

AFRICAN AGRICULTURAL POLICIES: PRELIMINARY OVERVIEW NOTES

By R.H.Green

On a cloth untrue  
With a twisted cue  
And elliptical billiard balls

- Gilbert and Sullivan

To ask the wrong questions  
is halfway to getting  
the wrong answers.

- Apologies to V.I.Lenin

I

What We Do Not Know

This is an area in which we all think we know something. There are several problems. What different people - even among ourselves - think they know conflicts not merely as to projection and cause but as to present and past objective reality. Schematically:

- a. how correct are our perceptions as to objective reality?
- b. how clear, logically adequate, operationally oriented and correct are our causal perceptions?
- c. to what extent are our trend perceptions overweighted by the recent past (possibly somewhat lagged recent past)?
- d. how safe is it to generalize from particular perceptions? nationally? cross-country? as to problems? as to causes?
- e. why do our (some of our) perceptions differ radically from those of other observers/participants? (We are right and they are wrong is not an adequate answer - even when and if it is a valid one at some level!)

The fragmentary evidence suggests that there is very substantial diversity in trend rates of growth of food output, degree and nature of food shortages,

institutional and price managements. The "conventional perceptions" - greatly enhanced by last two to three years - tend to blur these differences which may be useful for arousing concern but may have limits as to analytical or operational cutting edge.

#### Food Shortages

In most of the countries (Zimbabwe is an exception) there have been in 1980 and 1981 food shortages in the sense that preferred staple foodstuffs were unavailable or available only at abnormally high prices for extended periods. There are longer term problems of shortages of specific foods - eg vegetable oil, sugar, milk - and of inadequate nutritional standards (calorific and makeup). Related to the short term and specific commodity problems is substantial - at least in 1980/82 - dependence on imports. Zimbabwe fits this model only on dietary inadequacy - as of 1981 - though as recently as 1979/80 it had a staple food deficit (and imports) and historically it has usually not been self sufficient in wheat. Zambia appears in 1981 to have a physical, but immobile, maize surplus and a real maize shortage partly covered by imports.

Beyond that level of generality there are decided differences. In one or two cases (eg Tanzania, Kenya) one year of good weather would wipe out the immediate staple shortages and then allow (at least in quantities available to store if storage capacity existed and were properly used) reserves for two poor crop years. In others (eg Mozambique, Ethiopia) the situation seems to be structurally more difficult while yet others (eg Botswana, Zambia - which are not themselves similar) appear to be more complex.

Further divergences include:

- a. efficiency of "famine" (drought) relief;
- b. whether anyone (and if so how many) is starving or on the borderline of starvation;

- c. whether shortages mean absence of staple or only of preferred staple food;
- d. number of specific "secondary" food deficits.

Eg, in Tanzania drought (emergency rural) food relief (in kind) is relatively efficient. Nobody is starving and there seems to be no evidence of hunger related morbidity increases. (There is endemic calorie and protein deficiency ill health and child-morbidity). In general one or more staples have been available at or near "official" prices (or normal for those with no "set" prices) but not necessarily those buyers preferred. Cooking oil, sugar and milk have been very short supply.

#### Food Production Trends

It is not clear that there is a general pattern. Relatively bad weather in 1979-80-81 in several countries has given the appearance of such a pattern. The relatively shoddy (because underlying data are shoddy) FAO figures for Africa do support this impression but that may be circular.

- a. Ethiopia has had shortages for a decade. (Pre 1974 famine deaths and grain exports). This suggests low production growth but this may be related to war and/or be in part a faulty interpretation of procurement and transport problems.
- b. Kenya has had at least two years of relatively poor harvests (1980 very poor). Before that the recorded trend was near population growth. 1980 experience was exacerbated by changes in crop payment (ie de facto weather insurance) and unit price policy as well as by storage and reserve "use" factors.
- c. Tanzania has recorded (1964-1979) food production growth trend of 5% a year. The usefulness of this is limited by very poor articulation among products (partly a price and partly a broader crop development issue) and by fantastically bad storage. (Even if actual is 4% versus

the 5% recorded the problem would not turn on overall production trend). Since the early 1970's the former (unusual? historic?) pattern of alternate good and bad years has broken down ie 1973-74 bad, 1975-76 normal to good, 1977-78 good, 1979 poor, 1980 very poor, 1981 poor, creating additional problems for inter-year management (including at household - ie grower household - level where one year's reserve was fairly widespread).

