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Current African Agribusiness Case Studies
(an Overview)

AFRICA BUREAU AGRIBUSINESS SEMINAR
AGENCY FOR INTERNATIONAL DEVELOPMENT
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by Kenneth G. Swanberg, Ph.D.

Since I'm among friends, a bunch of Aggies, I'll make you feel comfortable by talking about agriculture. But I also want to stimulate your thinking by questioning our development strategy to date and challenging you to think along some new lines, some new ventures, if you will. Let's consider Agribusiness.

1. Agribusiness can play a major role in stimulating the development process, and in achieving the goals identified for our African Development Plan.
2. Moreover, our pursuit of agribusiness endeavours coincide with the dreams and inspirations of our African colleagues, who seek rapid expansion of employment, income and economic growth for their countries.
3. And agribusiness can pursue these goals within the context of environmental protection and sustainability in Africa; in fact, agribusiness, as I see it, can even enhance the productivity of environmentally stressed areas and actually stimulate the "regreening" of the continent.

The question is, how can agribusiness carry out this task? and what do we, a bilateral donor, have to do to get this process moving?

First of all, we must recognize and be convinced that agribusiness can contribute, even lead, in the pursuit of the three goals highlighted above.

So let me try to explain how I envision agribusiness accomplishing these goals.

I like to begin with a discussion of the role of agriculture in development, by laying out the following points:

- * Historically, most populations were rural engaged in agricultural pursuits, and were transformed into industrial or modern societies when surplus food was produced so that food and labor could be released to urban areas. This occurred in Europe, in the U.S. and in Japan. (See Hayami and Ruttan).
- * However, in order to release labor and provide food for employees in urban areas, productivity increases were needed in those environments where natural productivity was low, i.e. SE Asia, South Asia, Latin America and Africa. Due to a complex set of factors, high-yielding varieties of wheat and rice were developed which "took-off" in the Philippines and India and throughout that region called the "Green Revolution."

- * However, these technologies were not suited to all developing country settings. They only flourished under good moisture, cheap inputs and a complete set of supporting institutions, none of which have been readily available in Africa.
- * After the initial impact of the "Green Revolution," development agriculturists were faced with a new challenge--how to fit HYU to hostile ecologies. This led to adjusting technologies to farmers' conditions, i.e. the Farming Systems Approach. It fared well in Latin America and parts of Asia, but it seems to have fallen on rocky ground in Africa. Mainly, in my opinion, because there was either a "go native" attitude - do it their way without introducing any new elements, and never, no real advantage for increasing productivities significantly, or by focusing a technology into improper environments (T & V suffers from this malady). In many instances the Farming Systems Approach was not applied or introduced properly.
- * So we are left with a dilemma - what can be done in agriculture in Africa that can significantly contribute to employment, income, and growth given that no miracle varieties exist, that support systems for agriculture are weak, that inputs are costly, and that supplies food generation in dubious goal at best?

My proposal for consideration is the following:

- + Analyze each environment to determine their comparative advantage in light of the above.
- + Find commodities whose current technologies are such that they can produce a surplus for market.
- + Choose commodities that have elastic market demand, in either primary or secondary markets, and whose demand is international and not just domestic.
- + And lastly, design the technology delivery and support services system that will lead to widespread adoption of these production systems.

Such a plan will generate employment, income and growth, and in my estimation agribusiness can be the catalyst to the introduction of these systems.

We have learned from our research that the endured technology and institutional innovation models have been the most successful throughout the history of development. That means:

- a. recognizing strong demand
- b. fitting new technologies with factor endorsement levels
- c. and creating the support institutions to service that agriculture.

Therefore, we need commodities with international demand that can be grown in surplus under African ecological conditions and we need to develop their respective support services. One key issue here is "extension". Traditional extension has failed, especially when subsistence agriculture (food security) is the goal. And T & V and farming systems have not fared well either. What about contract farming?

Our research (AFR Bureau SARSA contract) showed how severe; contract farming schemes have been successful in introducing new technologies amongst peasant or traditional farmers, and have produced quality products for export markets. What are the key characteristics of these schemes?

