

PD-ABT 372
80918

**End of Project Report for the Visiting Professor
on the CAPM Project, Swaziland 1989-1991**

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SECTION I

Setting the Scene: Introduction and Objectives

Introduction

This is the EOP report by the Visiting Professor at the University of Swaziland (VP), subcontracted by the University of Florida (UF) to Chemonics International Consulting Division as part of a five man team to work on the Part I, three year phase of the USAID funded \$6 million Commercial Agricultural Production and Marketing Project (CAPM) in Swaziland, starting August 15, 1989. The University of Florida was one of four sub contractors in this project and it supplied the only full time member of the CAPM team that was not employed by Chemonics. The other sub contractors were Penn State, High Value Horticulture from Uxbridge, England and Khalipha Investments at Mhabane, Swaziland. Unfortunately, the VP position was terminated by USAID Swaziland on December 7, 1990 and the whole CAPM project is currently being rewritten. Thus this EOP covers August 1989 through January 1991 only. It reflects the VP's own views and not necessarily any of the institutions or individuals associated with the project.

The V.P. had four specific tasks outlined for him in Chemonics International office in Washington in a week's team briefing session, in July 1989. These tasks were:

1. strengthen the University of Swaziland's (UNISWA-L) Luyengo campus (i.e. College of Agriculture) curriculum to make it more business oriented. The main thrust was to occur in the agricultural economics and management department

- (AEM) but also to encourage this thrust in the other five departments at Luyengo (i.e. crops, animals, mechanisation, agricultural education and home economics).
2. to review current student practicals and expand or revamp appropriate ones to make them more relevant for future employment possibilities.
 3. to develop, co-ordinate and conduct outreach activities. This task was construed to mean working with Swazi farmers, suitable government personnel such as the extension service, local business people and quangos to provide them with workshops and seminars that would increase business efficiency and encourage privatization. These activities were to be centered at UNISWA-L.
 4. to do whatever the Chief-of-Party (COP) decided was relevant to enhance privatization and meet CAPM's objectives on time.

These four tasks appeared do-able and were not changed substantially during the time period of this report. The fourth task allowed some project flexibility and encouraged team rather than individual efforts. This approach strengthened the team and induced synergy.

Objectives and Progress

This objectives and progress section stems largely from my part of the first semi annual work plan of October 1989. It provides a more elaborate list of objectives after some on the ground experience in Swaziland. It is interesting to note the date of the above report. Despite starting the project on August 15, 1989, USAID insisted that the first semi-annual report was due in October. This insistence was to be an initial precursor of much of the subsequent

decision making associated with the CAPM project.

i. objectives

The scope of the CAPM Project's education and training objectives can be categorized and described as follows:

- (1) **Strengthening the UNISWA Faculty of Agriculture Curriculum and Capacity:** the V.P., in addition to formal teaching responsibilities, will develop an improved course curriculum, identify and procure texts and other course materials, improve "practicals" currently conducted on campus, plan and monitor degree training of selected UNISWA faculty members and conduct short-term skills training.
- (2) **Conduct Assessment of Training Needs:** the COP, the VP, and a training assessment specialist will conduct a skills training needs assessment among target groups and Government of Swaziland (GOS) entities participating in CAPM.
- (3) **Develop Outreach Education Plans:** the VP and COP will supervise the development of an outreach education plan to include short courses, observation tours, workshops and seminars developed for a range of CAPM target groups including: GOS officials, extension staff, farmers, businessmen and cooperative members. Training will be adapted to needs, which might include such areas as quality-control systems in agroprocessing, inventory management, overcoming farm-to-market bottlenecks and business planning.

(4) **Coordinate and Conduct Outreach Activities:** the VP will coordinate the implementation of the above outreach education plan. This will include the marshalling and coordination of all available resources so as to meet the objective of institutionalizing a permanent leadership role in outreach education and training within UNISWA.

ii. **comments on objectives**

Most of these objectives match the original objectives rather closely. There are some differences however. Objective (2) requires a training needs assessment specialist. This requirement subsequently led to some confusion among team members on what this specialist should do, when it would be done and how it could be used. The eventual assessment was commendable but focussed more on Swaziland's needs than UNISWA-L. Therefore it proved difficult to actually use it in the project.

Objective (4) required coordinating the outreach plan "within UNISWA". The UNISWA siting eventually proved impossible. The original Dean of Agriculture was enthusiastic about outreach stemming from the University, but was repatriated when his tour ended in early 1990. The next dean, a Swazi, was emphatically told by the Pro-Vice Chancellor (PVC) of UNISWA that there was to be no outreach at UNISWA. Consequently the embryo withered.

Objectives 1 and 4 required resources that were first ordered through the project in early September. Due to bureaucratic delays, an insistence on a third resource needs assessment at UNISWA-L and then problems with UNISWA

administration, none of these resources were purchased (this will be detailed later in the report). Consequently, the lack of computers and software which were originally expected in time for the term starting in January 1990 necessitated some major changes in the subsequent curriculum.

Objective 3 would have been met if CAPM were given some authority to make decisions, particularly on observation tours. Unfortunately a confusing trail of decision making at USAID make this objective a difficult one.

(iii) approach

(The following sections are also taken from the semi annual report).

"It is important that we recognize and build upon the strengths of existing institutions such as UNISWA as we implement institutional changes. The CAPM Project will endeavor to conduct all education and training development within the context of UNISWA's existing structure. Curriculum improvements will be conducted through existing UNISWA curriculum committees and faculty training will be compatible with UNISWA training objectives. Also, efforts will be made to incorporate past contributions to this area as well as to integrate successive steps of CAPM project activities. In this way, the needs assessment will build upon the McCorkle survey (an excellent survey completed a few years earlier by Professor Robert McCorkle at the University of California that essentially started thinking about a more business oriented approach at UNISWA-L), but will also require separate surveys of target groups and will include both hard data and perceived needs in terms of skills-training for improved employment prospects.

The results of the skills assessment will then be incorporated directly into the outreach education plan. This plan will stress practical training for the target group and will promote the use of case studies so that training will be meaningful in the Swazi context. The resulting outreach program will relate closely to other GOS activities such as the Ministry of Agriculture and Cooperatives (MOAC) Extension Services. Also, any print media used in outreach activities should take into account, and perhaps be linked with, the field guides being developed under the Cropping Systems Project (a Penn State project)."

(iv) comments on approach

Because there were some delays in hiring a suitable training needs assessor, the project went ahead without the assessor's report. This progress was essentially in order to meet all the necessary requirements to start UNISWA-L's new curriculum in the academic year starting in August 1990.

(v) specific tasks for the V.P.

1. Design and Teach Agribusiness Management Courses
 - a. Design one new management course for each of six semesters
 - b. Teach first of six management courses
2. Revise Curriculum, Upgrade Practicals
 - a. Revise the last two years of new five-year curriculum, incorporating two of the above new management courses
 - b. Revise the first three years to increase practicals by 30%, then structure these practicals

- c. Plan "special research topics" to be incorporated into the fourth year curriculum. These topics should: allow students to specialize in a local problem; have supervised research; and demonstrate self motivation.
 - d. Incorporate meaningful, practical farm work into the curriculum for students at all levels
- 3. Plan and Conduct On-the-Job Training for Faculty
 - a. Emphasize specific technical skills for those faculty with BSc degrees only, emphasis to include short term training (domestic and international) in irrigation, beef cattle management, agronomic experimentation, dairy technology, etc.
 - b. Plan for provision of UNISWA-L based short courses for selected faculty in specific areas such as financial management and market analysis
 - c. Plan and encourage a monthly seminar series on any topic using visitors, and local speakers, as well as local faculty
- 4. Plan Observation Tours
 - a. Explore feasibility of observation tours to universities in Lesotho, Botswana, Zimbabwe, Kenya, Uganda and Tanzania
 - b. Select two agriculturally oriented colleges in the Republic of South Africa for observation tours
 - c. Plan visits for selected faculty and ministry employees to private

businesses in Swaziland

- d. Plan credit observation tour**
- e. Plan European/Africa/U.S. export marketing tours**
- 5. Establish U.S. Degree Training of Two Faculty Members**
 - a. Determine training needs of faculty members**
 - b. Assist in identifying appropriate candidates and in obtaining approvals**
 - c. Monitor trainee progress**
- 6. Plan Training Needs Assessment**
 - a. Plan survey of target groups**
 - b. Plan for local and expatriate technical assistance**
 - c. Plan field training needs survey**
- 7. Coordinate and Conduct Outreach Activities**
 - a. Work with Mananga Training Center in providing and monitoring curricula and courses for appropriate audiences**
 - b. Work with CODEC to plan basic workshops on financial management, decision making and marketing for their employees and others.**
 - c. Collaborate with Extension Service to plan in-service training courses for credit to selected employees in above (b) areas as well as budgeting skills.**
 - d. Meet with Home Economic Department to conduct management**

short courses for selected women's groups

- e. Work with Rotary Club to encourage information dissemination
- f. Plan individual seminars on specific topics to invited audiences as needed
- g. Work with Kellogg Foundation, Swaziland Small Farmer Foundation, MCIT and other agencies and organizations to develop agribusiness short courses

8. Conduct on-the-job Training for Counterparts

- a. Coordinate activities of CAPM visiting professor with those of his UNISWA counterpart
- b. Assist in training other counterparts as requested

9. Develop Swazi Case Studies to be Utilized in Courses to be Taught

(vi) comments on specific tasks

These specific tasks were written on the understanding that the project's \$125,000 of computers, ancillary hardware and appropriate software would be on site around December 1989 and that the \$268,000 of farm, lab and classroom equipment would start arriving at UNISWA in February 1990. This did not happen firstly because it was determined that a third computer and equipment needs assessment was necessary before these commodities could be ordered. This assessment delayed commodity shipment. But secondly, by May 1990 the commodities were held back by USAID until they could get agreement with UNISWA administration on when the administration would start the new

restructured programme.

UNISWA had completed their own needs assessment in early 1989, before the project started. Their assessment seemed adequate. Yet in 1989 another needs assessment was done, also adequately, by a Chemonics employee who largely repeated the process in that she asked the faculty questions they had answered earlier. I then had to tell the faculty that they would have to go through this process a third time before their promised equipment was ordered.

(vii) personnel and resource allocation

(This section was also taken from the semi annual report.)

Personnel and Resource Allocation

Education and training activities will be coordinated by the CAPM visiting professor under the supervision of the COP. The UNISWA counterpart of the visiting professor will be involved in all facets of education and training activities. The CAPM university subcontractors, Penn State and the University of Florida, will also participate in the first six months' activities, with specific focus on the planning of degree training for two UNISWA professors and planning on-the-job training for UNISWA faculty. Other resources needed include vehicular and air transportation for in-country and international training and observation visits.

Output

1. Two UNISWA faculty will be identified for long term training and their training needs assessed by the completion of the sixth month of contract activity.

2. Establish relationships and develop framework for working jointly with local, regional and international training institutions for the purposes of planning and implementing short-term training.

(viii) comments on personnel and resource allocation

There was some not unexpected controversy about who was to be selected. My counterpart had already chosen a member of his staff, who later proved ineligible because she had just returned from the U.S. ostensibly with an MS from Southern Illinois. I argued that the original choice of 2 Ph.Ds was inappropriate for a project that emphasised business and that MBAs would be preferable. In the meantime USAID, under a different programme, was selecting UNISWA candidates for U.S. training without informing the CAPM team. Finally the Dean of Agriculture submitted his candidate who was not a UNISWA faculty member. Thus candidates emerged and were rejected without any clear notion of who was to make the final decision.

