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**TRIP REPORT**  
**ON**  
**MOROCCAN FEED INDUSTRY**  
**October 17 to 29, 1982**

**International Development Cooperation Agency**  
**U.S. Trade and Development Program**

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ON  
MOROCCAN FEED INDUSTRY  
October 17 to 29, 1982

T.J. Vorachek  
U.S. Feed Grains Council  
Mideast and Africa Regional Office  
ViaXX Settembre, 5-00187 Rome (Italy)

Submitted to: Trade and Development Program  
International Development and  
Cooperation Agency

Submitted by: Foreign Agricultural Service  
Department of Agriculture

TRADE AND DEVELOPMENT PROGRAM  
GRAIN STORAGE/HANDLING SURVEY MISSION  
MOROCCO - 18 - 29 OCTOBER, 1982

PURPOSE:

The objective of the mission was to assist the Government plan a grain storage and handling system with emphasis on the transfer of American technology (equipment, products and technical services) into the system. Dr. Vorachek's role as a team member on this mission was to evaluate and assess the status of the current feed industry and to make recommendations on how the transfer of American technology can be expanded in this area.

Results of this team's prefeasibility study will be shared with the World Bank, which has expressed a willingness to consider this kind of project in Morocco. Should the report point out areas in need of financial assistance, the World Bank will follow up with a full feasibility study.

OPPORTUNITIES:

Although Morocco is a developing country which has, perhaps, felt more than its share of the world-wide economic squeeze, the Government of Morocco and the private sector are actively planning and pursuing developmental projects in the areas of agricultural production and food processing. Like many of the other developing countries, they are, however, looking for joint venture partners capable of providing technical assistance and some financial participation. However, as one might anticipate, these opportunities are slow in coming, especially in light of today's economic situation. As a second alternative, especially for large scale development projects such as port facilities etc., the GOM is actively seeking outside assistance in the form of international banking loans and direct government grants. As might be expected, it appears the bulk of the latter are coming from the EEC, especially France.

Many of the opportunities in the area of agro-industry are dependent on the development of an efficient, well-designed grain handling infrastructure. Such a system is essential not only for the handling of imported grains, but also for the locally grown grains. In order to establish efficient, high producing flour mills, oil seed crushing plants, feed mills and livestock/poultry operations, it is essential that the raw materials (grains and oil seeds) are efficiently handled, taking into account both the economics and quality of the entire operation. This means the establishment of adequate grain/oil seed handling facilities at the ports as well as inland. The GOM realizes this and has proposed several sites for improvement and development in these areas. The problem for the GOM is to obtain the necessary financing for these projects and to prioritize the monies obtained in order to achieve the best use from the cost/benefit standpoint.

The author is of the opinion that if the GOM is provided with the necessary financial assistance to develop the grain handling/storage facilities, it will greatly facilitate the development of the related livestock, poultry and food processing industries. This, of course, is provided that the GOM liberalizes and streamlines its policies to allow the improved system to function. That is to say, if economics indicate that grain/oil seed importations are necessary, the government must not inhibit this process through the establishment of import restrictions. In other words, the free market system must be allowed to function if the Moroccans are to derive full benefits from the improved system. It will not do much good to construct an effective port facility if imports/exports are totally restricted.

#### CONSTRAINTS:

1. GOVERNMENT POLICY - The GOM, like most of the other developing countries, has established policies designed to restrict their hard currency outflows and/or to protect their own developing industries. These restrictions, however, often inhibit the efficient and effective development of the total economy. For example, inhibiting or restricting the importation of oil seed meals may protect the local crushers who are often very inefficient, but in the process, they also inhibit the growth of efficient related livestock and poultry industries due to the resulting shortages of competitively priced oil seed meals. This illustration is felt to be true in Morocco.
2. INFRASTRUCTURE - Again, as in most developing countries, Morocco, although the GOM is planning and actively working in this area, it is still deficient in the development of adequate roads, rail lines, port facilities, etc. Of course, the Moroccans are aware of this and have encouraged missions similar to this one to identify and establish priorities for their development program - in this particular instance, in the area of grain handling and storage.
3. MANAGEMENT/TECHNICAL SKILLS - Although Morocco is fortunate to have a solid technical/management base, the need for outside assistance and the latest know-how from the USA and Western Europe still exists. The way the Moroccans prefer to receive this assistance, as do most developing countries, is in the form of a joint venture, with the outside partner contributing its technical skill as well as financial assistance.
4. FINANCING - In order to put the entire development package together, i.e. the improvements in the infra-structure etc., it is essential that the Moroccans find sources of outside assistance. Considering the present world economic situation and Morocco's specific problems, i.e. the low phosphate prices, high petroleum prices, severe drought and war in the Sahara, if they are to try to improve their situation they must have financial assistance.
5. MARKETING SKILLS/TECHNIQUES - Although this was not a priority area as it was in the recent Turkish mission on which the author served, it should be considered. The Moroccans did discuss constructing facilities

for export and they do export some items such as phosphates and fruits at present, but in the area of agricultural produce they appear to be limited. In brief discussions with a couple of the government officials, it again appeared that government policies are the restrictive factor. An aggressive free enterprise-oriented marketing system could perhaps generate significant quantities of hard currency to supplement funding of the priority developments in other areas.

#### RECOMMENDATIONS:

The author's participation on the team was enlisted specifically to evaluate the Moroccan feed industry, associated industries such as the oil seed crushers and related consuming industries, i.e. the livestock and poultry industries. It is anticipated that the other team members will cover the general grain handling and storage situation, i.e. port facilities, transportation, inland terminals etc. Based on the existing per capita consumption levels of poultry, red meat and dairy products, the related feed milling industry appears to be adequate. In fact, based on both GOM figures and figures from the industry itself, the feed mills are estimated to be running at only 1/5 capacity. Estimated full capacity for all the feed mills in Morocco is 1.5MMT of finished feed per year with the current output estimated at 300-350,000MT/year. With the planned expansion of the existing mills, potential capacity will be increased even more. The same is not true for the oil seed crushers. Although they too are reportedly not running at capacity, especially in the case of SIGO in Kenitra, it is felt that this industry required considerable streamlining and modernization. Actually, in the opinion of the author, the quickest way to accomplish this is to remove the inhibitory government restrictions and to allow this sector to operate on a free enterprise bases. It is believed if this could be accomplished, the supply and price of suitable oil seed meals will ease considerably in Morocco.

#### SPECIFIC RECOMMENDATIONS:

1. Persuade the GOM that it is in its best interest to ease some of the restrictive import and internal policies, especially those related to the crushing and utilization of oil seeds.
2. Although the present capacity is adequate, the feed mill industry should be studied in detail and ways be explored to assist them to become more efficient, i.e. in bulk handling of ingredients and finished feeds.
3. As related to the feed industry, the current poultry, dairy and red meat industries should be assisted in developing into more modern, efficient industries. This should include the related grain storage and handling sectors associated with these industries.