- * A private operator introduces the scheme, and "contracts" with farmers to grow a commodity under pre-set conditions, for a given market.
- * The types of contracts vary and we can discuss these later.
- * But in all cases the commodities are produced for external markets (regionally or internationally) and transformed in some way, usually to achieve market preservation or value-added processing.

Examples: tea, coffee, tobacco, sugar, spices, horticulture, etc.

Now let's look at three country case studies to show how we can integrate agribusiness ideas into their respective agricultural and economic growth strategies. I have chosen Kenya, Botswana, and The Gambia for this purpose. And in each I am looking at the potential for agribusiness to exploit the natural resource base with sustainable non-damaging technologies, that can lead to widespread employment, not only on the farm but also in value-added processing, and generate significant income through import substitution and more importantly through exports. And since we are a bilateral donor - this must be done in concert with U.S. agro-industries and without jeopardizing our own constituents support for our A.I.D. program. The best way I see to do this is to generate schemes where U.S. agri-business (in its broadest sense) will join partnerships with our African colleagues in formal joint-venture investments, franchises or sourcing contracts. Let's see how we can do this.

Kenya

The 1986 Sessional Paper outlined Kenya's agricultural growth strategy as one concentrating on high-valued commodities - tea, coffee, dairy, horticulture and corn and beans. However, by 1988 it was apparent that the goals established by this agricultural strategy could not be met, and that an alternative plan would have to be developed to complement this initial approach. Fortunately, Kenya had recognized the need for alternatives to highland development near the end of the 70s,

and with the assistance of an A.I.D. planning team had embarked on an Arid and Semi-Arid Lands development program. Jointly with the EEC and several other donors, research and development programs had been initiated in 15 dryland districts. And so when a plan for consolidation of these individual activities into a coordinated second-generation dryland strategy was suggested a decade of experience in research, field trials and institutional adjustments could be called upon.

But how could the economic goals for employment and income be met from the drylands? Let's look at what we have.

First of all, the drylands produce sorghum and millet, not maize. Unfortunately, the Kenyan people don't prefer to eat sorghum. However, the drylands are also rangelands, and carry 12m head of cattle and 6m sheep and goats. But due to dry seasons and recurrent droughts, these livestock are threatened each year with lack of food and water. Although bore holes or highland water sources can be developed, grazing areas during the droughts or dry season cannot be guaranteed. Solution: produce sorghum for feed - for the carryover stock rope-tethered in the highlands or for those stock kept near watering holes in zones V or VI.

The result of providing feed for the livestock will lead to up-stocking rather than de-stocking. And demand for meat is high. Kenya currently imports meat. The dairy herd will also benefit from the feed and produce more milk. And international demand for leather is high. Moreover, the 6m sheep and goats can produce wool or mohair for spinning into yarn, as well as sheep and goat skin leather, and Kenya already has a thriving textile industry with high demand for quality garments.

This leads us to consider another major commodity drawn from the drylands. 15 years ago, Kenya exported high-quality long-staple cotton. Now she imports 60%. Kenyans can grow cotton if they were to be paid on time. However, past experience shows that the CLSMB is notoriously late in paying. Waivers to allow direct contracts from spinners with ginners or farmer coops could lead to rapid expansion in cotton production and such laws have been introduced but not implemented.

But cotton produces more than just yarn or thread. Cotton seeds produce vegetable oil. And cotton seed cake and meal is also used in livestock feed, to combine with the sorghum. Currently, Kenya imports saturated palm and coconut oils. Polyunsaturated cotton seed oil is more desirable, nutritionally.

Other oil seeds are also extremely suited to the drylands, namely sunflower, sesame, and groundnuts. And the latter two are monounsaturated oils, whose demand is increasing internationally because they actually breakdown cholesterol, like olive oil, whereas polyunsaturated are cholesterol neutral.

Vegetable oils can be crushed from groundnuts and cashews, but the market for fresh nuts is even more elastic. Macadamia is also grown in Kenya. And we haven't even touched on specialty crops. Kenya has been well-known for horticulture exports to Europe, and can expand these significantly, even to consider the Pacific Rim.