Penn State, although listed as participants, were included erroneously. Considerable time was spent on assembling suitable institutions and courses worldwide that could assist in the short term training component of the project. Initially, decisions were made jointly in team meetings but later, both course and candidate decisions were made differently.

SECTION II.

Personal Comments

Philosophy

This project was a worthy attempt to encourage a more commercial thrust in local agriculture. It was coupled with USAID's attempt to invest in the private sector under the buzzword of "privatisation". I agree with the idea but I have difficulty accepting that much progress is possible anywhere when the majority of resources are concentrated in a few hands and these hands are unwilling to increase resource availability. It is particularly hard to hope for much success when this concentration is mostly held by the administrators of a public sector that is dominated by a cadre which is neither elected nor accountable to the people who are to gain from privatisation. These cadres correctly discern threats to their privileges from an emerging group of entrepreneurs. An entrepreneur will by definition, take risks, but the risk of public sector persecution, even though it is rarely exercised, is perhaps one risk that few would want to take. People start a business for some sort of gain. They take known risks on the belief that the rewards for their efforts will be sufficiently great to compensate for these risks. In order to start a business people need access to resources at reasonable cost and fair markets with reasonable opportunities for fair prices.

Potential business people weigh resource costs, market prices and the security of keeping the assets necessary to make their products and some margin over cost. They then decide to start a business or not to start one. Swaziland, like practically all African countries, does not provide the level playing field that businesses require. While it can provide a level of

opportunity that is atypical in Africa, it still possesses a concentration of power over resources and an insecurity of ownership that is discouraging to local prospective business people.

Consequently it seems reasonable to hope that certain preconditions exist for successes in privatisation. One precondition is that those in power will neither prevent entrepreneurs from seizing opportunities, not discriminate against them when they reap their rewards. It is doubtful whether the current power structure in Swaziland is prepared to grant the former or watch the latter with a benign eye. The great difficulty that farmers have in obtaining meaningful title to their land is possibly the best example of the former and the new laws which allow land to revert to the crown at any time illustrates the latter.

Observations

I left Swaziland with a wealth of happy memories but still disappointed and frustrated. Disappointed because the contract ended early and left a possible job unfinished. Frustrated because UNISWA students and faculty were let down unnecessarily by their own people. My main role was to introduce and operate a more practical and business oriented curriculum in the Agricultural college at Luyengo and to use this foundation to establish and coordinate a business outreach programme. This programme included workshops, seminars and observation tours for local farmers, business people, and government officials including extension agents. I expected to bring to the University some \$125,000 of computers and software, about \$270,000 of class, laboratory and UNISWA farm equipment and the equivalent of \$370,000 of UNISWA farm structures and improvements from GOS sources. These items were to be used both on campus

and in outreach.

I arrived with the rest of the CAPM team in August 1989 with the understanding that the new UNISWA-Luyengo curriculum for the restructured programme, was to start in August 1990. This new curriculum needed the above resources and to help institute campus changes. The six departments at Luyengo needed a business orientation in their curricula, and 6 new business classes for the juniors and seniors. I expected to teach four of these classes to the agriculture and agricultural education current juniors before August 1990. I also hoped that the farm would then be ready to take the increased practicals necessary for the restructured programme and that the new structures and equipment were operating and capable of handling a student enrollment some 30% greater than the 1989/90 complement. Finally the project expected the faculty to be sufficiently trained in business and three of them selected for overseas study in higher degrees, all before August 1990. These commitments were to run concurrently with developing a new outreach programme. The goals were not unreasonable, given the preparation of the UNISWA-L faculty.

Perhaps the best part of the project was the enthusiasm shown for restructuring by faculty and particularly the students. The students had found that their University training was considered too theoretical for employment by many potential employers. The employers' main criticisms were an almost complete lack of job skills in practical agriculture, labour supervision, machinery maintenance, office management and any business skills. Most of the faculty were equally critical of the current curricula. There was considerable eagerness for a new programme that got students into the field, provided new equipment and allowed faculty input. So there was an expectation that UNISWA Luyengo would be ready for the restructured programme among

faculty, staff and students.

The Luyengo administration was also enthusiastic. The original concept of restructuring originated with a previous Dean of Agriculture who had helped with the McCorkle report. He had broached the idea during a trip to the USA some 18 months earlier. On return, he had met with all the appropriate GOS officials and with the UNISWA administration at Kwaluseni the main campus of UNISWA. The current Dean was equally keen, the University Senate had given their approval, and it appeared that the ground work was laid and all that was necessary was to get on with the job.

What went wrong? Essentially the UNISWA Vice Chancellor decided around March 1990 that UNISWA-Luyengo was not sufficiently prepared for restructuring. Her reasons were that the faculty were inadequately trained, the farm improvements would not be completed in time for the necessary practicals and that she had been insufficiently consulted about the programme. USAID made several attempts to compromise. A new agreement was reached in July 1990 which delayed the restructuring a year provided the UNISWA Kwaluseni administration did the following: (1) including an insert in the graduating package of seniors stating the business courses they took; (2) an addendum to the UNISWA 1990 calendar showing that some four courses taught under names like "Project Appraised" and "Farm Accounts" were in fact detailed business courses; and (3) that an outreach programme would be supported at UNISWA-Luyengo.

The Kwaluseni administration reneged on all three points. Consequently, after considerable hesitation USAID decided to terminate the VP part of the CAPM project in December 1990. Not coincidentally, they also decided to rewrite the whole project and wind

up the Food Technology, the Policy and the Marketing positions in the team, leaving one person remaining from the original five.

The future of my position became uncertain in April 1990, and for several months I was alternately told that it was being terminated or was being extended. My annual leave was first cancelled, then reinstated, then delayed as various members of the USAID office confirmed that the position was on or off or being revised. But I was never directly officially contacted on the state of play. The same uncertainty continued after my return from leave in August, when I pointed out that the previously agreed conditions between UNISWA administration and USAID had not been met.

I also found that nearly a third of the Luyengo faculty were leaving for overseas training, mostly on USAID scholarships, and would therefore not be available to help in restructuring. (See Table 2,) Several were leaving before the start of the 1990/1991 academic year and no replacements were expected until after the semester, which meant that a smaller faculty must increase their teaching. This news surprised USAID staff associated with the CAPM project and it became obvious that the depleted UNISWA-L staffing would be a poor introduction to meeting the requirements for the revamped restructuring in August 1991. USAID concluded that the University part of the CAPM project was again in trouble and arranged meetings with Kwaluseni administration to see what could be done. It was eventually decided to close my position but not when to close it. The closing date finally came from a Swaziland based AID officer, then in Washington, after police and troops raided the Kwaluseni campus in November and closed it. He was apparently unaware that the Luyengo campus remained open and was functioning normally. The upshot was that my termination date occurred on Dec 7 while the Luyengo

semester ended on Dec 22. I was unwilling to depart on Dec 7 and leave three classes unfinished as well as ignore an examination schedule for each class. Consequently I stayed and finished the semester on my own time.

It is not particularly instructive to assign blame. There is no doubt that the Luyengo faculty resented the restructuring postponement. But if they had protested to UNISWA administration at Kwaluseni they could have lost their jobs and would have certainly suffered in other ways. This may be hard for Americans to understand, particularly in a country that is considered democratic and peaceful by African standards. But there is no doubt that individual and collective protest against authority is not tolerated, even in Swaziland with its enviable free press, and highly literate and well fed population. The Vice Chancellor of UNISWA is appointed by the king and will serve until he thinks she should be removed. So even if the current Governmental Commission investigating the police and troop raid on Kwaluseni criticises the UNISWA administration for its role in encouraging the use of troops it is doubtful whether any of the top administrators will lose their jobs. So UNISWA Luyengo will continue in its present role of training students in academic rather than practical skills at least in the short run. The only casualty is the once raised hopes of the current student population and most of the faculty.

I would like to emphasise as my final comment in this section that no-one could have had more support and help during what were very trying times than I received from my colleagues on the CAPM team and the Luyengo campus. Without them things would have been even more difficult.

SECTION III

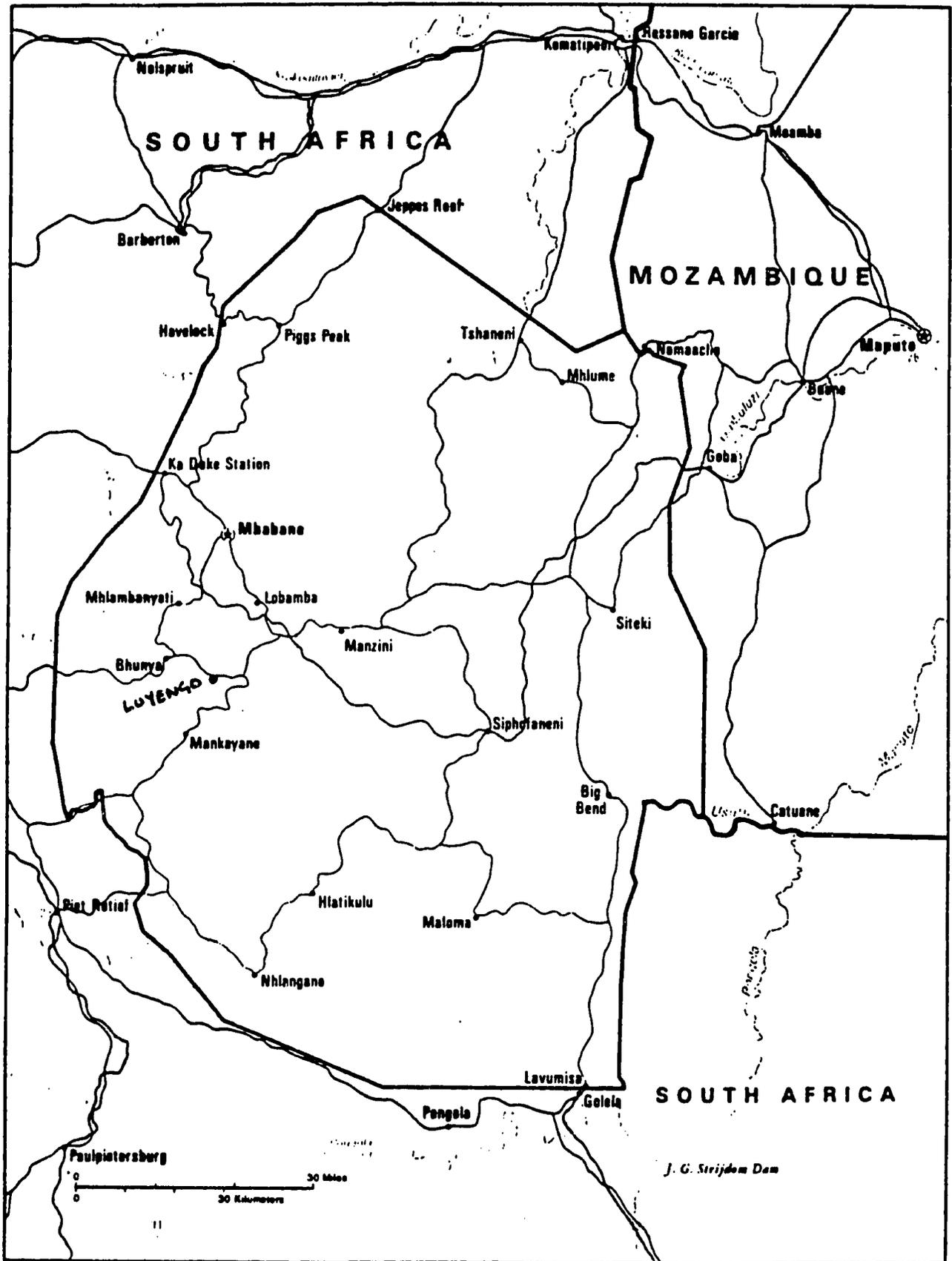
Background to Swaziland

Geography and economy

Swaziland is renowned for its beauty, and claims justifiably to be the Switzerland of Africa. It is geographically about the size of New Jersey with a climate that ranges from near temperate to sub tropical and semi arid. It is divided into 4 distinct geographical regions: the Highveld, Middleveld, Lowveld and Lubombo, running from west to east in approximate north south strips. The Highveld takes up some 39% of the country and averages between 1000 to 1400m. The highest point is Bulembu at 1862m. The predominant Highveld vegetation is sour mountain grass and the area is widely used for forestry under pine and eucalyptus.