4. Explore ways to assist Morocco in developing its infrastructure, especially in the bulk handling systems at ports and inland facilities as well.
5. Explore ways to extend favorable credit terms to the Moroccan public and private sectors, i.e. the new "blended credit" program, and funds available under the GSM5/GSM102 programs. This has been partially accomplished already by Mr. Ross of FAS while the team was still in Morocco.
6. The team members and supportive agencies should continue to follow up on promising joint venture opportunities and programs for the provision of technical/financial assistance to the Moroccan agro-industrial and related sectors.

#### SUMMARY/CONCLUSIONS:

In the area of feed manufacturing and the related industries, the adequacies and deficiencies have been at least touched upon. It is felt, however, that there is a tremendous need for the expansion and development of the poultry, dairy and red meat industries which will place added demands on the feed industry. If left to develop under a free enterprise system without excessive government controls, it is felt that the industry will meet this increased demand. It may, however, require some technical/financial assistance in order to accomplish its goals.

One last word of caution is that it is essential for the team and their respective agencies to follow up on their specific contacts and programs, as comments were made on the fact that this was just another visiting American team, which will leave with little or no results to follow.

#### CONTACTS:

18 October The team members rendezvoused at the Sofitel Hotel in Rabat and proceeded to the American Embassy for a briefing by the Agricultural Attache, Mr. Forrest Geerken. At this time, the team was divided into three groups according to their interests and goals. During the next ten days each group was scheduled to visit with public and private sector officials/organizations appropriate to the members specializations and interests.

19 October Free day due to a Moroccan holiday.

20 October The first meeting of the day for Messrs. Givens and Vorachek was with Mr. O. Lahlou, the Director of the Regional Office du Gharb in Kenitra, Morocco.

Office du GHARB - Kenitra, Morocco:

Othman LOHLOU (Regional Director)  
Mohammed ALALI (Chief of Agricultural Production Section)  
Abdulatif LOUAH (Agricultural Specialist)  
Mbarek KARMCUSSI (Chief of Miscellaneous Crops Section)

### Crop Information

The team was informed that this group has 620,000 hectares under its control, of which 380,000 hectares is cultivated land. The remainder is forest land and range land. The irrigated land is/will be fed primarily from dams. The major rivers are the Sebou and Ouergha. By the end of the current Five Year Plan, they will have approximately 90,000 hectares under irrigation and by the turn of the century they will have 250,000 hectares under irrigation, with an additional 130,000 hectares of improved rainfed land under project control. It was pointed out that the ownership of the land involved is widely varied, as indicated by the following breakdown:

<u>Type of ownership</u>	<u>% of total</u>
Milk land - private	30%
Collective land (tribal land)	25%
Guich land historically military - no ownership, but derive the profits)	10%
Government land (including the state farms)	35%

The organization visited is a government agency which provides the above landowners with the service of supervising and managing the development of the land in the region. They do the surveying and engineering work for a fee of 1500 dirhams/hectare (approx. \$245./hectare), which is charged back to the landowner. Repayment begins four years after the start of irrigation. This apparently encompasses the total cost including the cost of construction which is contracted out to the private sector. An additional fee is assessed the farmer for the water at a rate of approximately 1.2 US cents/cu. meter (gravity flow) and 1.6 US cents/cu. meter for sprinkler irrigation.

Crops currently grown within the project area are citrus, rotational crops on a four-year basis - sugar beets, wheat, cotton, forages, truck garden crops, soybeans and sugar cane. In this area, soybeans can be grown without any problems. Varieties tried and doing well are Clark, Caland and Mitchell. The Moroccans are considering soybeans as a second crop after sugarbeets. An interesting statistic is that Morocco's per capita consumption of sugar is 35 Kg./year, and they are only at 50% of self-sufficiency in sugar production at this time.

The final projections for the region by the year 2000 for the whole irrigated project are:

- 110,000 ha. - sugar cane
- 30,000 ha. - paddy rice
- 110,000 ha. - crops fitting a 4-5 year rotation pattern  
with an additional 23,000 ha. of citrus in production.

Livestock Information

Hamid BENAZZOU (Vet. Chief Service Elevage)  
Shed Slami SCUNNI (Dep. Dir. ORMVAC)

Although the group was primarily interested in livestock production, some crop statistics were also given, as follows:

Presently grow approximately 8000 ha. of sunflowers in the area - yield 7-800 Kg./ha. (They have a lot of bird problems and it was felt sunflowers are not very competitive on irrigated land.)

Cereals - rainfed: Wheat yields 1500-2000 Kg./ha.  
Barley - approximately the same.

Corn yields are reported at 3000 Kg./ha. on irrigated land (minimum of two times/season).

Livestock statistics for the area:

200,000 hd. of cattle  
370,000 hd. of sheep  
10,000 hd. of goats  
35,000 hd. of horses.

They indicated that the top priority in their region is to increase the milk production. This is to be accomplished through cross-breeding programs (local breeds X Holsteins) and through the importation of purebreds, primarily from Europe. The present estimated average production of the 17,000 hd. of Holsteins in the area was given as 2500 liters/cow/per lactation, which is extremely low. When question regarding the ration, the average ration was said to consist of:

40% local roughages	60% concentrates:
	beet pulp
	citrus pulp
	wheat bran
	molasses

The potential for the GHarb is estimated at 64,000,000 liters of milk per annum.

Apparently the poultry industry in the area is primarily in the hands of the private sector, the government's only involvement being the provision of veterinary and extension services. Cooperatives, such as ELKODS located in the Gharb area, do exist. This particular cooperative consists of 160 farmers, raising approximately 1,500,000 broilers/year and producing 11,500,000 eggs/year. The birds are usually sold live, as the only slaughterhouse within shipping distance is in Casablanca. However, a slaughterhouse is planned in the Rabat area within the near future. The feed for the poultry operations in the area is obtained primarily through

feed mills in Casablanca. The rations generally consist of:

Corn - 50% +  
Wheat Bran  
Molasses  
Fish meal  
(Very little soya is used due to the inconsistency  
of supply and local price.)

As indicated earlier, the bulk of the birds are sold live to the small neighborhood butchers. The team was told that there are tremendous fluctuations in consumer prices, depending on the season and weather conditions. Prices range from 6-12 dirhams per kilo with an average of 7.5 dirhams per kilo, the farmer's price being 1/2-1 dirham per kilo less than the consumer prices. Chickens are sold in Morocco, as in most other parts of the Mideast/Africa, with the head/feet/guts. According to the source, a typical breakdown on price would be as follows:

Consumer price	7.5 MD
Wholesaler (butcher)	7.0 MD
Producer	6.5 MD.

It was also indicated that there is an increased effort on the part of the producer to sell direct to the consumer.