- d. Zambia apparently has low growth trend but also a very erratic one. Random inspection suggests maize shortage/glut swings cannot easily be related either to price policy or to weather.
- e. Botswana has a relatively low ratio of staple food self sufficiency except in good years, relatively high swings related to rainfall (and, with a lag, to changes in RSA export prices?) and relatively low growth. Here there is no protection for local production against "dumped" RSA grain and no serious, articulated Ministry of Agriculture concern with crop (as opposed to cattle) production or marketing.
- f. Mozambique lacks post 1973 data with any pretence to comprehensiveness and accuracy. There has been bad weather. Urban demand has grown sharply (higher incomes). The shift from large settler farms to state farms (in an attempt to defend existing market oriented production) has not been succesful overall. There are shortages. What production trends in household and co-operative (or other form?) sub-sectors may be is unclear.
- g. Zimbabwe has moved from temporary (war-drought) shortages into surpluses at a level creating major transport/storage problems. Assuming 1981 is not an isolated peak, there is a trend growth (over a decade) above population growth. However, it is concentrated on a very small proportion of landholdings - the majority of peasant farmers output has been relatively stagnant and on the "reserves" it is hard to see how this can be changed dramatically.

Institutional Questions - Existential

There is need to map out the actual parameters in a number of areas which can loosely be described as institutional. This is quite apart from analysing or recommending - we first need much clearer, and more accurate, perception of what is.

Eg there is a wide spread perception of a large communal food sector in Tanzania. It is in fact perhaps 3% of output/acreage/time/inputs. Are there similar misperceptions as to scale of Mozambique state farm sector - especially in relation to total output?

Further, there is a need to separate formal from real channels. Eg in Tanzania virtually all smallholder (and for that matter village communal) paddy/rice has become privatized whereas up to early 1970's it had shifted to virtually all via a Crop Authority. (The reasons relate to shifts in price structure from ex-farm paddy to retail rice relativities). This not only makes NMC purchases no guide to production or even commercial sales but also means that the impression of a centralized rice procurement/marketing structure relates only to large farm (basically parastal) and imported rice.

Some of the areas needing data/description are:

- a. prices - official? At what levels (and places eg Kenya and Tanzania "farmgate" used to mean very different places in terms of distance from peasant)? For what crops? What data on private (legal, informal, 'parallel') market prices? How set and by whom at what time effective when?
- b. seeds - what research, by whom, on what crops? How turned into seeds (ie from test seed to semi-bulk to commercial)? How distributed? Whether subsidized? How widely used?
- c. inputs - patterns of research, production, distribution, use? How

diverse are they by crop? Area? Sub-sector (eg Zambia 'line of rail' and Zimbabwe 'settler' farmers at one extreme and Zimbabwe 'reserve' peasants at the other, but also 'in between' clusters)?

- d. procurement - who? What levels? How near grower? Paid in cash? How promptly?
- e. transport - by whom? How many breaks (ie farm to village to regional depot to main stores to use is rarely one trip or one haulier)? How efficient (in cost, in use of vehicle, in getting full backhaul)?  
General adequacy in terms of timing, quantity?
- f. research - on what? By whom? How closely linked to local testing?  
Under conditions analogous to those confronting peasants? What economic viability testing? Farm management? Technical quality?  
Continuity? Integration into agricultural institutions and policy?  
Links to extension? To agricultural education?
- g. extension - similar questions to research.
- h. credit - sources? Volume? Cost? Relevance to food crops? If relevant for which sub-groups of farmers? Relevance to procurement-transport-storage? Links to extension and input supply (if any)?