The Middleveld is a little over 25% of the country and ranges from 300 to 1000m. The natural vegetation is long grass and this area is very important agriculturally. The Lowveld covers 37% and is typically Bushveld vegetation with thorn trees and grass. Agriculturally the Lowveld has large areas of irrigated sugarcane producing some of the highest yields in the world. It also grows citrus. The Lubombo region is a thin strip of middle and highveld forming Swaziland's eastern boundary. The Highveld has between 100-230cm rainfall annually, the Middleveld 65-120cm and the Lowveld 50-90cm mostly in a few heavy storms.

Swaziland



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Swaziland is surrounded by the Transvaal to the west and north, Mozambique on the northeast and Natal in the south east and the south. Consequently its economy is heavily influenced by South Africa. Its currency, the lilangeni is pegged 1 to 1 with the commercial rand. Its main natural resources, apart from the almost unparalleled beauty of the remaining unspoiled countryside, are asbestos, coal, clay, tin and diamonds. Agriculture contributes 25% of GDP mainly through sugarcane, citrus, pineapples, cotton and cattle (there are approximately 750,000 cattle in the country) and forestry. Swaziland is said to have part of the largest manmade forest in the world, spilling over into the Transvaal. Industry also supplies about 25% of GDP, largely through woodpulp, sugar refining, cotton ginning, meat and hide processing and tourism. Tourism is well developed largely because the world's isolation of South Africa has made Swaziland a popular resort for South Africans.

Swaziland is one of the more prosperous African countries, inevitably because of its geographic link with the Republic of South Africa. It shares the same customs union with uniform import duties and depends on the Republic for over 95% of its imports, either by origin or transit and for more than 80% of its tourists. Rand are legal tender in Swaziland, most exports go to the Republic and around 15% of the Swazi labour force work there. A good relationship with the Republic is essential not only for the future prosperity of the country but for its very survival.

Swazi origins

The Swazis are part of the Nguni who left Central Africa probably in the 16th century.

An offshoot of this group the Nkosi Dlamini, came to Swaziland in the mid 1750s. In 1840 King Mswati III founded the Swazi nation. In 1906 the nation became a High Commission Territory under British administration. Swaziland became independent in 1968 under King Sobhuza II, Ngwenyama of Swaziland, who reigned from 1921 to his death in 1983. After considerable debate King Mswati III was crowned in 1986 at age 17.

Swaziland has about 650,000 people with a growth rate that is presently among the highest in the world at 3.5%. Predicting future growth is futile as Aids is forecast to have devastating effects by the end of the decade. The official languages are English and siSwati. Every child attends primary school and literacy is 65% and rising. Some 66% of the population is in the work force, including 53% in agriculture, 9% in industry and in services and a high 27% in government.

Power in Swaziland

The Westminster type of democracy inherited at independence was replaced by a traditional African system where one person, in this case the king, essentially has all the power. There is no constitution, and the present governmental style can be described as dualistic, with both Western and tribal features.

The king has executive power and rules in consultation with the cabinet and a bicameral parliament. This Western approach is countered by the Swazi National Council or Libandla, composed of the king, the queen mother, the Ndlovukasi, and all adult males. The king and queen mother rule jointly and are advised by the Libandla on things concerning Swazi law and

custom. The Swazi National Courts which have jurisdiction over the native Swazis and administer Swazi law similarly share the nation's judicial system with the Western type of legal system.

There are increasing problems with this system of power and law as the country develops. Many higher educated Swazis resent traditional law that provides traditional duties and penalties. Women particularly feel the burdens of enforced tradition and their traditional roles. The two types of courts increasingly clash as one rules one way and the other reverses the verdict. Again women who face domestic pressures may face decisions in the traditional courts that are reversed in the Western courts. There is little sign that the traditional sectors of power and law are prepared to compromise. In fact they would prefer to expand their aegis. It is difficult to see how this can be done if the country continues to modernise.

The Swazi parliament consists of the House of Assembly of 50 members, 40 chosen by indirect election and 10 by the King; and the senate of 20 members, 10 chosen by indirect election and 10 by the king. There are 4 regions: Hhohho in the North which contains the capital Mbabane; Manzini in the west centre with Manzini as the second major city and the industrial hub, Shiselweni in the south with the town of Nhlangano; and finally Lubombo in the east with Siteki. There are 2 municipal governments (Mbabane and Manzini). The traditional system acts through the liqoqo as an advisory council to the king through its 40 regions or tinkhundla in the country. There are no political parties in accordance with the Swazi tradition of government by consensus, though there is universal suffrage.

SECTION IV.

The University of Swaziland: Luyengo Campus

Introduction

The University of Swaziland (UNISWA) is divided into two campuses. I was at Uniswa-Luyengo, the agricultural campus and the precursor of the University. The Kwaluseni campus carries the other disciplines and the administrative buildings for both campuses (see accompanying maps). Essentially three administrators make the main on-campus decisions. These are the Vice Chancellor, the Pro Vice Chancellor and the Bursar. The Vice Chancellor is appointed by the King, the other two with the blessings of the Vice Chancellor. This closely held power structure is resented by many students and an appreciable proportion of the faculty. The group can and do veto decisions made by the more democratic power blocks in the University, such as the University Senate. This group was also responsible for the most University problems that USAID faced which culminated in the early demise of the Visiting Professor position.

Luyengo Campus

The Luyengo campus is essentially residential in that all students and the majority of faculty and staff live on campus in campus housing. The faculty houses vary a good deal and

are meant to be assigned democratically. The house grounds also vary, ranging from pocket handkerchief size to about half a hectare. House maintenance is ostensibly the job of the campus workforce but it is not uncommon to wait several months to get anything repaired. The grounds are the responsibility of the residents and upkeep varies from the highly manicured to the totally neglected. All houses have mains electricity which is very erratic. All also have water from an irrigation canal some 3km. away. However, only the houses (about 40%) in the valley get a regular supply of the deep brown mixture.

The students live in dormitories and eat together in a central refectory. They have access to some medical facilities and an expatriate doctor holds a weekly clinic which is mainly attended by families of Luyengo's work force. None of the students have their own transportation and rely on hitch-hiking or irregular, very full buses which crawl periodically into the 2 main towns of Mbabane-35km. and Manzini-20km. away. The nearest small town with shopping facilities is Malkerns, about 7 km. distance and perhaps 1 hour by bus including the wait.

There are few on-campus facilities for the students or the faculty. The students have a T.V. room which is linked to Swazi TV only, showing some US and UK programmes plus a few South African ones. There is an overused soccer pitch, two tennis courts and a neglected outside basketball court. Most of the students hitch-hike away at week-ends. Likewise, most of the Swazi faculty and staff return to their homesteads to work on their land. Jogging is popular, particularly for the soccer team.

The Students

There are about 250 students on campus at Luyengo. About 160 are in the first or second year of their diploma in Agriculture. The first year are typically high school graduates from various Swazi schools who have passed approximately 6 G.C.E. "0" levels. Some 20+ percent will fail before their second year. They typically take around 30 hours of lectures and practicals per week under a no-choice schedule. (No curriculum provides choice). They will take probably 5 exams in each subject during each of their 15 week semesters and two 3 hour papers in each major subject at the end of the second semester in May. At the end of their second year the better students are eligible to apply for admission to the BSc programme.

UNISWA Luyengo currently runs a 4 year BSc programme in Agriculture and in Agricultural Education, obtaining most of their entrants from the diploma students who take a further 2 years to complete the BSc after their diploma. There are usually some 35 juniors and around 30 seniors taking the BSc, most in Agriculture. Again the programme is set and students get very little free semester time. Emphasis is on academic work and apart from the education students, there is not much opportunity to do practical work.

Luyengo also offers a diploma in Home Economics, which is a 2 year programme that concentrates on practical skills like dressmaking, cooking and preserving. There are currently some 40 women enrolled. Along with Agricultural education, this seems to be the strongest programme on campus in that it emphasized skills that are needed in the country. Hopefully this will not change as the VC encourages the Home Economics Department to make a quantum leap from a diploma to a Masters offering.

The student age and gender mix varies with the degree and diploma taken. All the Home Economics Department students and faculty are female. The students are mostly in their early 20s and around half have children. The Diploma in Agriculture students are often in their late teens though a few are over 25. Only around 15 percent are female; probably 30 percent or more of the class are parents. The BSc students are older. Several took their diploma or the equivalent sometime earlier, and worked for a few years before returning to the University. Consequently, the average age is probably in the late 20s, with a few rather older.

There are more international students in the BSc programme. The Botswanas are the most common, particularly in education, followed usually by Lesothos. There are usually one or two South Africans, and a couple from Uganda or Zimbabwe. The degree group is around 25 percent female and practically all are in education. So nearly half the education enrollment is female. Probably 90 percent of the degree students are parents.

Most of the students are reluctant to think for themselves and express their own opinions. This is undoubtedly an integral part of their culture, which places a premium on collective decision making. But it does hinder entrepreneurial efficiency. They prefer to be given notes to memorize and texts to repeat. However, the degree students realize that they would do better in the work place if they were prepared to commit themselves. But their schedule gives them little time to think or write with thought.

Table 1 provides some data on enrollment and future projections assuming the restructured programme takes place.

Table 1. Student Numbers at UNISWA Luyengo

	<u>Year</u>	<u>Current</u> <u>89/90</u>	<u>90/91</u>	<u>Projected</u> <u>91/92</u>	<u>92/93</u>	<u>93/94</u>	<u>94/95</u>
Home Econ.	1	31	31	31	31	31	31
	2	10	28	28	28	28	28
	3	0	0	25	25	25	25
Dip. Ag. Ed.	1	45	45	45	45	45	45
	2	40	42	42	42	42	42
	3	0	0	38	38	38	38
Dip. Ag.	1	25	25	25	25	25	25
	2	17	23	23	23	23	23
	3	0	0	22	22	22	22
BSc Ag. Ed.	2	10	17	0	0	0	0
	3	16	9	16	0	0	0
	4	13	14	8	30	21	27
	5	0	0	0	0	14	20
BSc Ag.	2	14	17	0	0	0	0
	3	18	13	16	0	0	0
	4	17	16	12	24	15	21
	5	0	0	0	0	8	14
Pre. Voc.		0	8	10	10	10	10
Total		256	288	340	362	386	389

Assumptions for Table 1

- that the restructured programme starts in August 1991
- the diploma changes from 2 to 3 years
- the BSc changes from 4 to 5 years
- based on historical data: -

- 40 percent of diplomas will enter the BSc 4th year programme
- 60 percent of remedial year students will also enter BSc 4. One half will enter ag. ed., the remainder, agriculture.