#### Storage/Handling

The next area discussed was that of storage/handling. Although the Gharb is not a prime area for cereal production, there are still significant tonnages of cereals/grain which move through various commercial channels. It appears that the bulk of the corn/sorghum grown in this northern region is utilized locally for human consumption at the village level. The remainder of the cereal production is channeled through the official grain purchasing agency - SCAM, and the private sector including the local souks. The importation of feed grains for use in livestock/poultry feeding is done primarily by AFAC (Association de Fabriates d'Alimentes), a private sector association of feed millers. This organization must, however, obtain an import license from the Office of Cereals (ONICL). The current official grain prices to the producer, fixed by the ONICL, were reported as follows:

Corn	1000 MD/MT
Wheat (Hard/Soft)	1400 MD/MT
(However, often just following harvest one can find wheat for 600-700 MD/MT.)	
Barley	1000 MD/MT
Soybeans	2270 MD/MT
Cotton Seed	1240 MD/MT
Sunflower seeds	2400 MD/MT.

Local crushing percentages for the major oil seeds were given as follows:

Soybeans	20%
Sunflowers	40%
Cotton seeds:	
dehulled	40%
hulled	25%

Visit ended.

SIGO-GHARB  
Kenitra, Morocco  
Tel. 016-5955/5803

Idrissi OULAHNA M. (Manager)

The next visit was to one of the two largest oil crushing plants in Morocco. Their reported crushing capacity was 120,000MT/year. However, they indicated they were crushing less than one-half that quantity. (Later it was learned that the actual amount is far less.) The mill has two extractors, only one of which was functional. These were a:

French Oil Mill (USA) - capacity - soybeans 150 MT/day  
sunflowers 250 MT/day  
cotton seed 180 MT/day

De Smit (Belgium) - same capacity but not yet fully installed.

According to the source, the major reason for their low productivity is the inadequacy of oil seed supplies. Since imports are restricted, they must rely on locally grown oil seeds (CS/sunflower) which are inadequate. The government agencies responsible for the approval of the importation of oil seeds are the Ministry of Commerce, Ministry of Finance, and the Equalization Fund (which is involved in the fixing of prices for various commodities). On pricing, the gentleman we met with explained a very complicated formula which did not add up (he was obviously confused!) Last year's prices quoted were: cottonseeds delivered to the plant for 950 MD/MT and the sale of oil to the refillers at 4000 MD/MT. Apparently, CSM, whose price is set by the government, is now selling for 900 MD/MT.

On grain handling, our source indicated Kenitra, which is a river port, can handle small ships up to 2500 tons maximum and has a bulk handling capability via cranes and buckets.

COMAGRI  
Kenitra, Morocco

Abdullah BEN (Director of ORMVAG)  
Mohammed ABIDI (Farm Manager)

Following lunch, the team visited a COMAGRI farm which consisted of 660 ha. excluding the citrus. The farm was a diversified one, including a dairy breeding operation based on a shipment of Canadian Holsteins shipped in during 1967-69. The farm employed 25 people and appeared to be in excellent condition. The animals were all in excellent health

with those in production averaging 5,500 l/lactation. The milk was held in bulk cooling tanks and collected by COLAIT (a coop) from Kenitra. This farm, with 359 animals, was totally self-sufficient in feed production, and generally ends up with a surplus. Their ration consists of:

Barley hay	3 Kg./day
(Beet pulp pellets (Citrus pulp pellets (Wheat bran (Vitamins/Minerals	4 Kg./day
Green chop: (Burseem clover (Sudan grass (Corn (Alfalfa	Free choice

The farm currently had harvested 77 hectares of maize for silage (limited due to availability of water). The quality of this silage was observed by the team and found to be excellent. The reported yield was 25MT/hectare, using a French hybrid variety. The hybrid seeds are distributed through the government seed organization SONACOS.

The milk collection cooperative, COLAIT, in addition to collecting the milk, also distributes concentrates to the producers, which is deducted from their milk receipt. The concentrates distributed consist of:

1. Dry beet pulp	660 MD/MT
2. Wheat bran	400 MD/MT
3. Dry citrus pulp	Free.

The COMAGRI officials also provided some figures on the cost/subsidy situation related to the purchase of dairy animals. The current price of a pedigreed heifer is 7500 MD. Of this, the farmer is given a 1000 MD outright grant and provided a loan by the CNCA, Agricultural Credit Bank, which can be for up to 70% of the value of the heifer, to be repaid within five years.

In general, the COMAGRI operation visited appeared to be a very well-run, efficient operation for this part of the world.

CATTLE BREEDER  
Kenitra, Morocco

Thami AZZEDIN (Owner)

The next visit was to a private dairy cattle farm a short distance from the COMAGRI operation. This farmer owned 28 hectares and had a herd of 170 head of Holsteins (90 cows) of Canadian and German origin. The management on this farm, although not bad for the MEA area, was not nearly as good as that of COMAGRI. This was attested to by the fact that Mr. Azzedin's average herd production was only 4000 l./cow compared with the 5500 l./cow at COMAGRI.

CATTLE BREEDER  
Hamidia, Morocco

Ahmed RACHIDI (Owner, President  
of the local Coop)

The last visit of the day was to Mr. Rachidi's farm near Himidia. The farm consisted of 40 hectares: 25 ha. of field crops (irrigated) and 15 ha. of citrus. Although his cattle (15 cows) appeared to be in excellent shape and were reportedly from pedigreed West German stock, their average production was very low, only 10 l./cow/day. The ration currently fed was as follows:

Mornings	2 Kg. Wheat bran/hd. 2 Kg. Dehydrated alfalfa/hd.
Evenings	2 Kg. Wheat Bran/hd. 2 Kg. Dried Beet pulp/hd.

In addition, each cow was given green chop - maize or burseem clover ad lib. The forages were grown locally, while the concentrates were obtained through the regional milk collection coop.

21 October

MINAG REGIONAL OFFICE  
Khemisset, Morocco

Dr. Mohamed MAKHTOUM (Director of  
Livestock)

Zahr Mohamed BENGELLOUM (Extension  
Center Director)

The first visit of the morning was made to the MINAG Regional Office at Khemisset. Mr. Bengelloum explained to Dr. Vorachek that the center has 180,000 hectares under its supervision. He outlined the role of his office, which includes farmer extension services, including the distribution of seeds, fertilizers and pesticides. These are all subsidized at the regional level. Seed extension/development is handled by various groups:

SONOCOS - cereal grain and corn  
COMAPIA - industrial crops, i.e. sunflowers and soya  
Private sector - vegetables.

Mr. Bengelloum indicated that there are 17,350 farms in his region. A break-down by size follows:

1 - 5 hectares	5750+ farms
5 - 10 hectares	5000 farms
10 - 20 hectares	2300 "
20 - 50 "	250 "
50 - 100 "	240 "
100+ "	50 "

To reach these farmers, the regional extension staff consists of 66 extension agents plus 10 miscellaneous employees (drivers, etc.). The agents utilize local chieftans as contacts in each village. He indicated that in addition to giving demonstrations, the agents utilize farmer meetings to show slides, films, etc.

The majority of the crop production in the Khemisset area is dry-land in nature. As a result, yields are quite low even in good years. Averages reported are:

Wheat:	
Durum	1.0 MT/ha.
Bread wheat	3.0 - 3.5 MT/ha.
Barley	1.2 - 1.3 MT/ha.
Maize (6000 ha. raised in the area in 1982)	1.0 - 1.2 MT/ha.