There are some new specialty oil crops as well. Vernonia, an indigenous thistle, can be used as a substitute in currently banned soybean oil-based paints, to prevent toxicant fumes from entering the atmosphere, called VOC's. Since Vernonia dries hard, the potential demand in the states could require 1,000,000 hours of production. A wild castor, Jatropha, could also be grown in Kenya as a substitute for solid-fuel based diesel, which has been outlawed in Los Angeles. And with the rage against the Exxon Valdez leading to newer, tighter control against oil spills, I predict a return to gasahol - which can be produced from a whole host of oilseeds, grain crops and sugars.

Then there are pesticides. Pyrethrum demand is currently unlimited. Neem seeds from the leguminous neem nut tree are also in great demand, for use in pesticides as natural agents rather than carcinogenic artificial chemicals.

All of these commodities are or can easily be produced in Kenya's more stressed areas. International demand is strong, and Kenya's farmers know how to produce them. Moreover, Kenya leads the continent in experimentation with water harvesting techniques to improve moisture retention and insure minimal crop yields. And lastly, the agroforestry center, ICRAF, is located in Kenya, and has demonstrated techniques for recovering range and desert lands.

So let's record these commodities to memory, and move on to our next case study, Botswana.

Botswana has suffered from an extreme drought for seven years, and only the last two years have produced adequate rainfall levels. So what can we do in Botswana?

First of all, Botswana is the home of the Botswana Meat Commission, a world-class act that exports fresh, frozen and canned meats (basically beef) to Europe under the Lome Convention. During drought years, the offtake can go as low as 100,000 head annually. In years of plenty, stocking rates push this figure back up to 200,000. But there is no fattening of the stock because there is no feed. And the hides are shipped to the Netherlands as wetblue.

Sheep and goats also play a dominant role in the Botswana economy, numbering over 500,000 in total. Skins, hides, and hair are products of these animals. In the past, Botswana was known for its quality kidskins.

Besides livestock (and some game), the principal crop is sorghum, due to the droughty environment. After several years of research (Kansas State and David Norman), consistent sorghum yields have only increased from 200kg/ha. to a little over 400kg/ha. hardly a crop to bank on. But with a little water harvesting - simply slashing a diversion canal across the field - farmers shift right into oilseeds, namely, sunflower or groundnut, usually the latter - given the dry landscape, oilseeds, of all types, become the next most feasible crop.

In some places, for instance in the black cotton soils area of Pandamatenga, cotton has been known to produce well, and in some of the Botswana Development Corporation's small irrigation schemes, cotton is programmed. So there is potential, even in Botswana, where some analysts have come away saying - "My God, get out of agriculture!"

Let's now turn to the West Coast, The Gambia. Although Gambia is blessed with a river, saline encroachment is hampering development. Nevertheless, The Gambia still produces groundnuts for export - in crude oil and decorticated form. Recently, on higher ground and dryer ground, sesame has been introduced. Notice that both these oils are monounsaturated.

The Gambia also exports river shrimp and cultured shrimp. Potential for expansion is considerable. Offshore fishing is also thriving.

Lastly, it is well-known in The Gambia that the women produce fruit and vegetables during the dry season from small wells in the depression of the grain fields. This capability has been developed to such a degree that now hundreds of women raise vegetables on small plots with tube irrigation all around Banjul. Several large farms have also sprung up, and altogether, The Gambia is exporting over 2 tons of produce twice a week to England. When I first heard about this idea at the Yamoussoukro conference last year, from Seesay Mamadou, Madame Octoo, and Mr. Kulak, I rejected it, based on my experiences in Latin America where we were burned several times before we established successful produce export programs to the States. But after visiting the fields, seeing the quality of product they're developing, and watching the women at work, I've become a partial believer. I was the doubting Thomas who said show me, let me touch it, and I did. Now I think, with proper planning and structure, we could develop both fruit and vegetable exports to the U.S.

Citroproducts, which is the parastatal that Mr. Mamađou manager, has 200 has. of limes, and currently maker of a lime concentrate for export to Schweppes, to Rose's concentrated lime juice. They also bottle (by hand out of wash tubs) several other exotic fruit juices and squashes. There's quite a potential in juices.