The Faculty

The faculty are considerably more varied than the students. Several are essentially refugees from other African countries such as Ghana, Uganda and Tanzania. Possibly half the faculty are non Swazi and English is therefore the main language for faculty meetings (and all classes) besides being one of the two official languages of the country.

Their standards vary, though about 40 percent have Ph.D.s. While some work quite hard, few have any strong publications. A relatively large amount of their time is spent on administration. As all 6 departments are small and administrators travel extensively, faculty often have to substitute as administrators and miss their classes. There is also a fairly large turnover. As an extreme example, the Agricultural Mechanization Department had 4 separate department heads in the 18 months I was there.

Table 2. Faculty Numbers by Department (July 1990)

Dept	AEM	APH ⁵	AEE ⁴	CP ³	HE ²	LUM ^{*1}
Ph.D.	1	3	2	6	2	1
Other Fac.	3	2	4	3	4	5
(# Women)	3	1	1	0	(6)	0
Total	4	6	7	9	6	6

As of August 1990

*1 2 resigned, 2 on education overseas, 1 for education overseas 1991

2 1 resigned, 1 will leave June 1991, 1 for education overseas 1991

3 1 on education overseas

4 2 on education overseas, 1 assigned to Dean of Agriculture

5 1 on education overseas, 1 for education overseas 1991

The 6 departments are: Agricultural Economics (AEM), Land Use and Mechanization (LUM), Agricultural Education and Extension (AEE), Home Economics (HE), Crop Production (CP) and Animal Production (APH). Agricultural Economics is the smallest department with 4 faculty, 3 of them women with MScs and the chairman with a Ph.D. The largest is crop production with 4 Ph.D.s, encompassing production, protection, soil science and breeding. Both this and the Animal Production department own their own farm and field equipment which is kept separate from the farm machinery but is serviced in the same shop. As the ag. mech. department chairman is usually the titular head of the farm workshop, there is often some disagreement between these and the LUM department and the farm concerning availability,

service and repair priorities.

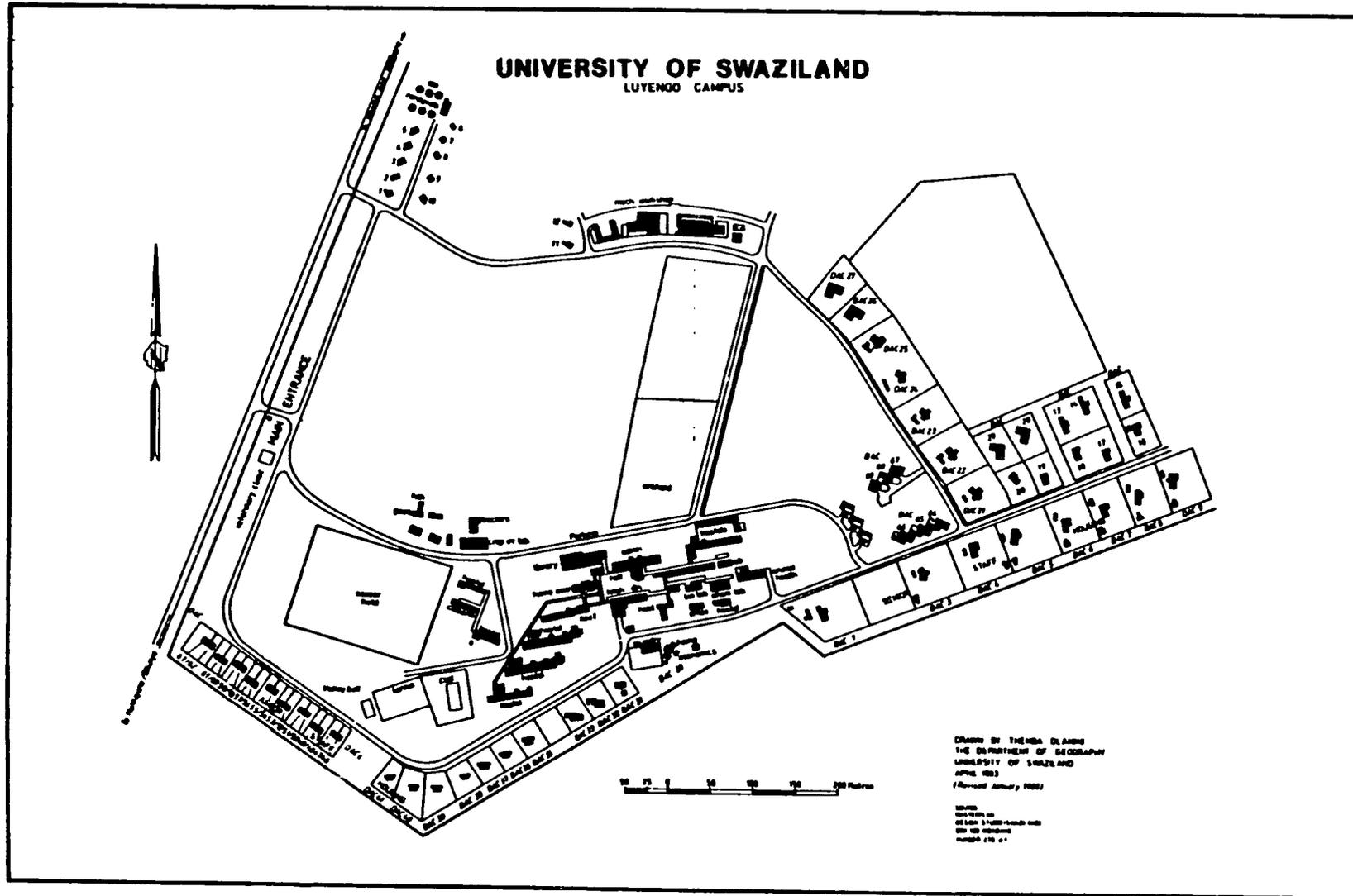
The faculty's main emphasis is on teaching. Most are expected to teach and conduct practicals for at least 15-20 hours per week. There is little emphasis given to research, ostensibly because there is no reward. So while one or two faculty with mobility in mind do publish occasionally, the vast majority write nothing. Consequently, if a typical faculty member is not teaching or grading, he is probably not present. (Most Swazi faculty and staff will be working on their homesteads). Office hours are not widely practiced so several faculty become conspicuous by frequent absences. Administrators are also required to teach and are accordingly listed as teaching. However, the more senior the administrator, the less likely they will meet their classes.

Classes tend to be more theoretical than they should be. Home Economics and Ag. Ed. are perhaps the exceptions and there are undoubtedly several courses in other departments that are practical and useful. But it is fair to say that there is over emphasis on academic work qua academic work. Understandably, a small and comparatively new University wants to impress as a scholarly establishment. But it is essential that the University provides the country with a cadre of skills that the country can use to develop (hence the eagerness for restructuring). It is possible to do both. Unfortunately, it is not doing the latter. The public sector is full. There is a great demand in the private sector for skilled agriculturalists and foresters in Swaziland in production, finance and marketing. It is not being filled by UNISWA graduates who do not have the necessary skills.

Services and Structures

The accompanying map shows the Luyengo campus and the University farm. Both areas were given to the University by the King, who essentially owns some 80 percent of the country. Much of this area was originally owned by the Makhubu family. The VP is a Makhubu and her mother still farms next to the University farm. This gift from the King involved moving the previous inhabitants and depriving neighbours of traditional rights of way. This had led to some long discussions and consequential compromises. So it is not unusual to see groups of local people walking through campus and young children hanging around the buildings. Security is a constant problem, compounded by the fact that several of the culprits have influence and are therefore often repeat offenders. Fences are cut at night and local cattle driven in to graze the farm leys. The culprits are known but have relatives in high places and are not punished.

The buildings and classrooms vary in quality but are generally kept scrupulously clean. All need general painting and basic maintenance. Light fittings are mostly inadequate as is the local power system. The campus water is unsafe to drink and the campus toilets are often without water. The campus phones ostensibly work for 4 hours in the morning and 3 1/2 in the afternoon. While I was there, the phone system was not working about 40 percent of the time. As there are no public phones on campus and only 1 in Malkerns which was available during post office hours only, most phoning necessitates driving to Mbabane. Few of the campus houses have phones and a phone only becomes available when someone leaves. Thus, some faculty have waited several years to obtain one. Even the private phones are out of action at least 40 percent of the time.



Faculty offices are generally very small and poorly lit and furnished. There is no air conditioning or heating except in the administration offices which favorably compare to similar offices in the U.S.A. There is a similar demarcation with the secretaries. There are 3 for all the UNISWA-L faculty, none of whom demonstrate conspicuous secretarial skills but are all accomplished knitters. There is a xerox machine that functions well but is under the sole control of an individual that does not. So not only is it difficult to find him, but when found it is even more difficult to persuade him to function. Therefore, getting the right stuff on time is not straightforward.

Administration

Succinctly, the administration at UNISWA verges on the dictatorial. As the King's appointee, the VC possesses and uses power. Faculty and University Senate are relatively powerless and can expect reaction if they vociferously disagree with her decisions. The students on both campuses have started several strikes to request an administrative overhaul. There were two major strikes during my stay. One resulted in both campuses closing early and making all students reapply for admission to screen out the undesirables. The second brought both troops and police on the Kwaluseni campus with some campus and considerable student damage. Some 150 students received hospital treatment; there were broken limbs, and two reports of blinding. There were also unconfirmed reports of 2 deaths.

The University has a charter which lays out certain procedures to be followed for items, such as appointments, promotions and the responsibilities of standing committees. The charter

is not always followed by the administration. Consequently, faculty work well singly or in committees that require little more than tacit administration blessing. They are generally not prepared to counter or discuss what might be considered elsewhere as exercises of power. The result is substantial student dissatisfaction and large staff turnover. Healthy debate is stifled and decisions come from the top. It will not be easy to produce entrepreneurs from within the current system.

SECTION V

The Visiting Professor's Role

Curriculum Development

My main objective when I arrived in Swaziland was to work with the faculty at UNIWASA-L to revamp their curricula to be ready for the new programme starting in August 1990. This goal required working with the six departments to increase the business cum practical content of each curriculum for the BSc student practicals for the diploma students. Faculty and students were enthusiastic for the revamping and it was decided to spearhead the programme through the AGM department. Consequently considerable effort went into redesigning the AEM Dept. curriculum to incorporate business coursework and, increased computer usage -it was also expected that computer procurement would be completed in a few weeks so that the computers would arrive around Christmas 1989-and start meaningful practicals. It was thought that AEM would provide service courses and pieces of courses for the other 5 departments, and eventually for the University as a whole.

My work centered on the last 2 years of the proposed 5 year BSc. The thrust included:

- * 22 hours of business classes, 13 of which are practicals providing hands-on skills with actual businesses. The skills include budgeting a business enterprise, making decisions using a cash flow, borrowing money and performing simple financial analysis.
- * sequencing the 5 courses making up the 22 hours so that each course becomes a pre-requisite for the subsequent course.

* increasing computer usage courses from 2 to 10 hours. These courses include spread sheets, decision making tools, recording, filing, risk assessment, time value of money and capital budgeting as well as information flows.