The bulk of the seeds used are of French varieties. However, in wheat, they have tried the Mexican short strawed varieties with very good results.

#### Storage/Handling

The same systems and channels described earlier in the report apply in this area also. The farmers' traditional storage method, i.e. the METMOGA, a large underground storehouse, was also explained. The extension people believe that there is a definite deficiency in the SCAM collection and storage system, one of the biggest handicaps being the bagged handling system.

#### Livestock

Dairying appears to be the primary area of emphasis for improvement in both the public and private sectors. The cattle numbers given for this area were 50,000 hd. of cattle. The improved herds are generally made up of Pinoir and/or Pinoir cross-breeds. They have increased their production in the milk province from 900,000 l. in 1979 to 3,500,000 l. in 1981. This was done primarily through cross-breeding and better rations, with high levels of concentrates. The average concentrate levels reportedly being fed are 1 - 1½ Kg./hd./day. Average production levels were quoted as follows:

Purebreds	2,500 - 3000 l./lactation
X-breds	1000 - 1200 l./lactation
Locals	350 - 400 l./lactation.

Fattening/feeding projects in the area are limited to two World Bank projects; one at Rommani and the other at Oulmes. The financing for these projects is extended to the private sector through the Agricultural Credit Bank (CRCA).

#### Poultry

Very little has been done in this area. Poultry production remains pretty much in the traditional small farm flocks for local consumption. Reportedly, there is one small operator in the area who specializes in day-old chicks, producing approximately 30,000 per year.

SCAM  
Khemisset, Morocco

Azahri BOUCHTA (Manager)

Following the meeting with the Regional MINAG people, Dr. Vorachek proceeded to the regional SCAM warehouse for a meeting with the manager, Mr. Bouchta. The bulk of the grain in storage was locally grown bread wheat. The main part of this grain is stored in bags; however, they did store some grain in hangers in bulk. They presently had approximately 3300 MT stored under permanent roof (warehouses) and 6000 MT under canvas. The manager indicated that, although the major part of storage was in bags under canvas, they had very little loss. The grain is treated every 3 months with phosotoxin for weevils and with terracide for rodents. The facilities were in generally excellent condition; the bags were well-stacked and there was no spillage of grains or debris lying around.

The operation employs:

4 employees in the office  
15 permanent employees in the warehouse at 900 MD/month  
10 part-time employees in the warehouse at 24 MD/day.  
40+temporary employees paid per job, up to 40MD/day.  
(These employees are generally only employed for loading/unloading large deliveries of grain.)

Costs:

Tarps - generally last 2 years, repairs are done by SCAM in Rabat

Transport - determined by the National Transport Office (However, some flour mills have their own trucks.)

Wheat - sold on the ton basis; bagging costs are paid by the flour mills

All grain purchased by SCAM must be reported to ONICL, which then issues permits to the flour mills to purchase from SCAM.

Regional Center MINAG  
CT 2502  
Maazizi, Morocco

Abdellaziz M'RIMI (Director)

Dr. Vorachek's next visit was at the extension service center at Maazizi. The director, Mr. M'Rimi, pointed out that the center consisted of 112,000 hectares, broken down as follows:

Cereals	30,000 hectares
Pulses:	14,000 "
Lentils	
Broad beans	
Peas	

Forages:	105,000 hectares	
Vetch		
Oats		
Alfalfa		
Sudan grass		
Burseem clover		
Truck gardens:	600	"
Tomatoes	-	
Potatoes		
Orchard:	150	"
Olives		
Citrus		
Fallow land, including range-land	14,000	"

They currently have no plans to raise corn in the area, as corn seed is too expensive. Comparative costs are corn seed - 400 MD/quintal vs. wheat seed - 150 MD/quintal.

This center has the same basic responsibilities as the first center visited. i.e. those commonly associated with the old US Extension Service.

### Livestock

The break-down of livestock numbers in this region is as follows:

Cattle	15,000 hd. (total includes locals)
Sheep	30,000 hd.
Goats	30,000 hd.
Horses/mules	1,600 hd.

### Poultry

As at the other center, the poultry is primarily farm flocks, with no industrialized operation.

Feeding of livestock: generally, there are little or no concentrates fed to livestock in the region.

The number of farms in this center was reported as 14,870 farms. All are primarily dry-land farms. Farm sizes vary, but the majority are under 50 hectares in size. Average crop yields in this area are:

Wheat:	
Durum	1.0 MT/ha.
Bread wheat	1.2 MT/ha.
Barley	1.3 MT/ha.

### Storage/Handling

Most of the locally grown grains are stored locally on the farms. According to the manager, much of what is stored on the farms is lost due to damage from rodents, insects and mold. When asked if he felt the farmers would accept some type of coop storage at the village level, since the farms are really too small to do much in the way of individual assistance in improving the local storage, the reply was "No!" Mr. M'Rimi indicated that the farmer wants to see his grain until he sells it.

Prior to leaving, Dr. Vorachek was shown the local milk collection center, similar to the ones seen earlier. Every three to four days, 400 -420 l. of milk are collected and sent to Centrale Latiere in Casablanca. Concentrates, primarily dried beet pulp pellets are distributed through this center.

PRIVATE FARMER  
Maazizi Centre - Route De Romani

Merzouk Haj LAABID (Owner)

The last visit of the day was to a private farm owned by Mr. Laabid, the Vice President of the local coop. The farm was of a typical small Mid-east type, i.e. 10-25 head of cattle kept in a small, completely enclosed barn. His average production was 14-15 l. of milk/day/cow. The ration received consisted of:

Cracked barley  
Dried beet pulp  
Green forage (green peas and Sudan grass)  
Straw.

This mixture was given at 25 Kg./cow/day.

Visit ended.

### 22 October

CICALIM S.A.  
Km. 9 Route de Rabat  
Ain Sebaa - Casablanca, Morocco  
Tel. 350903/04, 350274/75

Dr. Ahmed AMAQDOUF (Technical Director)

(Private ownership, with only a small share owned by the government agency SNI)

The team proceeded to Casablanca for the first meeting of the day with Dr. Amaqdouf of Cicalim, one of the two largest feed mills in Morocco. Dr. Amaqdouf briefly explained how the importation of grains, including US corn, is handled. All of the imported ingredients they use are imported through the AFAC, (Feed Manufacturer's Association). Once the feed manufacturers decide what quantities of grain they want, they place their orders with AFAC, which in turn, requests an import license from ONICL, the Office of Cereals. Upon arriving in Morocco, the commodities are handled in two ways: i.e. bulk or bags, depending on the handling capabilities of the

receiver. Cicalim, for example, receives all of its material in bulk. Cicalim's storage capacity consists of four new silos, each with a capacity of 12,000 MT, and a warehouse capable of holding an additional 2,500 MT in sacks. During Cicalim's peak production in 1979, they put through 48,000 MT of feed, of which 95% went to poultry. Dr. Amaqdouf indicated that they are again approaching this figure in 1982, after a reduced output due to high-priced ingredients and the recent economic crunch caused by the drought.