I have now depicted three case studies, all quite different. Kenya, in EA, with 20m people, 12m cattle, 15m sheep and goats, all agro-climatic zones, and great potential; Botswana, in the south, with 2m people, 2m cattle and 1/2m sheep and goats, with predominantly zone IV climates or worse; and the Gambia, on the West Coast, less than a million population, access to water (river and wells) but extremely small in size. How can agri-business help these countries? What do you think we could do, as A.I.D., to stimulate employment and economic growth in each country, and to help our own U.S. firms in their global objectives? I leave you with these thoughts and tomorrow morning I'll ask for your ideas. After a brief discussion, I'll tell you what we've done so far.

KENYA (traditionals: coffee, tea, corn, rice, beans, dairy, wheat)

sorghum
livestock - cattle, sheep, goats, camel, bees
cotton
nuts - macadamia, peanuts, cashews
oilseeds - groundnuts, sesame, sunflower, cotton
industrial oils - vernonia, jatropha
cosmetics - jojoba, aloe, gum arabic
medicinals
horticulture
fruit - passion fruit
specialty crops
pyrethrum

BOTSWANA

livestock - cattle, sheep, goat
wildlife - ostrich
cotton
oilseeds - groundnuts, sunflower, sesame
industrial oils

THE GAMBIA

peanuts, sesame
shrimp, seafood
horticulture
fruits - annuals, perennials

Participant Responses - 30 minutes

The next thing I want to do this morning, is talk about the commodity groups. Let me concentrate on the following:

industrial crops - pesticides, paints, fuels (1,2)
horticulture - fruit and vegetables
specialty crops
feeds
oilseeds - saturated, polyunsaturated, monounsaturated
leather
cotton
wool - mohair
organic fertilizers
nuts

Now let me tell you about what we've done in each country.

Kenya

1. We've identified a company that is interested in developing sorghum forage in a silopress - describe it.
2. The feed will be sold at waterholes by private dukas. The distributor will have to finance the inventory for the distribution to the dukas, who in turn will sell, on credit, to local farmer, who will tether livestock and feed them during dryseason, for replacement stock, and to stage slaughtering throughout the year.
3. We're working with the U of N Sorghum Utilization Committee, jointly sponsored by IDRC.
4. We're trying to get a paint company to pilot vernonia, with the U of N research grant.
5. With DEG, we're looking into Passion Fruit, Cashews and Macadamia, and Jojoba. I think Jojoba's demand structure is insufficient.
6. Oilseeds are being developed by IDRC and Egerton College, and we're helping out - possibly enticing extraction firm to get involved.
7. Horticulture and specialty crops, we're promoting with Winsor Grain.
8. In cotton, jointly with Dr. Yabb of EA Fine Spinners we are hosting the visi. of 5 CEO's from the U.S. looking for joint-venture in textiles, to include vertical integration from Contract farming the production and ginning, through spinning and weaving, and into cut and sew operations with name labels.

Botswana

1. The BMC has a wetblue tannery that they want to spin off. Ward Enterprises is making plans to operate and manage in a joint-venture, a complete tannery, plus several satellite cut and sew operations.

2. We've talked with Heinz about developing a contract growing scheme for oilseeds to substitute for the imported crude oil from RSA. The Government will assist in creating a price incentive for local growers so that they can deliver raw seed to the Heinz extractor at an equivalent price for crude oil. The incentive package may be applied at any point in the vertical chain.
3. With the increase in cotton - from Pandamatenga, water harvested fields, small irrigation schemes, and Zambian/Zimbabwean/Mozambican imports, Cargill has designs for a ginnersy.
4. Algo Industries is installing a spinning factory, and will entertain the "CEO's" in October, with hopes of landing a joint venture. Algo currently cuts and sews Clique women's jeans and apparel for the U.S. market.
5. One Design has an agreement with the President's farms, to raise farm ostrich, for meat, eggs, leather, feathers and live birds.
6. The oilseed cake and meal, together with bonemeal and other residues, will be mixed into a feed, for cats and dogs and livestock.

The Gambia

1. Cargill is interested in taking over the GPMB oil pressing operation, for peanuts and sesame.
2. We have several interested parties in the shrimp packing and importing operation. Wise Associates, Nguyen from the Gulf, Houston Agribusiness Associates, and
3. Sun World, Winsor Grain, Sun Diamond, CONAGRA and Redenius, we hope to have on a CEO visit to The Gambia, Swaziland and Kenya in November, to see if we can't contact grow these specialty crops, for the U.S. market.
4. We hope to get a feed company in to take the oilseed cake and meal, and fish entrails to develop pellets and feeds for aquaculture and poultry/hog fattening.