* Introducing three 3 hour courses, on in each of the last three semesters of the BSc programme, which allow students to do some regional research on local problems and discuss their findings in peer and faculty groups for problem solving purposes. These conclusions will hopefully lead to publications and potentially a publication series. Students presently have no opportunity to publish through all BSc students must write a research type of report in order to graduate. Some of these reports are excellent and several examine problems and provide answers for areas many donor countries are investigating. Unfortunately these reports are apparently only distributed to the library.

Classes taught

I taught an introductory business management 3 hour course to 33 juniors during my first semester, starting August 1989. The course was intended to provide initial practical skills in every day business management. Each student was expected to select and run his own business, incorporating new skills into the business as the term progressed. The basic subject matter started with setting business objectives, incorporating family objectives into them and setting time and money targets, followed by drawing up a business plan. This task involved producing balance sheets, income statements and cash flows. All this subject area was new to the students and apparently unique to UNISWA.

I taught two classes in the following semester starting in January 1990. The previous junior class known unofficially as Business Management 1, was followed by Business Management 2. The class was still expected to run their businesses and incorporate additional features into them. We concentrated on financial analysis of business case studies using liquidity, solvency, profitability and efficiency measurements. These standard investigations were tempered and adapted to fit local circumstances. We also covered debt and equity markets, encouraging the students to raise debt capital for their own businesses for a small business expansion. The equity market section showed how the primary and secondary financial markets work, illustrated by an Initial Public Offering with underwriters and the workings of a stock market. This subject included a trip to the Johannesburg Stock Exchange and involved the emerging Swaziland Stock Exchange.

The second class was assigned to me because the original lecturer was ostensible sick for much of the semester (and as it turned out, the ensuing one as well). This was a 75 strong Diploma second year class in Farm Management that I essentially inherited after the first few weeks of the semester. We covered decision making, risk management, budgeting and recording.

Students have little free time during the day. Consequently my attempt to use "office hours" was not as fruitful as I intended. The usual arrangement is to see students in the evenings either on campus or in one's house. It is not unusual to have unexpected student visits late in the evening or at 6 a.m. at home. My preferred practice was to see students on campus at 8 a.m. on Saturday mornings. These semi-permanent meetings were often followed by visits to student project sites such as markets, firms and homesteads.

The following semester starting in August was originally scheduled for the new restructured programme of business courses and practicals. Because the UNISWA administration decided to postpone the programme for at least a year there was considerable uncertainty at UNISWA-L on what should be taught. The new programme depended on new inputs. The computer equipment, farm mechanisation, lab tools and buildings were either held back by USAID or funds were not released by GOS to start construction. The eventual decision was to muddle along with the old curriculum but plan to partly "privatize" a couple of classes and introduce some changes in the practicals. I inherited the "privatized classes."

The first of these was with the juniors of the previous year, who were now in their first semester of their senior year. The course was locally termed Business Management 3 following in sequence the class's two earlier business courses. Unfortunately this class had to be taught under the existing title of 'Project Analysis', which did not reflect the course content. This situation also occurred with the 2 other classes. I had hoped that the new agreement between USAID and UNISWA administration prior to my leave, would have solved this problem. Unfortunately UNISWA did not change the course titles in the university calendar. Consequently the course title and course content did not match, which complicated the students' transcripts.

Business management 3 with the broad concept of the time value of money, emphasising several of the more common tools under this rubric. These tools were then applied to business case studies, particularly those that applied to decision making and discounted cash flow. It then dealt with types of business ownership followed by obtaining loans for operating and investment in capital assets, and subsequently, taxes, insurance and future decisions on growth,

consolidation and transfer.

The second course I taught in August 1990 was a 3 hour stand alone business class to a group of 6 high school teachers with several years experience, who were returning to university to obtain a certificate of competence. This group was funded from European Community funds. They had rather more flexibility in their programme than the typical UNISWA student even though they lived on campus and went home on weekends.

This course covered basic business skills in somewhat less depth than the courses taught earlier. The skills included setting objectives, keeping records, enterprise budgeting, farm budgeting, cash flows and decision making, historical financial statements and simple analysis. They were a diligent class but slow compared with the juniors and seniors. There was an obvious effort to do the least possible to survive and one wondered just how successful their schools were. Typically as with all the classes, they were a joy to be with.

Due to the continued absence of a faculty member in AEB, I continued the farm management class for the diploma students. Much of their previous education had revolved around the marginal principles associated with microeconomics. My thrust in this 2 hour class was to provide them with sufficient budgeting and financial statement tools to encourage them to make farm firm decisions on case studies, both on the past performance of the firm and on possible future directions for the firm.

I have mentioned earlier that Swazis are generally reluctant to make individual decisions. They prefer to group together and thrash out all possibilities before voicing their group decision. In several cases this decision will favour what they think their superiors will like. "Superior" is a loose word here. Anyone with authority, whether traditional, appointed or achieved, is

more prepared to use this authority than Americans are used to seeing. Women tend to kow-tow to men, young to old, men to authority, authority to a more powerful authority. Consequently it was difficult to extract individual opinions on case studies unless that individual possessed the authority to do so. Some individuals would simply sit, shake their heads and become increasingly embarrassed if I encouraged them to give their decision. This obviously did not work, so I reluctantly adopted the group approach, knowing that some members of each group would say and contribute nothing during their sessions. I think there will be some real problems for the emerging private sector unless we consider carefully how we can use the Swazi decision making customs.

Future Teaching Plans

We planned the following sequence of courses at UNISWA-L before I knew the project was cancelled. Perhaps this sequence will be useful if changes occur at UNISWA.

1. Business seminars

There is little free time for students during a typical academic day. Consequently there is little time for them to think. I advocated a series of seminars for the degree students, one for each semester which would stimulate their thinking, particularly in the field of business skills. I hoped that a well structured seminar would also attract some faculty and staff. Thus the plan was to meet once a week for 2 hours for the whole semester, and cover the following area.

- * To select and analyse a specific firm with the seminar audience broken up into

small groups. Each group would collectively make decisions on the firm, present their findings and contrast these finding with the other groups.

- * Apply for and complete a loan application for the firm and run through the same procedure as before.

- * Raise equity capital for their jointly run firm by firstly changing its form of ownership and secondly using the embryo Swaziland Stock Market.

A second business seminar was planned for the next semester to use much of the hands-on skills developed in the first seminar to work with local firms. The idea was to visit these firms and observe what they did, discern what their future objectives were and compare their analysis with the seminar group findings. I spent some time finding firms that were prepared to cooperate both in Swaziland and in the RSA. Before I left I had promises from 8 interested firms. These included 3 farms producing cattle, vegetables, sugarcane, tumeric, milk and sweet corn; a firm manufacturing locks, one drilling boreholes for water, a large cotton producer and a small commercial forest growing 600ha of eucalyptus and a private bank.

I believe that the students, faculty and staff would have received considerable education from these hands on observation tours.

2. Faculty seminars

Surprisingly there were no faculty seminars arranged at UNISWA-L when I arrived. However faculty were apparently keen on starting a comprehensive series of seminars and I was to arrange for their introduction starting in January 1991. I also had an additional role of providing some business skills to the faculty through this vehicle.

All 6 departments planned to participate and present papers in these seminars. There was great interest in learning about the embryo stock market and its stated objective of raising equity capital for emerging Swazi businesses. This objective became increasingly unclear as the market started to function with a staff consisting solely of one part time expert. Thus a series of seminars would help both the faculty and perhaps the market in understanding functions, goals and potential developments. The expert himself strongly endorsed the series, particularly as his employers were uncertain about the future dissection of the exchange.

3. High school agribusiness

I had already spent some time working in this area with a couple of competent and dedicated individual teachers who were anxious to develop a useful high school agribusiness programme and later specialise in this subject. We had several meetings on what should be taught and what practicals should accompany the classroom teaching. The initial work suggested a tight and doable programme. Some of the programme was tested on the pre-vocational students I mentioned earlier. They were unequivocally enthusiastic and looked forward to its adoption.

4. Student practicals

(i) background

There was once a comprehensive list of compulsory student practicals at UNISWA-L. when it was simply an agricultural college, producing diploma students. Apparently the added prestige of becoming a University and the then assured future jobs in the Ministry of Agriculture, removed much of the emphases on practicals. But public

sector jobs eventually became filled. This left the private sector as the main source for employment. But the private sector is unwilling to hire agriculturalists with little but book learning skills. So the need for meaningful practicals is again receiving close attention, not least by the students. Several faculty are also attempting to add skills to their courses.

(ii) supply and demand

My job in this area was to find what the private sector required and then get the assistance of the faculty to put these requirements into the curriculum. It became apparent that two broad categories of skills were needed. These were skills for working with the large agribusiness firms dominating Swaziland's private sector and skills for managing a small business. The first category requires communication and writing skills besides labour supervision in fields, workshops, factory floors, mills and processing plants. It demands quick decision making and bearing responsibility for the decision. The basic Swazi culture of collective decisions after everyone has contributed, combined with general deference to anyone in traditional or modern authority makes these skills very difficult to acquire for the average Swazi. Therefore most of the large businesses look outside the country in hiring for positions of responsibility.

The second category is easier to supply. There is high unemployment in Swaziland and a flood of graduates from high schools and higher institutions looking for work each year. They should be encouraged to either work to increase productivity on their own homesteads or to start their own businesses based on the needs of their own homesteads. This approach, though by no means easy, will both help alleviate increasing

unemployment and the associated social problems, and increase output.

Initial informal surveys suggested that the skills needed were the every day agricultural skills required to run a farm and perform some value added work. Meetings with several people suggested that students with these skills would also be hired by the large firms and get more training in the firms' in-house programmes. So while this approach is directed at small individual or jointly run businesses it is also apropos for the larger sector as well.

The main skills emphasises were labour handling, simple bookkeeping, comprehensive recording, mechanisation management, irrigation handling, transportation management, chemical handling and operating. The students also need to know how to drive and be familiar with a variety of tractor implements. They should be able to maintain livestock, including formulating and feeding correct rations for the different stages of each animal's life, do simple veterinary work, milk, shear, slaughter and butcher produce into the demanded products. They need skills in fencing, bricklaying, concreting, digging foundations, carpentry and general building construction including elementary plumbing and electrical work. They should have basic shop skills for machinery maintenance and simple repairs.

The list seems endless, unrealistic and unattainable. However it is not difficult to offer a judiciously selected comprehensive practical curriculum that provides students with foundation skills that can be expanded after graduation and mesh that same list into a revised curriculum.

(iii) the current situation

The problems of implementing a revised and expanded practical regime are human rather than technical. Currently each department runs its own practicals using their own resources. Thus the department chairmen are responsible for their student training just as they are with courses. So practicals fit within each department instead of an overall curriculum. There is an understandable turf mentality that must be handled carefully.

Any expansion of practicals should use two facilities that are currently underutilised. One is the Malkerns Research Station some 3 km. away where students could do simple practical research and get a different perspective than they might in UNISWA-L. Unfortunately there is little contact between the two institutions, largely because of some historical ill-feelings. The second is the farm area that is under the responsibility of the Farm Director. His aegis is to make money from the farm. This goal is not compatible with student practicals. Therefore very few practicals are carried out on the farm. Yet it is the perfect facility for them.