Cicalim delivers within a radius of 100 Km. Outside this range, the customer must pick up the feed. The product is delivered in bulk or bag (primarily bags) to the large customers or local feed dealers. Although the majority of their feed is currently delivered in bags, they indicated that due to the cost of bags and labor, the industry is going to have to go to bulk. Some of the costs of bag handling is as follows:

50 Kg. bags for feed (plastic)	2 MD/bag (approx. 32¢ US)
90 Kg. bags for ingredients (burlap)	9.5 MD/bag (approx. \$1.50 US)

Porters - cost to handle bags:

25 centimes (approx. US 4¢)/50 Kg. bag
60 centimes (approx. US 10¢)/90 Kg. bag

Feed Prices (Ex-mill):

Breeder feeds (layers):

1.64 MD/Kg. minus a 0.25 MD/Kg. rebate for large customers = 26¢ US/Kg. or 22¢ US/Kg. with the rebate

Broiler feeds:

1.66 MD/Kg. (27¢ US/Kg.) for a 2950 - 3000 calorie, 22% protein feed

The ration varies with the price and availability of ingredients.

Maize - always (generally imported)	50 - 65%
Barley	0 - 10%
Sorghum (local)	only small quantities available
Wheat	0 due to competition from humans
Meat meal	0
Fish meal (65% protein, 8% fat)	0 - 12%
Bone meal	traces

Oil seed meals:

SBM (when available - imported)	0 - 15%
Sunflower seed meal (local)	0 - 15%
Cotton seed meal (local)	0 - 15%
• Rape seed (imported)	0 - 15%

The imported SBM generally comes from the USA or Brazil. However, very little is imported as such, due to the requirement of a special permit. According to the source, SBM falls into category C, and as a result, has a 30% added duty on the delivered price. This mill would like more soybean meal, especially in light of all the problems with fish meal, i.e. above 10% incorporation: flavor, bacterial and salt problems.

Dr. Amaqdouf believes the Ministries of Commerce and Finance are working very hard to keep imports down, including imports of soybeans and other ingredients even though there is a need and demand for them. As a result, he heard/feels that the Moroccan oil crushers are running at 50% capacity or less. This was confirmed by the visit to SIGO in Kenitra. However, this organization had more problems that supply limited its annual crush.

Grain Handling/Storage

The Cicalim people feel there is a definite inadequacy in the grain handling facilities in Casablanca. Recently the GOM has been forcing them to use the quays at Jorf-Lasfar, even though it is further to truck the grain and there are no grain handling facilities there as yet.

Miscellaneous Information/Statistics

Corn quality: recently the Moroccan importers have been having a lot of problems with the quality of US corn. The sample observed in Dr. Amaqdouf's office, if representative, was undoubtedly substandard. In addition to excessive BCFM's, there was an excessive amount of heat damage and moldy kernels.

Farm sizes: Cicalim delivers to small broiler farms (approx. 1000 birds per cycle, with four cycles in a year) and to large broiler farms (approx. 100,000 birds per cycle, with four cycles in a year).

Broiler performance on this feed: they reach 2 Kgs. in 63 days. The feed conversion ratio is 2.2 to 2.5.

PROVIMI  
149 Rue des Ouled Ziane  
Casablanca, Morocco  
Tel: 242808/243661  
Telex: 25618M

Louis DEFOORT (General Director)  
(Ownership is private: 50%  
Moroccan and 50% Swiss based money)

The next visit of the day was to Provimi, which is the largest commercial feed compounder in Morocco. Their throughput in 1980 (June-May) was 84,000 MT with an estimated 74,000 MT for 1981, of which 95 - 98% goes to poultry. As with Cicalim, the majority of their feed (60 - 70%) goes to dealers and is handled in bags. In the old mill (a new one which will be geared for bulk is under construction), all the ingredients are handled in bulk, while nearly all the feed is handled in bags. With regard to deliveries, Provimi only delivers directly to farmers taking over 50 MT. For deliveries to dealers, the dealer must pay the freight from his commission which is generally 1%.

Provimi's price on broiler feed to the producer is 1.78 MD/Kg. (approx. 28¢ US/Kg.).

SBM: Mr. Defoort explained that they do not use soybean meal due to inherent problems: first, its availability and second, its price. The GOM, due to its price equalization scheme, often sets the price of SBM far beyond its true value. This was found to be true. Actually, since the price of oil is fixed/subsidized, the GOM pays a part of the subsidy off via the sale of the meal. Mr. Defoort believes that factors affecting the present restrictions on SBM imports are:

1. A desire to keep the local crushers busy (currently they are under-utilized).
2. A need to protect the locally produced SBM which generally is priced far above the world market price. This is because its price is set by the relationship to the subsidized oils.

At this time, the price of SBM on the market is 2,000 MD/MT or US \$320./MT. When asked if he would use more SBM, the answer was "Yes, up to 30% in the rations if there were not a 30% duty on the bean meal." If all the feed compounders would use 30%, the Moroccan market would need to import approximately 300,000 MT of SBM. They are presently using 8 - 15% fish meal, but are not very happy with it.

Corn: Current production of corn is estimated at 400,000 MT of which 90% is consumed on the farms by humans, thus leaving approximately 40,000 MT to be sold on the commercial market. Mr. Defoort estimates that at least 300,000 MT of corn could be utilized by the livestock industry (95% for poultry) at present.

Under the new tender system, the procedure is for the feedmills, such as Provimi, to place a request with the AFAC (Feed Manufacturers Association) which, in turn, requests an import license through ONICL (the Cereals Office), and then requests one of the 10+ importing firms to submit tenders for the quantity required.

An example of a recent shipment received via this channel was a 22,000 MT shipment at US \$ 106./MT CIF Morocco.

Miscellaneous Statistics/Information:

Current poultry numbers:

Broilers - day olds - at 960,000 weekly = approx.  
50M/yr. - primarily Arbor Acres, Hubbards

Layers - 3 hatcheries in Morocco:

1. 26,000 day olds/wk.)
2. 15,000 day olds/wk.; 40,000 - 50,000/wk.
3. 15,000 day olds/wk.)

Hatcheries (major):

SINA - use Dendob (US)  
SNV - use Warran (French)  
SAVIMAC - use Tetra (Hungarian)

Per capita consumption of poultry meat in Morocco is 1.8 - 2.0 Kg. on a live-weight basis (per annum).

Storage/Handling of Grains

Provimi's capacity based on:

2 shifts is 800,000 MT/yr.  
3 shifts is 1.2MMT/yr.

Although they did reach 800,000 MT in 1980, they are currently at only 300,000 MT - thus are running at roughly 1/3 or less than capacity.

Mr. Defoort concurs with his colleague from Cicalim that the grain handling facilities at Casablanca are inadequate, and he does not like to use the port at Jofr -Lasfar because of the extra distance to transport the materials. He feels that the Casablanca port could handle off-loading directly into trucks and do up to 2000 MT/day.