That wraps it up for these three countries, but let me just mention what we have going in other countries:

Uganda - seeds, textiles, fruits, ginnersies
Chad - gum arabic, Ag. Mktg. PID, cotton ginning
Senegal - ITA, Horticulture, Coarse grains, cowpeas,
groundnuts
Lesotho - textiles, leather, wool scouring, seeds (corn,
pulses)
Swaziland - tumeric, landried fruits, furniture, flour
milling, textiles
Cameroun - cocoa, rubber, flour milling (oats/barley),
sorghum feeds
Mali - meat processing, cotton growing
Women's Exports - venture capital

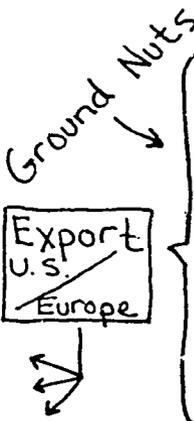
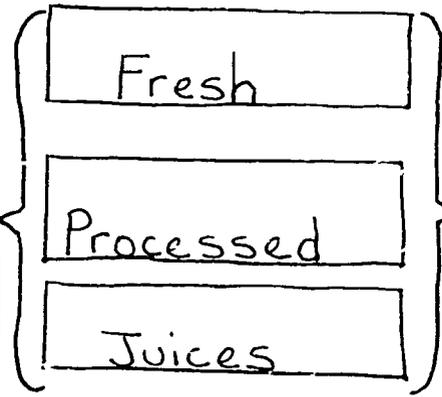
We're also trying to develop free trade or swaps amongst neighboring countries in line with their own trading partners, such as the Customs Union for the BLS countries, SADCC, PTA, CILSS, etc.

And that concludes my presentation, and as Bartles and James would say, I thank you for your attention.

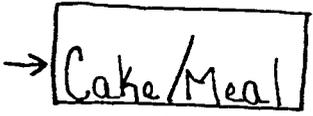
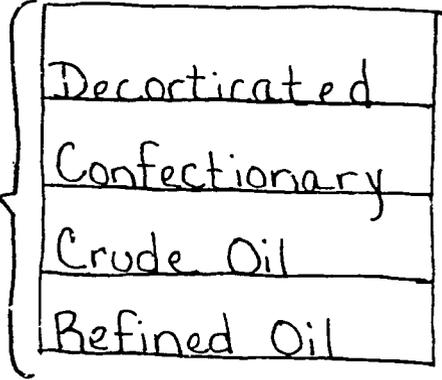
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THE GAMBIA

Produce

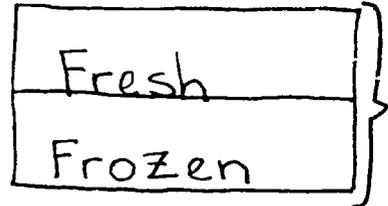


Oil Seeds

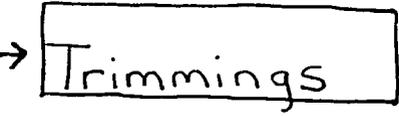
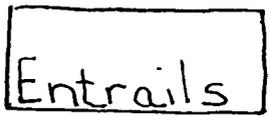


Agriculture

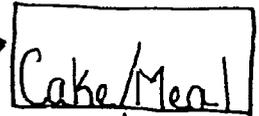
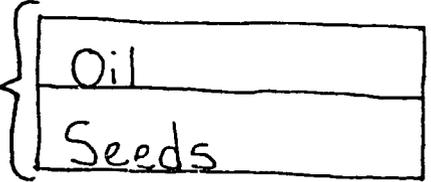
River Shrimp