These problems can be overcome in the short run. The main problem in the long run will be UNISWA-L's committed leadership to maintain and improve the practicals. The present administrative structure at UNISWA-L will not reward initiative unless it comes from the administration on the Kwaluseni campus. If the administration there believes in increased practicals then the programme could thrive. If they are disinterested the UNISWA-L faculty will concentrate on other things that they feel the administration favours.

There are two additional problems. The Farm Director's contract expires in June 1991 and many faculty expect that the farm will then deteriorate, making it even more

difficult to design and manage practicals. Secondly many of the UNISWA farm workers are not enthusiastic about students occasionally monitoring their daily output. Some of these workers have influential relatives and it is possible that this factor alone could hinder some practicals, such labour budgeting exercises necessary for enterprise costing.

(iv) the visiting professor's progress

My procedure initially consisted of talking to potential employers in the large businesses where I had contracts. These included sugar estates, forest companies, citrus groves, cattle companies, a pineapple processing plant, a cotton ginnery, some dairies and several farms. Also businesses connected with agriculture such as banks, a brewery, a fence company, several supply firms providing chemicals, fertilisers, machinery parts and seeds. Other businesses contacted included padlock manufacturing, weaving, borehole, and computer companies. I also visited public sector institutions including the Ministries of Agriculture, Commerce and Education and other training institutions such as SCOT. The background discussions provided the foundation for a suitable practical format. The format then developed after these meetings and spending considerable time with students visiting several homesteads scattered throughout the country.

The initial plan at UNISWA-L for adding to existing practicals was done in conjunction with the 6 department heads, the Dean and the farm director either in joint meetings or individually. All evinced enthusiasm for increased skill training, all of us assuming that the CAPM derived equipment would arrive in time for the originally planned new programme opening in August 1990. When this was postponed for a year many of the same people met and decided on the following procedure for the 1990/91

academic year.

* poultry: start a record keeping system for the layers and a weekly check sheet that applied to a typical 500 bird operation. Also start a recording system for layers. Start and supervise a simple marketing record which with the ancillary records would provide the information to produce poultry budgets. The one year's experience would then be used to produce a more permanent record system which would be ready for the first entrants to the new programme starting August 1991. This concept was agreed for all the new practicals during the 1990/91 year. Students will be assigned to the project by the department. My job is to supervise and critique before deciding on the final layout.

The same discovery mechanism was proposed for a broiler recording cum budgeting system.

I was also expected to ensure that the basic agricultural tasks required for good husbandry were done by individual students who would bear the responsibility for these tasks.

* beef: start and keep simple records on the beef unit. These will include breeding, feeding, labour, veterinary and marketing records based on a single animal methodology. The end product is to obtain a per cow and herd budget. Students also assigned by the department and my duties are similar to those of the poultry enterprise.

* dairy: the dairy is the main money producer of the farm. Unfortunately the main managerial records largely exist in the heads of the senior farm personnel. Consequently considerable diplomacy was required to discover who was responsible for

what before the problem could be defined. A complete and comprehensive record system was necessary but it was deemed unrealistic to expect inexperienced students to be capable of its day to day management. Therefore the farm director and I worked together to produce an enterprise budget to estimate a bread-even price for meal. This work showed what information was currently available and what was not. (The exercise itself was eventually used in a case study as one of the 6 required under the CAPM project).

The budget acted as a foundation for subsequent student work. It was decided that milk, feed and labour records would start the procedure, followed by the more tricky field records showing field inputs for the silage and hay crops including appropriate mechanisation records for the various implements. Finally it was proposed that dairy overhead should also have individual attention.

Students are also expected to help in the physical tasks of running a dairy including milking, calf rearing, feeding, carting repairs, irrigation, cleaning etc. This suggestion is not enthusiastically endorsed because of the effects of numerous unskilled people on the milk yield.

* small animals: start and monitor a simple record keeping system for the sheep, goats and rabbits. Make sure the students have sufficient information to know whether these animals are making a profit. Make certain that the students perform the agricultural tasks necessary for enhanced animal welfare.

* horticulture: student work was already well established in this area. A relatively large area was "assigned" for student production, with over 100 students

producing meaningful quantities of a wide variety of vegetables. But there is poor input purchasing both with respect to timing and price. Also there is little attempt to dispose of the outputs in anything but a cursory manner. A good practical will encourage students to bear some financial responsibility for their work and consequently share in any profits or bear at least some of the losses. The faculty agreed to start a marketing centre on the campus where customers can buy fresh produce. Various local retail markets were approached to see whether they had interest in any surplus output and their response was favourable. Students can choose to sell the produce themselves for a price determined by them or sell to a local trader in lots at whatever price they can get.

This project seems one of the best ways of experiencing the competitiveness of a fairly free market with commodity that is produced solely by the student's own efforts on his own plot. (There is, of course, some UNISWA subsidy in the form of free land, supplied tools, free water and some transportation).

All students are expected to keep clear records and a model record is needed to cope with widely varied commodities such as lettuce, cabbage, cauliflower, broccoli, several types of beans and peas, carrots, peppers, cucumbers, sweet corn etc. While packing and hygiene are not vital in Swaziland, freshness is, and students will quickly learn about timeliness, oligopsony, weather and luck in this type of project.

* citrus: introduce a record keeping system suitable for the small citrus orchard. This system must monitor inputs such as fertiliser, chemicals, irrigation, labour and mechanisation as well as tree and orchard maintenance, harvesting and transportation. It additionally needs to show sufficient marketing information to see whether the project

makes a profit.

*** farm machinery:** There are apparently no consistent records kept on the machinery on campus. Responsibility for this machinery varies. Several departments have their own tractors and implements, the farm has its machinery and the campus has its own transportation. All ostensibly come together for service and maintenance in one workshop on the farm. Some regular workable system is badly needed. The present situation is haphazard at best. There is apparently little organisation and considerable uncertainty as to who is responsible for what. Anyone with perceived authority will jump the queue. So some repairs and maintenance are continually deferred to meet new priorities.

*** central store:** It is hoped that students will obtain a place where they can do post harvest work on their produce to get it ready for sale. I started working on a system which defines costs of production, costs of harvesting and post harvest treatment for this produce. This system will help students price products either for their own profits or for the collective good through cooperative pricing.

Currently livestock and crops including vegetables and fruits are marketed by the individual departments whenever the products are available. Quantities available and actually sold are usually not recorded and money handling is loose. Prospective customers include faculty and staff, general public around the campus, local women who usually pick and pay directly from the field or barn, vegetable traders from the local markets in Malkerns and Mahlanya, and various grocery stores. Selling through contract is rare.

Students would learn a lot by running a suitably equipped and secured central store. Produce sources apart from the student plots include vegetables eggs and broilers grown collectively by the AEE and the APH departments, and (separately) eggs and broilers and rabbits from AEE. All these are available and sales could start almost immediately. Later on other products such as beef, pork, mutton, goats and lambs from the farm could be added followed perhaps by farm cereals. Any surplus milk from the dairy plant may also be available.

It was thought that final year degree students would run the store. Each student might follow a 2 stage exercise. Firstly buy all produce from the departments at their costs of production (which demands good production records). The departments, in turn, keep proper records of their sales. Secondly the students decide what value added treatments commensurate with existing market demand are necessary, such as cleaning, grading and packing. Then price the products for sale. Profits will first accrue to the store and secondly to the students on a pre-determined, mutually agreed sharing basis.

(v) methodology

The following suggestions were made by the faculty for my supervision.

1. provide technical advice to students
2. visit each project site at least twice weekly, and more frequently while the project gets underway.
3. use continuous assessment for each student.
4. assist students in purchasing, inventory levels, product choice, pricing and marketing methods.

5. check all bookkeeping weekly.
6. be available as a problem solver both at student, staff and faculty level.

These duties were agreed by the relevant departments. It is obvious that decision making rests rather more with me than it should. While the students are encouraged to make decisions they were too ready to pass this risk on, which is perhaps the typical Swazi way of operating. However it is necessary to start somewhere. As the students gain confidence in their decision making abilities, particularly if there are no recriminations for "wrong" decisions, then my role in decision making should vanish. It is hard to convince an uninitiated audience that most real world business decisions are "wrong", because they have to be made expediently. The cost of waiting for more information before making the decision is usually greater than the cost of making a "wrong" one.

The hardest part of decision making is bearing the consequences. It is more difficult for a Swazi to do this than for an ex-patriate largely because of cultural differences. Swazis prefer to decide collectively and the decisions that must be made in these practicals cannot wait for the slow collective process. Understandably this transformation from collective with deference decision making to immediate individual decision making is hard, particularly for students. It is a foreign process for them and runs counter to their custom. Therefore a person practicing the individual decision making so inimical to his culture could encounter considerable peer and traditional authoritarian pressure. The further the push towards privatisation the harder it becomes to maintain traditional culture. There are costs of social change here that must be

appreciated in these practicals.

5. UNISWA Committees

I served on the following committees during my sojourn; Faculty Advisory; Farm Management; Kellogg; Internship; Linkage and some ad hoc committees. All meetings were lengthy, firstly because it is customary to arrive late unless important people were expected, (in which case everyone comes early) and secondly because it was also customary for everyone to speak.

(i) faculty advisory: this committee typically met once or twice a semester to cope with the normal business of a department. This included course scheduling and assignment, student progress, staffing and examination schedules.

(ii) farm management: this committee had some 15 members representing those with interests in the UNISWA farm, including various department members, Uniswa budget officials, the dean of agriculture and the farm director and manager. The committee reviewed farm requests for purchases, commodity pricing for items consumed in the refectory by students and others, farm plans and the general farm budget.

It became apparent that little time was spent on figures because the farm records were practically non-existent. Thus the meetings were largely a forum for what was happening on the farm, what the future staffing plans were and what farm facilities were available for what departments.

Two points became clear. Firstly the farm director was widely perceived to be excellent. He had reportedly resurrected the farm from a dilapidated condition to one that exemplified good husbandry. Consequently there was considerable worry that his

return to the Netherlands in June 1991 when his tour finished would result in the farm returning to its previous state. This unfortunately, seems possible because his successor, a UNISWA graduate with a good MS from the USA, will not be given the same support.

Secondly the farm has good productivity in its major enterprises of milk and maize but no information on whether it makes money. The main measurement of profitability was the difference between estimated annual cash costs and cash sales. As cash management was rather loose even this rough measurement was not particularly useful.

After the first meeting the Farm Director and I produced a simple break-even milk budget to see whether the three tiered pricing system which was then operating was a profitable one. The tiers were (1) low priced milk to the refectory, (2) higher priced milk to the staff and faculty and (3) whatever the Swaziland dairy board offered as the third price. It was found that both student and faculty prices were much too low for the dairy enterprise to break even. Consequently after lively debate in the committee, both prices increased substantially to ensure an approximate break even.

(iii) Kellogg: this was a UNISWA-L committee that worked with the Canadian government and Kellogg funding to improve the well being of village women through skills training. Home economics faculty organised visits to homesteads, some well off the beaten track, to find what educational requirements would improve their lives. Conferences and training sessions were organised on campus and homestead women were brought in and housed and fed on campus to encourage their attendance.

This programme was well done and committee work was therefore enjoyable.

The skills were kept simple by emphasising things like making clothes including expensive and compulsory school uniforms, safe food handling and storage, infant hygiene etc. The right groups were targeted and consequently the money was well spent.

Most outside funds to the University are not well spent. Conferences take up most of the money and most conferences have only the well fed presenting self serving papers to the well fed and ignoring the audience the conference ostensibly covers. This group demonstrably got things right and it was a joy to serve with them.