Provimi's storage capacity is:

900 Mt/silo x 6 = 5400 MT  
plus hangers (warehouses) = 2,000 Mt  
Total = 7400 MT.

SEPO  
Ste D'exportation Des Produits  
Oleagineux  
2 Rue Caporal Corbi  
Casablanca, Morocco  
Tel: 241389/241337

Mohamed SMIRES (General Director)  
Mohamed BOUTAYED (Chef De Fabrication)  
Abdurrahman MAH

(Ownership - Private)

The last visit of the day was to the second of the two oil crushing plants in Morocco. The plant's crushing capacity is 60,000 - 70,000 MT per year.

depending on the type of oil seeds crushed. The plant has crushed soybeans, cottonseed, sunflower and rapeseed. At the time of the team's visit, they were crushing the Canadian rapeseed and everyone seemed to be quite happy. Price comparisons certainly favor the rapeseed from the meal standpoint at present with:

SMB @ 2,000 MD/MT exfactory in bags (approx. US \$ 320./MT)  
Rapeseed @ 1000 MD/MT exfactory in bags (approx. US \$ 160./MT)..

SBM is so high due to the low oil content and price equalization, bringing up the cost of the meal in order to subsidize the oil. Their current crush on US No. 2 beans runs:

17.2 to 17.3% oil  
75 - 76% meal, with a loss of 7% (very high - US loss 1%).

At the time the plant was crushing Canadian rapeseed, but it has crushed soybeans for the government on a toll crush basis. The plant's capacity was indicated to be 60,000 MT on a 330 day per year schedule. Cottonseed and sunflower account for 25%; rapeseed and soybean account for the balance.

SEPO:

1. Crushes the oil seeds
2. Refines some of the oil
3. Produces soap.
4. Produces baby food (using high quality imported SBM).

SEPO also sells crude oils outside to some of the 14 refineries in Morocco. Each refinery receives a share of imported and locally crushed oils which are allocated according to a government formula.

Subsidized oil prices: The GOM subsidizes vegetable oil to the consumer @ 4.4 MD/liter (approx. 70¢ US/l.), at least 20% below cost of production. Rapeseed oil is subsidized less and olive oil is not subsidized. Mr. Smires feels that the problem with SMB usage in Morocco is largely due to the fluctuating demand on the part of the feed/poultry industries. He indicates when they crush beans, they have plenty of meal available, with no takers; however, the other side claims the reverse. The competition of the 15,000 - 20,000 MT fish meal available/yr. at 2,400 MD/MT (approx. US \$ 385./MT) was also pointed out to be a problem/reason.

Oil Seed Handling/Storage: Although the plant was equipped to handle bulk railcars and trucks, their storage space was limited, especially for storage of the processed meals. The total capacity was 1000 MT of meal storage which is approximately one week's run. The movement, handling, price and availability are, undoubtedly, all factors affecting the use of SBM in Moroccan livestock/poultry rations.

Visit ended.

23 October:

SOSIPO  
Port of Casablanca  
Tel: 274202

Mohamed BERRADA (Director)

The entire team went to Casablanca to visit the port facilities and view SOSIPO's operation there. SOSIPO is the government agency responsible for all the port silo facilities in Morocco. Current cereals imports are running at approximately 2½ MMT, of which 60 - 70% is handled through the port of Casablanca. The port has bulk and bag handling capabilities. However, the problem is that the silos were built for export and not for import. The SOSIPO officials indicated silos are proposed for the ports at Nador and Tangiers, with storage capacities of 50,000 and 100,000 MT respectively, as well as an additional 900,000 MT inland storage system.

Due to the existing congestion in Casablanca, there are no plans to expand the port facilities there. In order to alleviate this congestion, SOSIPO is currently diverting grain shipments to Jorf-Lasfar even though there are no grain handling facilities established there. Actually, the silos are considered public; SOSIPO only manages them.

Following the tour of the Casablanca Port, the team was taken out to Mohammedia, a new port just being constructed near Casablanca. The port was originally used only for petroleum off-loading and can handle ships up to 30,000 tons DWT. However, under the current plans they will be able to receive tankers up to 150,000 tons DWT, and cargo ships up to 80,000 tons DWT. The Mohammedia planners are proposing a grain handling quay with a draft of 15M, 350M long and grain storage silo of 100,000 MT capacity. They have done a cost comparison study and believe their port can efficiently handle up to 1.0 MMT/yr. When asked about Jorf-Lasfar for grain, they indicated that the port there was only being used temporarily for handling grain.

The amount of work being done and progress being made in a short time on the development of the port was impressive.

Visit ended.

24 October: Sunday - "Free Day."

25 October:

MINAG Regional Office  
El Jadida, Morocco

Abdurahan TAOUKI (Director)

SCAM Regional Office  
El Jadida, Morocco  
Tel: 2873

Abdulkadu Seffar (Director)

The team, consisting of groups II and III, proceeded to El Jadida for the scheduled meetings with the MINAG/SCAM people and tour of the port. Upon

arrival, they met Director Taouki at the Regional MINAG office and were accompanied to the Governor's Office for a briefing. Following a short briefing, the group departed for the port of Jorf-Lasfar. The quays were all laid out and nearly completed, with just the above ground facilities; warehouses, etc., remaining to be constructed. The group was told that, contrary to what the people at Mohammedia said, they were planning a grain handling quay of 350M in length with a silo of 60,000 MT capacity, able to take ships of 60,000 - 70,000 MT.

This port also appeared well-along and progressing very well for the time actually under construction.

Visit ended.

HATCHERY  
El Jadida, Morocco

Abdulatif BELEQUIH (Manager)

HATCHERY  
Dar El Felloun  
Sidi Bouzia - El Jadida, Morocco

On the way back to El Jadida, the team stopped for a quick tour of a broiler hatchery with an output of 160,000 chicks/week. The operation had its own breeder flock of 40,000 birds, which were Arbor Acres and Shaver breeds. Mr. Belequih explained that most of the day-old chicks are sold to middlemen who, in turn, sell them to the farmers. Cost to the middlemen, ex hatchery, are 1.10 MD/chicken (approx. 18¢ US/chick), while cost to the farmer is 1.75 - 2.0 MD/chick (or 23 - 32¢ US/chick). The hatchery also manufactured its own feed which looked quite good. The corn being used was all of local origin and also appeared to be of good quality.

The feed storage and handling appeared to be adequate for an operation of this size. Although well-kept and orderly, all of the ingredients and feed were handled in bags. In general, the hatchery had an overall appearance of being well-run and profitable.

Visit ended.

Moullen El Jadida  
El Jadida, Morocco

Said LAHRICHI (Owner/Manager)  
Abdurahman LAHRICHI (Brother)  
(Ownership - private)

The next stop for the team was a flour mill in El Jadida. Mr. Lahrichi told the group that the mill's capacity is 240 MT/day (24 hr. shift). 90% of the wheat they mill is imported. Of the wheat they receive, 20% is in bags and the remainder in bulk. Storage for this mill, which ranked ninth in size (out of 70 mills in Morocco), consisted of 1500 MT in flat storage and 3000 MT in vertical bulk silos.