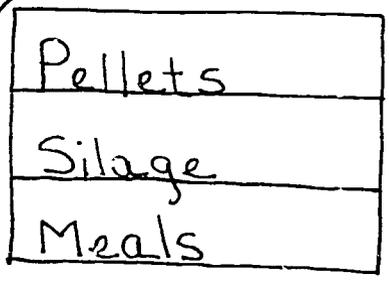
Cultured



Sesame

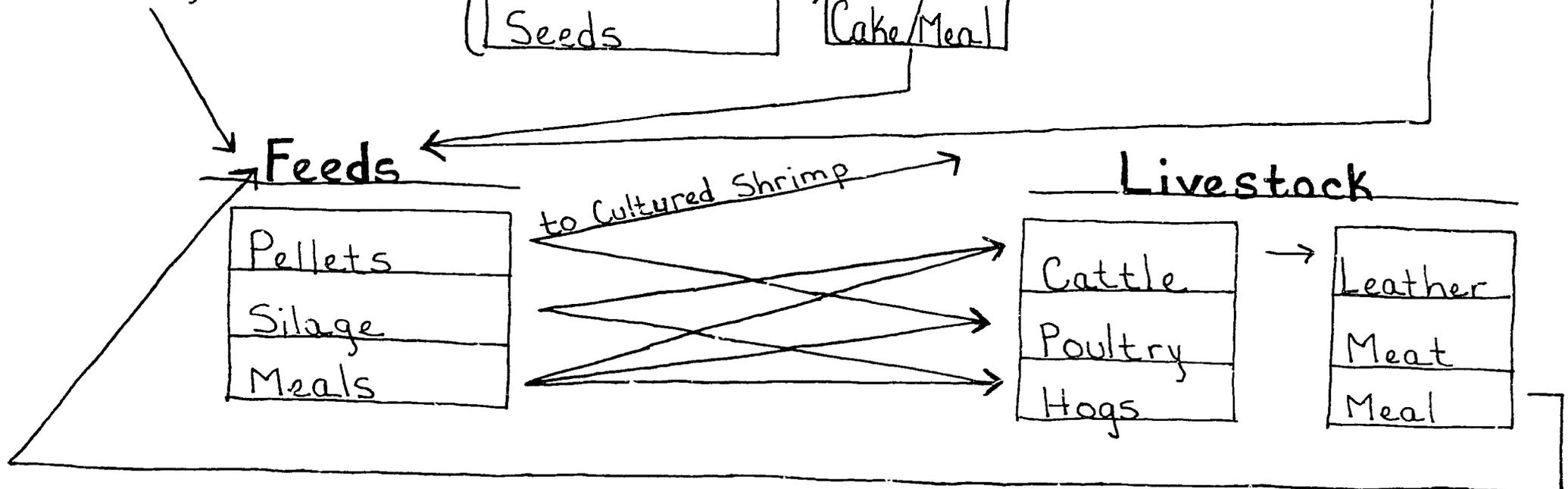
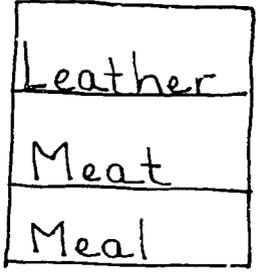
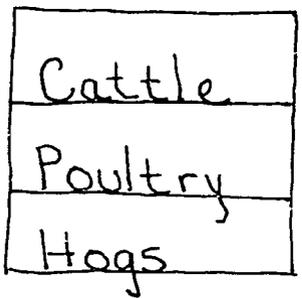