(iv) Internship: this committee initiated an extremely useful internship programme and presented its findings to the faculty just before I left. Hopefully it will bear fruit. The committee's task was to produce an internship programme that would complement and enhance the new restructured programme starting in the 1991/2 academic year. I spent some time visiting prospective employers to get their views. These included the sugar estates, forestry firms, cattle ranches, citrus estates, the larger mixed farms, coal and asbestos companies, banks, supermarkets and service companies.

The small in-house committee generally agreed that all UNISWA-L students should do a semester's internship, supervised by both a specific faculty member and a representative in the employer's firm. A check sheet was written showing the student, the employer and the faculty supervisor exactly what all three were expected to do and when it was to be done.

The programme looked doable. Students were generally keen, employers willing and curious and an initial faculty sounding seemed promising. If the internship is adopted then both students and employers will have useful contacts and the university

will gain a reputation for producing students who have meaningful skills.

(v) Linkage: the goal of this committee was to provide a list of overseas universities that would link with UNISWA-L and provide strengths in specific departments that facilitated faculty and student exchange and other things. This did not seem a particularly hard task for the small in-house committee and it expected to present its conclusions to the full faculty before I left. Thus faculty were asked for their suggestions.

The results were surprising. It seemed that few wished to suggest an institution that might be vetoed by the UNISWA administration. It was uncertain to me why there would be any vetos. However this rather tentative approach to what might have been a useful exercise spoiled the committee's work. A list was finally produced but its success is unknown

SECTION VI

OUTREACH

Comments

Outreach was to be a major objective for the visiting Professor's role at UNISWA. But as mentioned earlier, the UNISWA administration, specifically the Pro Vice Chancellor was vehemently opposed to any outreach based at the University. This definitive view was later contradicted by the Vice Chancellor prior to my departure. No reasons were given for either view but it had become apparent long before then that no reasons need be given.

Despite the PVC's opinion, outreach was conducted, albeit under some different titles. After curriculum revamping, it was probably the most important need for Swaziland. The extension service had few funds to fulfill their proper role and the local Malkens Research Stations was simply not organised to disseminate their results efficiently. Consequently, a proper outreach programme is badly needed and is not difficult to organize once it receives the necessary blessings from the proper authorities.

This section is presented in three summarized parts, which show how the CAPM team avoided avoiding outreach qua outreach. The first part outlines my speaking engagements; the second, the short courses I conducted; the third details what I think is needed for training people in farm management in Swaziland.

Speaking engagements

1. The basic records required for starting a business

- 5/2 at UNISWA Luyengo to four students
- hours involved total 10
- using a tutorial methodology to four BSc students who were attempting to start a business as sole proprietors. Mentioned and illustrated (1) a basic note book (2) daily diary (3) cash book (4) input-output summary book (5) specific enterprise records necessary for the individual student's business (6) a routine.

2. Managing for managers

- 20/4 at UNISWA Luyengo to 50 Swaziland based managers as part of the Agricultural Field Practice Conference.
- hours: preparation 10; face to face 2; tutorial 2.
- outlined the various areas of management e.g. financial, mechanical, labor, public relations, administrative etc. and presented a managerial structure recommended by Peters, a structure in a typical public institution and in a large company. Encouraged comments on all three and grouped audience to suggest a hierarchy that they preferred. Then made them link their desired structure with (1) firm operations (a) firm goals. Finally, tried to balance a new structure with decision making, delegation, access and operations and goals.

3. Agricultural education

- 17/5 at UNISWA Luyengo to 30 faculty, staff, EEC representatives and media at the Agricultural Education Conference.
- hours: preparation 4; face to face 1/4
- covered a desired mix of theory, application and practicals (application of theory and practicals are not the same) and contrasted with UNISWA'S previous and current practice.

4. **Modern and traditional methods**
 - 29/5 at UNISWA Luyengo to 10 visiting undergraduates from developed countries
 - hours: preparation 3; face to face 1/2
 - mentioned the traditional system in Swaziland and traditional orders compared with the modern legal system. Compared this apparent conflict with different ethnic group customs in the western world where these groups form active minorities.
5. **CAPM in Swaziland**
 - 9/7 at UF to 45 faculty, staff and students
 - hours preparation 3; face to face 1
 - outlined the decision groups involved in operating the project document and the different interpretations these groups may have on the same objective.
6. **Americans in Swaziland**
 - 9/7 at UF to 45 faculty, staff and students
 - hours preparation 3; face to face 1
 - outlined the colonial heritage, the general American introduction, the perceptions by the local people of these two influences and drew conclusions from the audience.
7. **Private enterprise**
 - 19/10 at the Mountain Inn to 80 Swaziland high school administrators and teachers.
 - hours: preparation 14; face to face 1/2
 - compared and contrasted public and private sector goals and suggested what might be best for the economy and for the majority. Emphasized choice and definitive decisions and the consequences of later alterations.

Short courses 1990

1. **Business Management for home economics**
 - 31/1 at UNISWA Luyengo to eight faculty and technicians in the Home Economics Department
 - hours: preparation 10; face to face, 1 1/2
 - outlined goal setting, monitoring, quantifying and modifying commensurate with business and personal objectives.
2. **Introducing equity and bond markets**
 - 5/3 and 14/4 respectively at UNISWA Luyengo to 30 faculty, staff and students.
 - hours: preparation 12; face to face, 3
 - introduced equity and debt capital and markets and appropriate financial instruments for each market. Demonstrated how shares are issued and how both shares and bonds are traded in financial markets in New York, Johannesburg and Swaziland.
3. **Financial statements for agricultural teachers in Swaziland high schools**
 - 21/5 at UNISWA Luyengo to 10 teachers attending an Agricultural Centre Conference
 - hours: preparations 8; face to face 2 1/2
 - presented the balance sheet, income statement and cash flow as the foundation financial statements and showed how each of them could be applied to individual and collective students projects in their own high schools. e.g. calf rearing, egg production and vegetable marketing.
4. **Objectives in management**
 - 20/8 and 22/8 at UNISWA Luyengo to 75 Diploma students.
 - hours: preparation, 8; face to face, 4; individual tutoring, 25
 - outlined how to set goals in a small emerging business and showed them how to

apply this knowledge to their own businesses. Emphasized goal quantification, timing modification land monitoring as bank relationships develop.

5. Introduction to farm management by budgeting

- **17 to 21/9 at the George Hotel, Manzini to 21 Ministry of Agriculture extension agents.**
- **hours: preparation 50; face to face 18; tutorials 5.**
- **Covered goal setting, constructing and using enterprise budgets for farm decision making, combining enterprise budgets into a farm budget, reviewing the farm budget and changing enterprise mix, size and technology to fit previously determined goals and then financing the final farm budget with debt and equity capital through a cash flow.**

6. Farm management, part II

- **12 to 23/11 at George Hotel, Yen San Hotel and Ezulwini Sun to around 14 extension agents. This was the follow-up to No. 5 above.**
- **hours: preparation 60; face to face 40**
- **provided increasingly complex examples to be the No. 5 subject matter above and discussed what each of the student groups (5 or them) would do under the same circumstances.**

eg. if their farm budget generated less cash than their goal over that time period, would they (a) alter enterprises to meet the goal; if so, what enterprises, how would they alter them and why did they select what they did (b) alter the goal; if so, why and what would this reduced goal due to further goals.

- **added other subject matter, including varying yields and prices, using probability tools, decision making on different risks, as well as partial budgeting which examines the financial and other consequences of (1) substituting enterprises (2) dropping an enterprise (3) changing an enterprise size and (4) changing an enterprise technology. Also used probability applications in partial budget decision making and showed the financial consequences of including and excluding overhead.**
- **described depreciation of intermediate capital assets in Swaziland.**

Proposal on Future Farm Management Education in Swaziland

Section (1)

Background

- (i) Definition of farm management**
- (ii) The proposed farm management education approach**
- (iii) Present supply of and demand for farm management education**

Section (2)

The Potential Audience

- (i) Importance of agriculture to Swaziland**
- (ii) Farm structure**
- (iii) The potential audience**

Section (3)

Farm Management Education

- (i) Methodology**
- (ii) Sessions and subject areas**
- (iii) Timetable**
- (iv) Approach**

Section (4)

Course, Session and Subject Details

- (i) Session 1: Basic Management Tasks**
- (ii) Session 2: Budgeting**
- (iii) Session 3: Financial statements and analysis**
- (iv) Session 4: Investing and time**

Section (5)

Concluding Remarks

- (i) Basic comments**
- (ii) The extension audience**
- (iii) Timeliness and facilities**

1. Background

(i) Definition of farm management

It is important to define the phrase "farm management" at the outset to avoid any ambiguity. "Farm Management is what farm managers do" is simply not good enough. Succinctly, farm management is the production, marketing and financing of a farm firm to meet the manager's goals.

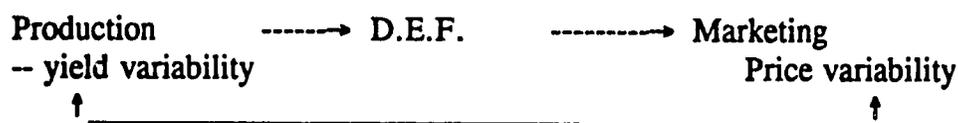
Those involved in farm management knowledge in education must know, practice or have access to research and extension in farm production, farm marketing and farm debt and equity financing in order to teach farm management. They must also state clearly the manager's objectives when teaching their areas of expertise. Teaching management without objectives can be meaningless.

(ii) Interpretation of farm management education (FME) here

It is impossible to teach everything if resources are to be used sensibly and the audience attain useful skills. Consequently some boundaries must be drawn. It is suggested that production and marketing be taken as given, with the proviso that yields (production) and prices (input and output marketing) can vary. The third farm management area, namely debt and equity financing* (DEF) can then bridge these other two areas and provide the essential thrust for farm management education.

There are other reasons for this suggested concentration on DEF. One is that the anticipated audience is generally well grounded in production. Secondly agricultural marketing is often highly legislated and consequently problematic. Therefore, it is probably better to cope with marketing problems solely through price variation, which should capture among other things timing, location and quality. This approach limits the education boundary and allows the farm management specialists to concentrate on the linkage i.e. DEF, and therefore concentrate resources on what has traditionally been the most important and the most neglected area of farm management education.

Diagrammatically, the suggested thrust looks like this



where each DEF's subject involves production and/or marketing. Consequently this FME thrust appears justifiable.

*covering management tasks, budgeting, financial statements and analysis and investment and the time value of money (see later on).

(iii) Supply of and Demand for FME

There apparently is a great demand and a rather poor supply of FME. The demand is most vociferous in high schools and UNISWA, but is growing in the Ministry of Agriculture and cooperatives and in the private sector among the small and medium sized commercial farms. While the larger estates tend to supply their own, it looks mostly like on-the-job training which may encourage and perpetuate poor and dated management customs. So there may also be a demand for various aspects of FME on these estates.

The supply of FME is essentially non-existent. UNISWA presently does a poor job in this field. Other educational establishments make little or no attempt to provide FME and Mananga, when it does any FME, is highly concentrated and caters largely for a different clientele than the one presently envisaged here. Other sources of expertise, such as banks, accountant firms and consultants do not provide FME.

Generally, the situation is that the vast majority of public and private sector personnel in agriculture concentrate on growing agricultural products and so tend to focus on good yields rather than good management. This by no means a typical objective wasted resources and can often lead to serious managerial problems. A good FME thrust is badly needed.