Some "indices" of total recurrent expenditure (including subsidies on inputs), personnel (including research and crop bodies beyond central government ambit), credit (including food procurement/transport/storage/marketing) are needed. These may suggest very substantial resources (eg Tanzania research-extension-input subsidies-other services to agriculture seem to come to 5% of total sector contribution to GDP; 40% of commercial bank credit is for agricultural marketing and over 20% for food crop - at least on face of it) but also questionable value for money. Data to compare industrial/export and food crop magnitudes of output/export and food crop magnitudes of output, input, credit, expenditure are also needed. It is not clear that the impression of concentration on export/industrial crops vs food is accurate (eg in Tanzania

it is a travesty of reality as far as Tanzanian resources are concerned albeit certain foreign enclave programmes on tea, tobacco, cotton were 'tolerated' and occasionally given second level priority backing). To call food "subsistence" and export "cash" is an example of false perception - in some countries at least (eg Kenya, Tanzania, Ethiopia, Zambia) the majority of farmers derive bulk of agricultural produce cash income from food crops ie maize is commonest cash crop (albeit not the largest total value).

#### What Do We Cover?

Do we limit ourselves to grain? Is so why? And of grain do we avoid the "World Bank/FAO fallacy" of concentrating on maize over traditional drought resistant (eg Millet, sorghum)? If we cover millet/sorghum why not cover casava and (where significant) bananas (cooking) and (irish or sweet) potatoes? Are rice and wheat true staples? In what sense?

If we go further how much further? Sugar, cooking oil (oilseeds), milk, beans, eggs, poultry, fish, meat (including goat?), bananas (eating), onions, tomatoes, oranges, mangos, cabbage (and relatives), tea/coffee (where developed for local market) would appear rational. But what of data on output? Prices (retail, wholesale, ground)? Channels? For all except sugar, tea/coffee these tend to be either absent, shaky or very incomplete (eg queries of rural researchers, residents suggest most cattle which die other than of eg anthrax are eaten and if of old age meat often sold locally. This is not consistent with GDP or nutrition figures. Does it matter for our purposes. Why? Why not?)

In general all data need notes on how compiled (now and in past as basis has often changed one to three times since 1960). These should indicate probable biases:

- a. trend
- b. absolute
- c. year to year (eg plausible trend could be linked with underestimating good/overestimating poor years, ie "undue stability", as seems to be the case in Tanzania).
- d. relative strength of constant and current price series (eg in Tanzania quantity series for total agricultural production is a series of actual data/estimates which can only be weakened in conversion to current price series at partly unknown - and probably underestimated - prices but in other cases the current price series for "marketed" output might be strongest).
- e. What formulas are used? Why? How plausible? What are implications for data series? (eg in Tanzania formula assumes more or less "urban buy" "rural eat own", urban 5%. As the 5% was valid in early 1960's but 13-15% would now be more accurate, this biases "cash" food down and "subsistence" up, since the basic quantity series is for total output).

#### Procurement - Transport - Storage

In certain cases these appear to be greater problems than production trends or to have a significant causal relation to production (ie if farmer cannot sell crop he will presently cut or not increase production) and to shortages (grain 'locked' in backcountry or lost-strayed-stolen-rotten in godown last year feeds nobody this year).

Problems with procurement vary - by country, by crop, by locality and by year. Eg in Kenya there appears to be a rip off problem ie supposed "farm gate" price twice what small peasant actually gets. In Zambia there is a recurrent (annual?) problem of non-procurement at one level related to roads, bridges, lorries but presumably (given its recurrence year after year in precisely the same form) at another to lack of any serious forward procurement planning



backed by resource allocation/mobilisation. In Tanzania procurement for maize-wheat-rice-sorghum-millet-beans-cassava-oilseeds by NMC was good over 1975-78. In general NMC vehicles, buying officers and cash showed up at stated times at most buying points and most villages were or were near a buying point. (The very sharp rise in procurement in several regions eg Lindi, Mtwara, Ruwuma, Rukwa, Songea, Kigoma and, for certain food crops, Shinyanga, Mwanza relates substantially to the sharp improvement over the co-ops NMC then represented for foodstuffs). With the war impact on transport, and NMC's loss of physical and financial control on cash, the reliability of physical pickup and the promptness of payment declined sharply in 1979 and 1980. Major attempts to improve it in 1981 probably halted the deterioration - it is less clear whether they have started a recovery.

Transport difficulties relate to shortages of vehicles, spares, fuel, and railway capacity turning on general physical shortages flowing from foreign exchange crises (except in Zimbabwe where they are the aftermath of the war period and the result of a low level South African destabilisation efforts).