Feeds



to Cultured Shrimp

Livestock

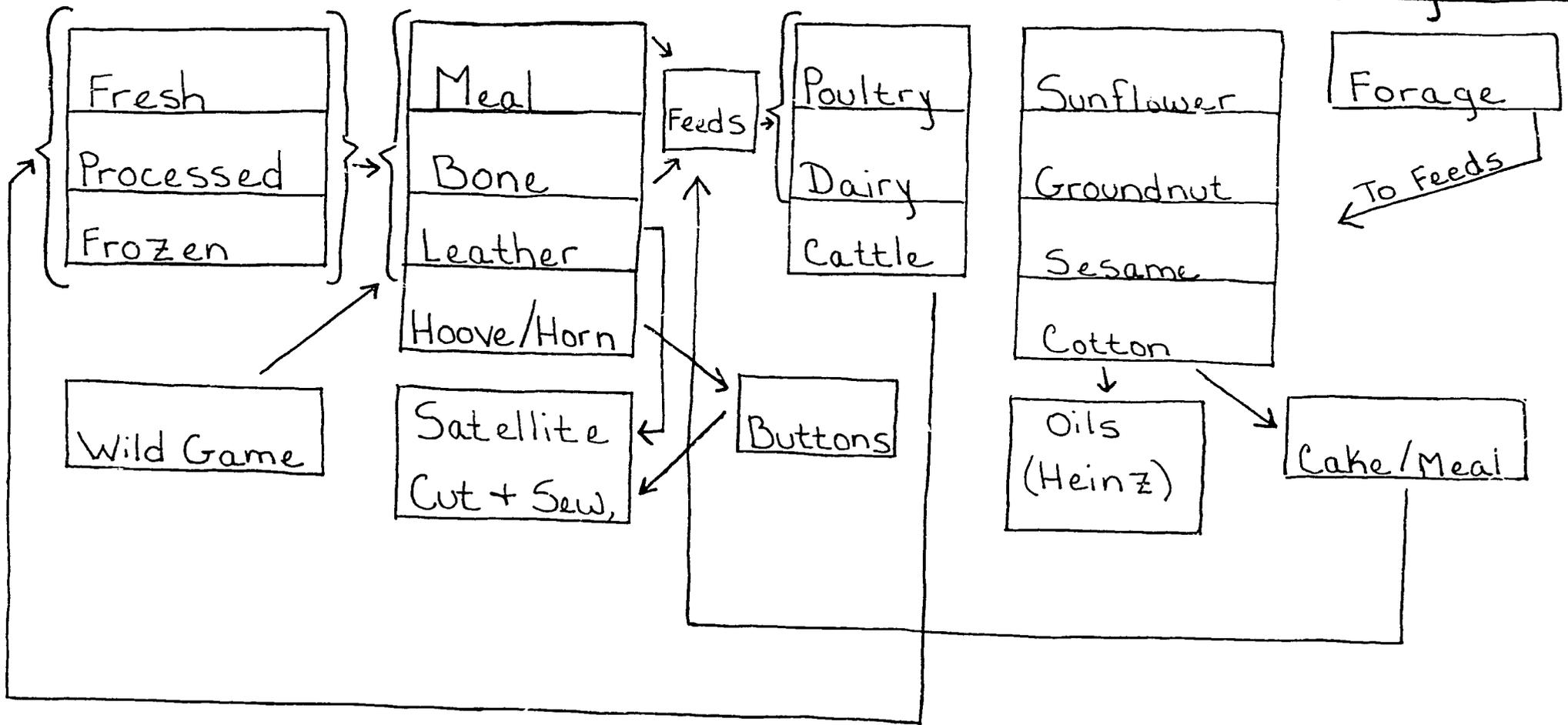


BOTSWANA

Livestock

Oil Seeds

Sorghum



AGRIBUSINESS SEMINAR
August 24, 1989
Rapporteur Report - J.C. Sentz

Dr. Kenneth Swanberg: Three Current African Agribusiness Case Studies

Following the agribusiness development model strategy developed Wednesday afternoon, Dr. Swanberg challenged seminar participants to consider the potential of various commodities and commodity groups presented earlier for development through the U.S. private sector in three target countries: Kenya, Botswana and Gambia. Potential conflict with the Bumpers amendment was considered briefly and concluded that this innovation should not be in conflict in this case of mono-unsaturated oils because the U.S. cannot fulfill potential demand and this amendment is focused toward interference with U.S. exports. The basic principle expressed is that "someone will develop these industries" and the U.S. should take a lead and reap the advantage (Pioneer International).

For Botswana, which has a functioning meat commission supporting a viable livestock process and marketing industry, discussion focused upon "added value" to the industry through incorporation of a pen fattening period to increase both meat and hide values.

Mr. Terry Lee from the U.S. textile industry discussed dynamics of the industry and identified (1) large source of low cost labor, (2) lack of competition with Caribbean Basin, (3) supply of raw material and (4) accessibility to EEC-92 market as very favorable for expansion of the industry in Africa. Because of erratic markets, developers will want to concentrate on low capital labor intensive ventures wherever possible. The needs for management and technical training were emphasized.

Mr. Jack Ward addressed the African role in the leather industry with reference to the Botswana Meat Commission (BMC). This is a world industry and market in which processing and transportation are very important considerations globally. Both speakers focused upon benefit to the U.S. industry as driving forces in their involvement with these African industries.

