorded -- Nigerian imports were probably substantially larger. Coastal imports of vegetable oils--another commodity for which income elasticities are high on the coast--are growing rapidly. Ghana and Nigeria are now both importers of cotton.

Ghana and Nigeria appear to be re-emerging on solid growth tracks that will change their structure of demand. They are also investing heavily in their own agricultural and livestock sectors: in particular, productivity in hybrid maize is increasing rapidly in the Middle Belt. It is striking in Table 1 that commercial exports of cereals from the coastal countries to Burkina Faso during the 1980's drought were almost as important a source of consumption as non-African food aid. The Sahel has the potential to become an increasingly important market for the products of the northern parts of the coastal countries, provided that the Sahelians have purchasing power from their own exports.

In economic terms, the current balkanization of West Africa makes no sense. Sahelian countries are attempting to focus on cereals

production, despite the appearance of a comparative advantage for the latter in the more humid northern zone of the coastal countries. However, the latter, as in the case of Nigeria, Côte d'Ivoire and Ghana have embarked on ambitious programs to increase national livestock production. Nevertheless, this has not been without cost to their own development. Technically, increased livestock production in the coastal countries, which are Tse-tse fly zones, has been made easier by the abnormally dry series of years this decade. However, a recurrence of historical rainfall patterns could greatly increase animal mortality. Second, the opportunity cost of land in the coastal countries under population growth is increasing especially rapidly, leading to increasingly severe confrontations between herders and farmers. Third, as the Middle Belt regions develop a comparative advantage in cereals production, they also develop, by definition, an increasing interest in obtaining their feeder cattle from further north.

The conditions that depressed both domestic demand and coastal outlets for Sahelian livestock are rapidly changing. The EEC "meat mountain" stemming from the slaughter of the dairy herd appears to be gone. The "milk lake" is drying up, which suggests that the urban dairies in West African will be weaned from reconstituted milk. As demand conditions improve, much will depend upon the capacity of technological change in grain production in the Sahel to alleviate the feed constraint with low price grain and by-products, and to prevent labor costs rising even further relative to output prices.

On the supply side, in the case of both dairy and other types of

livestock improvement, the principal constraint has always been an adequate supply of low cost high energy feeds (Delgado, 1980; Jahnke, 1982; von Massow, 1989). New cereals technologies for sorghum and maize offer hope for at last breaking this constraint, but only if cereal prices are allowed to fall.

Outside the agricultural sector, growth of employment in the informal sector, whether in rural or urban areas, will depend on keeping the price of the principal wages-good, cereals, low (Haggblade et al, 1989).

III. Conclusions

Events since the late 1970's in world markets for the traditional exportable of the Sahel, especially livestock, oil seeds, and cotton, have been devastating to long-run growth. This has been much more serious than the case for cereals, which tend to be importable. It seems clear that the greatest likelihood for the Sahel to be able to resolve their problem of access to export markets is at the regional level. The types of commodities that the rural Sahel is likely to have a long-run comparative advantage in are probably close to those that prevailed before the disruption of coastal West African agricultural markets by outside forces in the mid-1970's to date. This probably includes a focus on livestock products. However, progress will depend upon: a) lowering the cost of labor through technological change in foodgrain production, and (b) lowering the cost and improving the availability of high energy feeds for livestock. Even so, these prospects will probably not be

realizable unless the CFA franc is substantially devalued vis-a-vis the Sahel's coastal trading partners, especially Nigeria and Ghana, at least for the purposes of agricultural trade. The worst policy for both growth and food security in most rural and urban areas of the Sahel would be to implement policies that raise cereal prices relative to other prices.

TABLE 1

SOURCES OF CEREALS CONSUMPTION IN BURKINA FASO
1969-1986

(percentage shares of national consumption)

	1969/72	1973/76	1979/82	1984/86
Domestic production	95	92	90	79
Commercial imports of rice and wheat (primarily non-African sources)	2	2	4	7
Commercial imports of other cereals (primarily maize from the coastal countries)	-	2	2	6
Food aid	3	4	4	8

Sources: Computed from FAO production, trade and food data and UN population estimates.

TABLE 2

SOURCES OF MEAT CONSUMPTION IN COTE D'IVOIRE
1969-1987

(percentage shares of national consumption)

	Historical Trend 1969-1972	Drought 1973-1976	Recent Events 1984-1987
Domestic production	11	15	38
Live animal imports (primarily from the Sahel)	85	70	37
Meat imports (primarily from EEC and Latin America)	3	15	25
Average annual meat consumption	7.6 kg	6.3 kg.	11.4 kg

Sources:

1969-1976: J. Staatz in C. Delgado and J. Staatz, Livestock and Meat Marketing in West Africa Vol. III, "Ivory Coast and Mali", C.R.E.D., University of Michigan, 1980.

1984-1987: Afrique Agriculture, "Les Importations Massives de Viande CEE: Une Calamité Nationale," Etude Spéciale No. 6, No. 164, June 1989.

TABLE 3

INDEX NUMBERS OF CONSUMER PRICES FOR BEEF AND STARCHY STAPLES IN ABIDJAN AND BAMAKO

(1979-82 = 100)

	1969-72 (Integrated Market)	1974-76 (Aftermath of Drought)	1984-86 (Aftermath of Drought)
Cote d'Ivoire			
Bone-in West African beef (fresh)	24	41	120
Boneless Non-African beef (frozen)	n/a	92	109
Rice	51	98	146
Fresh Cassava	22	39	124
CPI	30	47	131
Mali			
Bone-in local beef (fresh)	23	59	100
Rice	35	49	113
Millet	32	44	143
CPI	41	60	141

Source: Secondary price data from various national sources; see Staatz (1980), Delgado (1980), Delgado (forthcoming) and Stryker et al. (1987).

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