In addition several special factors apply in one or more countries:

- a. rundown (or literal runaway) of private lorry fleets;
- b. shift of private operators from rural to urban and main road business (easier in a situation of excess demand and made more desirable by deterioration in road maintenance);
- c. war/insurrection conditions and aftermaths of various kinds;
- d. poor coordination of vehicle fleets leading to empty backhauls (eg lorries carrying fertilizer and consumer goods upcountry in Tanzania usually do not pick up crops from villages or towns for return haul for complex reasons relating to ownership, data availability, speed of turnaround, etc);
- e. generally poor physical and fleet use capacities of larger public sector operators and shortages of vehicles/spares for more efficient, newer, smaller (eg villages in Tanzania) ones.

Storage problems exist at several levels. The first is household. Some household storage - pace the conventional unwisdom of general 30% losses - was effective for one year. How many households had losses/poorer storage is unclear. So is impact of more good and bad years in succession on this system. Village level storage in support of household is uneven and as basic holding store for "nationally procured" grain until it can be shipped to urban or drought relief use or to more "permanent" national reserve at district or regional level is next to nonexistent and totally ignored in at least several national plans (a gap contributed to by international "expertise").

Urban/drought relief/reserve storage needs appear to be underestimated and not fully met even at those levels. They are too concentrated at a few points - increasing transport costs especially in countries with highly local weather in which one year's surplus area can be next year's deficit (eg Kenya, Zambia, Tanzania). Weird swings between "high" (silo) and "intermediate" (tarpaulins over concrete slabs with no building) technology approaches have diverted energy from the boring job of using proven godown and metal bin techniques to build up functional capacity.

Lost-rotten-deteriorated-stolen-strayed-eaten by rodents (varying numbers of legs) or insects per cents are appalling (probably substantially higher than household) with 15-20% estimates per year for grain in Tanzania-Zambia-Kenya in the late 1970's/3 to 4% in Tanzania in the early 1970's/1 to 1½% Zimbabwe today. In addition substantial quantities have been exported (or turned into poultry feed) in some years by Kenya, Zambia and Tanzania simply to avert spoilage when godowns were full. (Zimbabwe has been an exception on storage - whether huge volume increase in 1981 will cause deterioration is unclear).

### Prices and Costs

Costs of procurement, transport and storage are high and rising. Part of this is inherent in 1973-1981 evolution of fuel, spares, vehicle prices (up at least 400% on average). Part relate to costs of high reserve stocks held for up to three years before use (admittedly not very effectively in some cases but interest and storage cost would remain if stocks had been in good order and used to meet local demand in year of bad harvest).

How much relates to bad management in general, how much to weird transport patterns (very noticeable in Tanzania where "move early and often" seems to have been NMC's 1977-80 motto), how much to storage losses, how much to dumping (for whatever reason) on poultry feed and export markets is less clear. It probably varies by country and is important in estimating what cost reductions could be obtained here.

Price patterns - for centrally procured and for other food crops - are somewhat obscure and may vary sharply by country. In Tanzania over 1972-1981 most centrally procured food prices (ex-farmer) rose as rapidly as retail price index excluding food and most secondary food prices more rapidly. I.e. in food, farmer/cost of living terms of trade were static or improved; farmer/wage-earner terms improved markedly. This is contrary to popular perception of what happened in Tanzania and generally. What is actual position in other countries. (Zimbabwe 1981 is clear case of improved farmer/cost terms especially for wheat).

Relative price for centrally procured crops often seem to make little sense either in respect to return per day, supply/demand balance for the crop or structures from "farmgate" to "shop shelf" prices. MDB price setting in Tanzania over 1975-1980 created an amazing degree of irrationality (a technocrats' performance in this case). How typical or atypical is this?

The criteria for setting prices are obscure. Grower incomes (relative to what? COL? Urban wages? Other crops?); crop supply/demand balance; foreign exchange; urban food prices; overall agricultural output targets and their makeup by crop; breakdown for procurement and/or processing levels; random hunches (eg Uma Lele's "peasant go-slow " thesis)? More detailed information needed in respect to recent past and present (especially of recent changes or attempts at changes as in Tanzania 1979-81, Kenya 1980-81, Zimbabwe 1980-81, Zambia 1980).