Mr. Lahrichi indicated that of their production, 10% is used by bakers, while 90% is used in the homes. Apparently, there are two grades of flour

sold in Morocco, i.e.:

1. National quality @ 1.12 MD/Kg. (approx. 18¢ US/Kg.)
2. Deluxe quality @ 1.50 MD/Kg. (approx. 24¢ US/Kg.)

By-product from their milling process consists of the bran (approximately 20% of the total), which sells for 0.40 MD/Kg. (approx. 6½¢ US/Kg.) to the local feed mills and dairies.

Visit ended.

ORMVAD  
(Office Regionale de mise en  
Valeur Agricale)  
Sidi Bennour Spa, Morocco  
Tel: (034) 92 30

Abdulatif KADDIOUI (Agronomist)

Societe Agro-Industrielle des  
Doukkala (S.A.I.D.)  
Sidi Bennour  
SNDE, Rabat, Morocco  
Tel: 277 -83

Lamsiah LAHCEN (Commercial Director)

The penultimate visit of the day was to an SNDE feed mill near Sidi Bennour. Prior to going to the mill, a stop was made at the Regional ORMVAD office. The team was briefed on the production in the Doukkala area (one of the most productive in Morocco). Presently there are 24,000 hectares under sprinkler irrigation, and another 31,000 hectares under gravity flow irrigation. Major crops raised are:

Sugar beets  
Cereals - primarily wheat  
Corn - 4,000 - 5,000 hectares irrigated yields 3.5 MT/ha.  
60,000+ hectares are rainfed and yield 1.2 MT/ha.

As elsewhere in Morocco, the corn raised locally generally goes for human consumption. The team was told corn is generally not used in livestock rations because it is too expensive and there is little or no commercial production of poultry in this area. The official price for corn is between 900 - 1000 MD/MT (approx. US \$144. - \$166/MT), and, of course, black market prices are even higher.

### Grain Storage/Handling

When asked about the current methods used in the area, Mr. Kaddioui indicated that the bulk of the grain is stored in the old, traditional MATMORAs (large underground silos). Traditionally, these were simply dug in the clay soils; however, today a considerable amount of concrete work is also added. In addition, some farmers also store grains in flat storage in 100 Kg. bags.

After the briefing, the team proceeded to meet with Mr. Lahcen of Saidalim. Although the feed mill was designed as a livestock feed mill,

approximately 90% of its production goes to poultry. Last year's annual production figures ran at 15,000 MT - approximately one-half the mill's capacity on an eight hour shift. Storage facilities at the mill included 3000 MT in silos (steel bins) and 1500 MT of flat storage (warehouse).

Ingredients used at present include:

- SBM (when available from SEPO - Casablanca)
- Cotton seed cakes
- Sunflower seed cakes
- Wheat bran (8 - 10%)
- Barley (50% in cattle rations; 15% in poultry rations)
- Corn (Generally this mill uses local corn - the Doukkala region raises over 20% of Morocco's total production. At present, however, they were using imported corn, of which 90% is of US origin.)

Reported feed conversions on their poultry are 2.3 to 2.5 to 1.

This is not a bad-looking operation, but obviously it is being both under-utilized and utilized for the wrong purpose, i.e. for poultry rations when it was actually designed for cattle feed production.

Visit ended.

PRIVATE FARM  
BG 3 Km.8  
Route de Beni Hilal  
Sidi Bennour, Morocco

Haj Bouchaib ben MILOUD (Owner)

The last visit of the day was to a 300 hectare private farm, one of considerable size for Morocco. The Haj was a diversified farmer, with a wide range of crops which include:

- Sugar beets (50 hectares)
- Wheat
- Barley
- 50 milk cows (production - 10 - 15 l./day)
- 200 sheep

The Haj had a sizeable flat-storage warehouse in which he kept grain and animal feed in bags. Additionally, the team finally got to see the famous Moroccan "MATMORA", the traditional storage pit for grains. On this particular farm, there were 5 pits, all approximately 5 meters deep times 4 meters wide. According to the source, each held 13.2 MT. The grain stored in them appeared to be in excellent condition; however, what was viewed had not been harvested very long ago. The Haj indicated, however, that there is essentially no loss with this method of storage and, if treated periodically, grain can be stored up to three or four years in this way.

Although one could not rate this farmer very high compared with a farmer in a developed country, his operation was quite good for one in a developing country.

Visit ended.

26 October:

Ministry of Agriculture  
Rabat, Morocco

Abbes MARSILE (Director of Livestock)  
Taleb BENSOUA (Assistant Director)

Messrs. Givens and Vorachek proceeded to the MINAG for their first meeting of the day, with the Director of Livestock and his assistant. The MINAG people explained to the team the procedures under which imported grains are currently handled. Using corn, which was just recently required to be put out on tenders, for example, the steps are as follows:

1. Feed millers set quantities required
2. Orders are placed through AFAC (feed millers association) with importers (there are actually only two or three)
3. An import license is obtained from the ONICL (Cereals Office).

Upon arrival, the corn can go directly to the feed mill.

A list of importers for various ingredients was given as follows:

- |               |  |
|---------------|--|
| Corn:         | 1. FORAFRIC (Swiss partner)<br>2. SOCOFRGS                                 |
| SBM:          | 1. ORBONOR (SEPO and SICO, the crushers must import through this importer) |
| Wheat/Barley: | There are numerous importers   |

Concerning the importation of commodities, SBM is in Category C which is prohibited except with special permission. Soybeans (whole) are in Category B.

The MINAG people also stated that another reason the importation of soybeans and other oil seeds becomes so complicated is that there are no less than four ministries involved:

1. Ministry of Commerce
2. Ministry of Economics
3. Ministry of Finance
4. Ministry of Agriculture.

Mr. Bensouda said that the feed millers/poultry producers prefer SBM but that even if they get permission for its importation, they cannot afford

to import it due to the high import taxes. Another problem is that SBM is also very high locally. See the following comparisons:

SBM	2.00 MD/Kg. (approx. 32¢ US/Kg.)
Sunflower	1.10 MD/Kg. (approx. 18¢ US/Kg.)
Cotton seed	0.90 MD/Kg. (approx. 14¢ US/Kg.)
Linseed	1.10 MD/Kg. (approx. 18¢ US/Kg.)
Canola (Canadian rapeseed)	1.00 MD/Kg. (approx. 16¢ US/Kg.)

Current feed production figures for Morocco were given as:

300,000 MT of poultry feed per year  
30,000 MT of livestock feed per year

Average annual requirements for imported corn was given as 120,000 MT, plus an additional 30,000 - 40,000 MT from the local production. 1982 imports thus far were given as 50,000 MT - US source from June - September, with an additional 20,000 MT to be imported by the year-end. SBM imports for FY 82 were given as 5,500 MT from the US and an additional 600 MT from Spain shortly thereafter.

#### Grain Handling/Storage

The MINAG people feel it is essential for the feed millers themselves to construct storage facilities in order to assure them adequate supplies on a continuing basis. However, they point out that there are two problems in doing this: 1) the credit/monies for the construction, and 2) having the financing available so that the feed millers can fill the silos once they are built. Apparently, limited credit is available through the Caisse Nationale de Credit Agricole (CNCA) and the Banque Nationale Pour le Development Economique (BNDE).