2. The potential FME audience

(i) Importance of agriculture to Swaziland

This section will be kept brief because the subject is widely covered in many other publications. However, it is still worthwhile to highlight some of the more salient statistics and facts to accentuate the importance of good FME.

Agriculture is the largest sector in Swaziland's economy, in terms of GDP, sales, exports and employment. For example it provided nearly 40% of private sector employment in 1986¹. Over 75% of Swazis live in rural areas and use their homesteads for at least part of their food. Consequently practically every Swazi has some claim to a specific area of land.

¹"A Description of Private Sector Employment in Swaziland" Capricorn Africa Economic Associates, April 1989, table 2.1.1(b), unnumbered page

Swaziland's growth rate in the 1980s was the fourth highest in Africa. For instance, it was quoted at 9% in 1988². But it also has one of the highest population growth rates in the world (c.3.7%); so presently over 9,000 individuals try to enter the work place each year and this figure will rise in the future.

One potential source of employment is to increase the amount of commercialization on their homesteads. But this source can only be exploited if there are trained people to teach and monitor them. Unfortunately there aren't.

(ii) Farm Structure

There are four broad types of farms in Swaziland today.

(1) SNL Homesteads

These make up 90% of all the homesteads. There are about 63,000 of them in this category with nearly half a million people living on them. The homesteads have some 80,000 ha under crops. Thus the average SNL homestead has around seven people per 1.3 ha of cropland.

(2) ITL Homesteads

There are about 7,000 ITL homesteads with 52,000 people and 9,000 ha. of crops. The average here is also around seven people, on 1.7 ha of cropland.

(3) ITL Estates

These 260 or so estates have nearly 450,000 ha, of which 260,000 are grazed, 105,000 in commercial forests and 45,000 in crops. Most of agriculture's production and exports come from these estates, via sugar, pineapples, citrus and cattle.

(4) Tibiyo Land

This quasi parastatal operates independently in growing sugar, dairy, maize, rice and cattle and also in partnership with sugar, cattle, poultry and irrigation projects. Tibiyo also contributes appreciably to agriculture's gross output and exports.

²Swaziland FU 1991: AID Washington, August 1989, Unclassified document p.4.

Not surprisingly, the homesteads concentrate on domestic consumption. Some 75% of cultivated land is used for maize, *8% for cotton (see below), followed by sorghum, pumpkins, groundnuts and beans. These six enterprises use 90% of the land.

There is however, a growing group of these small farms that are commercializing. Their principal cash crop is cotton and there is increasing interest in vegetables, poultry and dairy.

(iii) The Potential FRM Audience

Logically, the main audience should be (1) high school teachers, (2) UNISWA faculty, staff and students (3) extension agents (4) selected farmers and managers from the small commercial farms, Tibiyo and the estates (5) agribusiness personnel.

Pragmatically it may be best to concentrate at first on the extension agents and individuals from (4). If this is done it should avoid some difficult bureaucracy and generate quick results in the field in both knowledge transfer and data collection.

3. Farm management education

(i) Methodology

It has been suggested that field people should be the first recipients of FME, using DEF as the main thrust. This is because they already have experience, can apply new knowledge quickly and supply some data for their subsequent course discussion. Stated bluntly, this group can provide "the biggest bang for the buck".

Because they are field people, sustained concentration land intensive study will not be as easy for them as for students. Consequently, the methodology and course framework should be created to suit them rather than the traditional lecturer, student approach.

Each session will rely heavily on brief presentations, problem setting and group participation using illustrative exercises and discussion groups. All sessions are decision oriented. The total DEF thrust should be spread over four sessions with each session standing alone and varying in length (at audience convenience?) There may be a break between sessions which will allow the audience to keep to their employment schedules, put some of their knowledge into practice, and avoid educational overkill.** But all four sessions i.e. the complete course, should be done within four months.

Experience suggest other important factors.

*about 20% of maize is still imported

** (See subsequent timetable)

These are:

- (1) the audience must be congruent
- (2) they must attend a complete session
- (3) they must have sufficient notice to attend and make arrangements for their other work.
- (4) if they take more than one session they must take sessions in the proper sequence
- (5) they should have similar backgrounds

These five factors are probably not the aegis of the farm management specialists but of an administration responsible for the audience and audience selection. However, these five factors are crucial for course success. Unless they can be guaranteed it may not be worth putting on the course.

Finally, each audience should have about 15-20 people. Audience selection can be done by mutual agreement.

(ii) Subjects Areas and Sessions

There are 10 basic subject areas in DEF. The first one - office routine - can be taken by itself, or in conjunction with the first session.

The subject areas are

Session (1) - 2 1/2 days

- Office routine: objectives: recording systems

Session (2) - 3 1/2 days

- budgeting; risk analysis

Session (3) - 3 1/2 days

- financial statements, proformas, financial analysis

Session (\$0 - 2 1/2 days

- discounting, investing and debt management

(iii) Time table

Proper use of the farm management specialists' time would ensure that they handled more than one audience and one session each time they visited Swaziland. For example, using the following nomenclature.

A = Audience; first subscript (A¹) means first or second specialist, assuming two specialists only.

S = farm management specialist; subscript means first or second specialist, assuming two specialists only.

	<u>M</u>	<u>T</u>	<u>W</u>	<u>Th</u>	<u>F</u>	<u>M</u>	<u>T</u>	<u>W</u>	<u>TH</u>	<u>F</u>
S1	A1.1	A1.1	A1.1			A1.2	A1.2	A1.2	A1.2	
S2		A2.1	A2.1	A2.1		A2.2	A2.2	A2.2	A2.2	

Thus in a face-to-face fortnight two specialists can handle two audiences and two sessions. Then after a possible two month period these audiences could have the concluding sessions and get a further two audiences started in the next fortnight.

	<u>M</u>	<u>T</u>	<u>W</u>	<u>Th</u>	<u>F</u>	<u>M</u>	<u>T</u>	<u>W</u>	<u>Th</u>	<u>F</u>
S1	A1.3	A1.3	A1.3	A1.3		A1.4	A1.4	A1.4		
S2		A2.3	A2.3	A2.3	A2.3	A2.4	A2.4	A2.4		

Then repeat the first and second session with audiences three and four as before.

Realize that starting the specialists and audiences at different times avoids daily subject matter comparisons between audiences and allows both specialist and audience individuality.

(iv) Approach

Each session will aim at providing a complete block of knowledge that the audience can immediately put into action when they return to their jobs. It is recommended that each participant will have a workbook, task and contact number

so that individual progress can be monitored between presentations i/e/ between sessions 1 and 2 and 3 and 4 if the above timetable is adopted. (This ideal will not be elaborated here, as it may be logistically impractical).

The individual's progress in applying each session's information can be used in subsequent sessions and in subject modification for better results in the future.

(v) **Session and Courses Details**

Session 1: Basic Task of a Manager

The objective of this session is to provide organization and direction through a good routine and objective setting and to monitor progress through a comprehensive but simple recording system for the individual's specific enterprise or work task.

Subject 1: Office Routine

This presentation includes developing a routine, prioritising tasks, clustering items such as phone calls, signing papers, setting aside undisturbed time and scheduling. It also includes developing a proper filing system and delegating and supervising.

Subject 2: Objectives

The subject deals with setting short, intermediate and long term objectives commensurate with the individual's specific duties. It shows how to quantify these objectives in both time and number to provide a target and how to monitor progress towards these targets via a recording system. It also deals with rewriting objectives as circumstances change.

Subject 3: Recording Systems

In illustrating a complete farm recording system, including crops, livestock, mechanization and labor, the specialists will encourage the audience to develop their own. A sample system will be provided which will be subsequently modified by the participants.

Session 2: Budgeting

The objective of this session is to provide sufficient skills that the individuals will be able to create and monitor their own farm budgets in their jobs. They will eventually use the information obtained from Session I in this task.

Subject 1: Enterprise Budgeting

What an enterprise budget is, how it is constructed, how it is used to help make managerial decisions such as (1) calculating break even prices (2) break even yields (3) margins over cash costs, (4) margins over cash and non cash costs (5) margins over (4)+ overhead (6) setting debt targets.

Subject 2: Farm Budgets

How enterprise budgets lead to farm budgets and how to modify all the budgets to meet previously determined objectives, or modify objectives from budget information. Showing how to share farm overhead between enterprise budgets. Contribution of enterprises to the total business.

Subject 3: Partial Budgets

Showing what happens to a business when (1) an enterprise is removed (2) an enterprise introduced (3) an enterprise changed in some way.

Subject 4: Cash Flow

Showing how subjects 1-3 fit into a cash flow for future cash management and debt and equity cash introductions and removals. Monitoring cash flow progress and decision making from differences between actuals and predictions. Rewriting future cash flows.

Subject 5: Risk Analysis

Varying yields and prices among enterprises, assigning probabilities and using decision trees to decide what to do. Budget modification.

Session 3: Financial Statements and Analysis

The objective of this session is to make the audience comfortable with constructing, linking and using the basic financial statements. They will also see how budgeting combines with the proformas and how budgeting decisions stem, at least partly, from past financial statements.

Subject 1: The Balance Sheet

What it is and what it means in terms of assets, liabilities and net worth. What decisions can be made from the balance sheet.

Subject 2: The Income Statement

What it is and what it shows in terms of outputs, costs and income. How this statement links with the balance sheet and how current performance produces future net worth.

Subject 3: Analyzing Past Performance

Using liquidity, solvency, profitability and efficiency indicators and ratios against standards to assess and comment on past performance. Make decisions on what could or must be done in the future.

Subject 4: Proformas

producing a proforma balance sheet and income statement (1) link with the cash flow budget and (2) see how the decisions made in subject 3 will alter the business in the future. Do more proformas into the future to see if the business matches objectives made in Session 1.

Subject 5: Comments

A group discussion on the farm business(es) to see what should be done and what might happen under varying decisions, including doing nothing.

Session 4: Debt and Equity Capital Investing and The Time Value Of Money.

Showing how to raise debt capital and how its use will alter cash flows and liquidity, solvency and other indicators. Emphasising timing of borrowing and payback.

Showing the effects of using profits (i.e. equity capital) in the business and what this investment into intermediate and long term assets does to available cash and its future uses (note: this elementary session will not introduce raising external equity capital).

Subject 2: The Time Value of Money

How money loses its value over time. The effects of compounding and discounting. Calculating discount rates. Introducing annuities and simple financial tables.

What all this means to a farm business and its cash flows and proformas.

4. Concluding Remarks

(i) Basic Comments

It should be noted that these four sessions will cover elementary but useful and workable topics. Nothing will be presented that cannot be used either by extension agents, teachers, farmers or business people. Hopefully the whole course or any session will act as a basis or prerequisite for subsequent courses.

(ii) The Extension Audience

Extension agents will be able to build up a data bank of information from their clients after taking one or more of these sessions. They will learn by putting their knowledge into operation and their clients gain by the increased discipline the agents demand.

For maximum benefit it would be advisable to have a source person that the agents could contact. This source person will supervise, advise and collate the information supplied by the agents and digest their conclusions on their course and what future courses should contain.

(iii) Timeliness and Facilities

It is essential that the audience come on time and attend all subjects. Likewise the venue must be well lit, quiet, comfortable and conducive to learning. The audience should preferably "live in" for each session and be isolated from their usual day work activities. The course will not be a success unless these things are possible.