Urban (retail) prices seem in general to have been fixed with some view to breakeven but both varying shares of imports (at prices sometimes above and sometimes below local crops), varied treatment of food aid (eg in some cases sold at cost with funds used for other capital projects and in some used directly for famine relief), bad data on costs, slow adjustments have created some very substantial subsidies even where none were intended (eg Tanzania). Zambia and Zimbabwe have at least at some points had deliberate maize flour/bread subsidy policies. Subsidies, if large and on staples, are hard to eliminate whether intended or not because of urban COL effect (eg Tanzania has eliminated on sugar - which cross-subsidizes sembe- wheat, rice but not on maize despite a 100% 1981 increase).

Price structures between grower and retail can cause problems. Zambia, Kenya and Tanzania have all at times had milling margins so low as to "guarantee" losses (for rice for several months in Tanzania they were regative because a technical assistance expert had "known" one tonne of paddy yielded one tonne of milled rice and set structure on that basis) with the not surprising result of problems in flow of sembe, flour, rice even when maize, wheat, paddy availability is adequate.

Uniform grower prices have roused sharp controversy. In Tanzania they reduce the income gap of several border regions (eg Rukwa, Ruvuma in maize - Kigoma in

beans) and - when backed by procurement - create a "vent for surplus" increase in production. Their removal would constitute throwing people on the scrap heap. However, unless they are backed by a) promotion of suitable low volume/value ratio crops; b) attention to optimal markets (including exports); c) medium term optimal transport planning (including rail and water) they can have a substantial cost requiring either substantially higher prices from urban consumers or a substantial recurrent budget crop support payment.

Uniform national retail prices have less to be said for them at least in respect to crop surplus, outlying regions. If they are applied to these the result is simple - local trade (including secondary urban centres) is privatized. As the uniform retail price includes average transport/storage which is "shadow" for these regions, any competent trader can pay peasant at or above farm gate price and sell to consumer (or retailer) below official retail (or whoelsale). There is no evident gain to encouraging ("enforcing") that pattern as these are poorer regions and procurement/marketing have economies of scale.

Prices for drought resistant crops pose problems. Tanzania set them high and provided effective procurement to encourage peasants to have some production to eat in a drought year or sell to NMC in a good year. Three problems arose. The prices were too high relative to other crops ie per day return on cassava third to tobacco/coffee and well above actual alternative crops in many areas. The production additions were by farmers specializing in the drought resistant crops for sale (often growing some maize to eat themselves) not by most peasants planting a bit. In good years there was minimal urban demand (rural was - is - not negligible, but is met privately and locally as uniform retail price with transport/storage included is much higher in normal years) and export sales create massive losses (usually over 100% of farm gate price ie cheaper to buy and burn if destination otherwise is export). The 1979-81 nominal price constancy may have eroded the first problem. The 1981 setting of differential prices by ecological suitability for maize or drought

resistant staple may also reduce distortions and reduce scale of inappropriate commercial production. The marketing problem remains (as soon as there is a good weather year) unless all drought relief is given in cassava - sorghum - millet - beans in the future (rather than predominantly in maize/sembe).

#### Demand

How can demand be estimated? What are we trying to measure?

- a. actual consumption (local production - exports + imports + change in stocks) per capita?
- b. "normal" trend (based on what?) consumption per capita?
- c. requirements for a normal, adequate diet per capita (based on what?)?

These do not yield same results - or even similar ones for some products (eg millet, cooking oil, sugar). "B" projections are very shaky as they are usually based on brief periods with sharp learning effect, food switch, urbanisation, real income rise effects not necessarily relevant to late 1970's or 1980's. (Eg Tanzania sugar "demand" estimate of 180,000 tons for 1980 assumes 3% per capita increase in demand trend. It is hard to see realism of that over 1979-80).

For "secondary" and "unofficial" crops data on "a" (let alone "b"; "c" could be done by nutritionists assuming a population estimate within 10% of accuracy) are lacking. In any event, data for any one crop are not independent of relative prices, incomes, availability, learning effect eg explosive rise of Irish potatoes from ca 10,000 tons 1961 to ca 150,000 tonnes 1980 in Tanzania and per contra clear tendency of cassava to decline absolutely in Dar es Salaam when the staples are freely available at official or non-scarcity (for non-controlled items) prices. How does one handle - set up parameters for - this?