Dr. Swanberg concluded the session with a summary of private sector ventures underway in the three countries.

Kenya: Sorghum forage for livestock during dry season; vernonia oil as carrier replacement for paint; fruit juice and nuts production/processing; vegetable oilseeds; horticulture and specialty crops; and vertically integrated cotton-textile ventures.

Botswana: Tannery and cut-sew leather operations; oilseeds extraction scheme with Heinz; cotton ginnery with Cargill and

spinning factory plus cut and sew operations; and cotton oilseed cake and meal utilization as feedstuff.

Gambia: Assumption of Gambia Peanut Management Board oil processing plant by U.S. firm; shrimp packaging and export; and utilization of oilseed cake for poultry and swine.

In addition, several related activities are being explored in Uganda, Chad, Senegal, Cameroon, Mali, Lesotho and Swaziland.

Dr. Tham Truong: Private Sector Fertilizer Analysis in Cameroon

Dr. Truong discussed in detail his experiences with converting this public monopoly to the private sector. He emphasized the nature of dismantling such a system based upon patronage and the re-education necessary to the success of a private system and the forces to be controlled for conversion of government philosophy. Lessons emphasized are (1) government bureaucracy is not interested in policy reforms and their social natures; (2) Implementation of policy reforms involves resolution of conflicts; (3) Privatization requires establishment of new rules of behavior and institutional arrangements. Constraints to this privatization exercise, resulting from A.I.D. regulation conflicts with the project demands, were noted as a significant deterrent to progress.

Mr. William Cook: Forward Contracting and Contract Farming

Mr. Cook presented this subject of contracts as a tool to get things done and stressed that the only reason why "private industry wants to be in Africa is the bottom line -- to make money." This is the difference between capitalism and other systems where profit is the driving force which delivers where others fail. He emphasized the need to start small, but to get going without delays. He presented a Blueprint for Contracting with these main points: Know the territory, the grower, the problems and/or opportunities; Choose a proven commodity of value on foreign markets; Identify the market; Define distribution; Utilize local networks; Educate/inform the farmers on why; Provide for your physical facilities; Consider value added through processing to avoid competition with others; Resolve transportation matters; Develop good communications; Ensure quality control; and Resolve any and all red tape. In conclusion, he emphasized that A.I.D. must do up-front investment to provide a blueprint so the contract will be an "everybody wins" situation.

Mr. Terry Chuppe: Capital Markets in Developing Countries

Mr. Chuppe indicated that because development is increasingly reliant upon the private sector, the capital markets are becoming more important. Four sub-Saharan African countries have markets; Nigeria being the largest with about 100 companies registered (in

comparison with 6,000 in the U.S.). He projects that external sources of development capital are expected to be small during the 90s pointing to the need for internalization for capitalizing agribusiness.

Mr. Michael McWherter: Packaging for Local Financing of Agribusiness and Related Activities

Mr. McWherter focused upon agribusiness in Kenya, where he is currently working, in contrast with the centrally controlled economics of Zaire, Zimbabwe and Tanzania. He traced capital development from the colonial period of influence to the present excess number of banking institutions, identified a need for positive PR to counter current negativism in the press. The rural chambers of commerce, which function more like American cooperatives, were identified as a good source for developing agribusiness opportunities in which best opportunities were low in dollar cost requiring mostly good ideas, skill, training and contacts.

Discussion revealed that prices are mostly right in the past five years for dialogue and investment in Kenya, and taxes are not a burden to the private sector. Targets of opportunity were seized upon to move with multiple priorities. The advantage of an American over a National for such a task is knowledge of people and programs in the U.S. to move rapidly with appropriate linkages.

Dr. Fariborz Ghadar: Normal Capital Financing of Agribusiness

Dr. Ghadar identified and discussed the factors of How to Make a (financial) Deal. He portrayed personal and institutional sources of capital for projects and their interrelationship with risk level, profitability, cash flows, asset/liability ratios, and efficiency measures. He indicated agricultural projects generally have high debt/equity ratios of 3 or 4 to 1. Historically, agricultural debt financing has been primarily through relatives, commodity suppliers and landlords rather than by financial institutions. In the case of large sector projects, infrastructures, such as a dam or large capital investments, are spun off for separate financing by a different lender.