#### External Inputs: Developmental or Disintegratory?

Agriculture has been a sector in several of these countries with far above average absolute and relative external advice, finance, programme design and

personnel. The macro results do not suggest that this has been outstandingly successful. Many of the micro cases are even worse (eg on a quick survey about three quarters of really bad major agricultural sector decisions and programmes - and at best a tenth of reasonably good - in Tanzania over 1963 - 1980 were taken at instance of one international agency including its local "subsidiaries").

This is not a case for autarchy but for identifying problems with a view to seeing what external inputs might actually be complementary and developmental:

- a. institutionally there has been a tendency to create "domestic" units which are externally staffed, financed and run with no responsibility to local technical or political bodies - and which remain externally run enclaves (or more accurately bridgeheads and penetration points). The MDB and - to a lesser degree - Tobacco Authority in Tanzania are glaring examples;
- b. as a direct result, domestic technical capacity has atrophied, training appeared less urgent and political decision takers have been less able to act responsibly and responsibility for bad decisions less easy to place;
- c. quite serious tendencies to technocratic/managerial rule and centralisation/ high technology have been reinforced eg change of independent village settlement idea of Tanzania into de facto plantations in 1963 and of village chosen, village programme manager into outside chosen, outsider to manage villages in 1975 again in Tanzania; opposition to decentralisation (in general and food procurement/distribution in particular) in respect to Tanzania and early 1970's silo programme in Tanzania. (Tractors are a mixed craze - there is a wide range of views both on external and domestic side. But animal drawn implements and animal training get no sustained external backing despite verbal requests from some sources which feed neither cattle nor research - design - production personnel).
- d. different external agencies do not coordinate well (which may be a blessing

- in view of control risks) and do not work well together when locally coordinated (which is an unmitigated nuisance) leading to attempts to parcel out regions or functions or crops (often the reverse of unpackaging),
- e. external agency priorities - when enforced via the institutional structures cited at "a" - can result in operational policy and resource patterns quite out of line with stated and obviously intended priorities;
  - f. some external personnel's decisions have clearly been very badly wrong - res ipsa loquitur - eg price setting in Tanzania 1976-79; Tobacco Authority capital programmes 1972-1980; tea development priority 1963-1974 (also Tanzania);
  - g. external personnel in research (even when in national institutions) have often been on two year terms which are totally inadequate either for sustained research programmes or building adequate contextual understanding in agriculture);
  - h. given special importance of contextual, institutional, local knowledge the use of expatriates in field (and above in many functions) is open to serious question;
  - i. in some countries t.a. personnel have become significant focuses of blatant conspicuous consumption, exchange control racketeering, corruption (not all personnel and not just in agriculture).

It is important to identify the differential impact of these "problems" by country, crop, function and period. (Country and institution on external side as well). From that it may be possible to draw certain ideas as to desirable changes eg all institutions responsible to domestic units, all senior expatriates selected jointly or solely by recipient country and responsible only to that country, serious training programmes relating to institutions or functions with high expatriate proportion judged primarily on results in terms of qualified citizens produced and in relevant posts.

In respect to SIDA, more particularly, recommendations might be appropriate:



- a. do not concentrate on production proper;
- b. do provide funding for e.c.d.c. t.a. (eg from international crop research institutes, agricultural personnel of other developing countries);
- c. examine ability to provide inputs to seed multiplication (from proven sample through bulk to farmer) institution building;
- d. develop capacity (backed by finance) to participate in national storage programme design and implementation (SIDA does learn from mistakes - silos are unlikely to be replicated);
- e. ditto in respect to transport - not so much lorries and bogeys alone as in the package to back institutional and physical capacity build-up programme which at some levels may include personnel and finance for training/bookeeping personnel;
- f. accounting/auditing/financial management personnel for Crop (Procurement) Authorities - interim operational, system check and redesigning training personnel and studies;
- g. statistical development (albeit preferably jointly with - eg - India as Swedish and African field level, initial recording, reporting, interpretation contexts vary very widely - Indian are closer to African and India has the personnel but not necessarily the finance).

This list is in fact probably more than SIDA would have to spend on agriculture. It does - potentially - direct SIDA's mind to areas in which it has a comparative advantage of which tropical agricultural production proper is not one. Also it may help shift focus/perception from a rather narrow one on food production in the field/food shortage in the shop to a more vectoral and integrated one.