Visit ended.

Ministry of Commerce and Industry  
Rabat, Morocco .

Mustapha SLIMANI (Director of  
Agro-Industry)

As this organization deals primarily with oil seeds and the related pricing-subsidy situation, the main topic of conversation during the meeting was soybeans. Since the GOM provides a heavy subsidy for vegetable oils, they are involved, via this organization, in the procurement and handling of the oil seeds crushed in Morocco. According to Mr. Slimani, the Ministry of Commerce calls for bids of oil seed (such as soybeans). However, once the bids are received, the contracts are actually signed between the two crushers, SEPO/SIGO and the suppliers. Apparently, the crushers and refiners actually crush the seeds for the government, working on margins set by a very complex formula. When asked about duties, an example was given, using soybeans. Again, it appears that according to a somewhat complicated formula, the duties worked out to approximately 19.5% on whole beans and 55.8% on soybean meal.

The team was told that the Ministry of Commerce was aware of the plans for the new crushing facilities to be established at Jafr-Lisfar, and were fully in favor of them. Mr. Slimani also stated that the GOM encourages joint ventures through:

1. Allowing 100% foreign ownership
2. Export of earnings of foreign partners
3. Breaks on taxes/import duties
4. Lump sum premiums paid for each worker employed.

Visit ended.

Societe Nationale de Development  
de L'elevage (SNDE)  
5 Rue De Sale  
Tur Hassan  
Rabat, Morocco  
Tel: 314 70

Ahmed KETTANI (Director General)

Following lunch, Dr. Vorachek proceeded to a meeting with Mr. Kettari of SNDE to discuss ongoing negotiations between his organization and the Council, which were added to this report as part of the overall livestock evaluations. Two areas discussed with Mr. Kettari were the progress in establishing a beef feedlot at Sidi Bennour in conjunction with the feed mill visited on this tour (see earlier reference). They would still like to start the feedlot, but are still looking for an outside joint venture partner. Although the size is quite small (2,000 - 4,000 head), it is believed that it would provide an excellent model for other public and private sector investors in Morocco. The other area of interest was in expanding and developing SNDE's cow-calf operations. They are interested in a joint venture for technical assistance and/or financial participation in this area also. The technical aspects of the latter would be in the areas of breed improvement, feeding and range management.

Briefly, they are interested in finding joint venture partners (American) who are willing to provide technical and financial assistance in the areas of beef feedlot development and in the development of a cow-calf operation(s).

Visit ended.

27 October: Groups II and III departed for Marrakesh and Agadir to tour the Cooperative Maroc Agricole (CMA) facilities and the port of Agadir.

(MA  
Regional Collection/Storage  
Marrakesh, Morocco  
Tel: 316 03

Simon OHAYON (Director)

The group was told that this organization is made up of seven small coops which each have several hundred farmer members whom they represent. The

team was also informed that the CMA in Marrakesh has four secondary purchasing centers within a 100 km. radius, which collect grains for the main center in Marrakesh. The outside storage capabilities for these collection centers was quoted at 10,000 MT. At the main center, the storage capacity consisted of 17,000 MT in concrete silos and additional warehouse storage for bagged materials, totalling 28,000 MT. Mr. Ohayon indicated that they have processed up to 70,000 MT of grain within a fiscal year, of which the majority is locally grown. On occasions when they do handle imported grains, it generally comes from Agadir in bags (bulk to part and bagged there), or from Safi in bulk hopper cars. The elevator can handle up to 400 MT/day when handled via the latter method.

It was pointed out that the CMA is merely a storage-handling facility, in that 95% of the grain moved through its operation is sold to the ONICL (Office of Cereals). A large part of this grain is, apparently, then moved through the six flour mills in the Marrakesh area. The estimated capacity for each of these mills was given at around 120 MT/day, with a local storage capacity of 3000 - 3500 MT (silos/flat storage) at each mill.

In general, the facility was in excellent condition, especially clean and neat. As an added testimony of the quality of the operation, the team was shown a sample of wheat stored since 1980 which was in excellent condition.

#### General Statistics of the Marrakesh Area

CMA, Marrakesh collects grains from three major provinces in the Marrakesh region. The provinces' total production potential is 1.0 MMT of cereals (roughly 2/3 barley, 1/3 wheat) from 850,000 hectares. The total storage capacity is reportedly 40,000 MT, with approximately 60% being consumed locally on the farms or sold direct through the souks. In addition to the cereals, the region grows 12,000 - 15,000 hectares of irrigated maize. No oil seed crops of significant quantities are raised in the area.

28 October: In Agadir, the teams first meeting was at the Port of Agadir, with the Port Director, and officials from the local CMA, MINAG and the Ministry of Equipment. It was learned from the CMA representative, that, contrary to the situation at the facility at Marrakesh, most of the grain they handle is imported. In an average year, approximately 30,000 - 40,000 MT of wheat and barley are purchased, of which some 20,000 MT is sold to the local millers.

Presently, CMA operates 7 depots within the Agadir area. They do not have any plans for a port facility, but are considering another 2,000 square meter hangar 18 km. from the port. Transport of the grains is done by the Office of National Transport, at a cost of 5.20 MD/MT/Km. (approx. 83¢ US/MT). It appeared, however, that SOSIPO and the ONICL are in favor of a port silo facility. (There appeared to be a bit of conflict of ideas among the group.)

Current Port Date:

Handle: citrus, cereals, phosphates  
Draft: 9 M. at cereal quay  
Average unloading time: 10 days (3 cranes x 6 tons/hr.  
x 15 hrs./day)

Future Plans - Port and Related Grain Processing Facilities:

Due to the addition of four new flour mills, each with a capacity of 120,000 - 140,000 MT/day and several feed mills, it is anticipated that by the year 1995 the grain imports to Agadir will be:

Wheat: 360,000 MT  
Corn: 125,000 MT

In order to efficiently serve these needs, the ONICL/SOSIPO are proposing expansion of the port facility. As understood, the proposal would include:

2 new quays  
a 9000 sq. meter silo  
a 6000 sq. meter silo.

In addition, they will add pneumatic unloading and bagging equipment.

Visit ended.

29 October:

Centrale Laitiere Maroc Lait  
83, rue Emir Abdulkader  
Casablanca, Morocco  
Tel: 24 27 95/24 97 96

Charles DANAN (Director General)

Mr. MESTOUR (Manager of Cattle  
Production)

Dr. Vorachek's last visit in Morocco was made with regard to the Council's ongoing work in North Africa, but is added to the report as it provides additional livestock/feed industry data. This company is the largest dairy collection/processing organization in Morocco, accounting for 50%+ of the commercial milk production (processing). Statistics concerning their operation were reported as follows:

Milk Collection is from 1800 individual farmers, plus 100 coops (each with an average of 150 farmers). 65% is collected in bulk and 35% is collected in cans.

There are approximately 50,000 cows in the milk shed. 70% are cross-breeds, 20% are purebreds, and 10% are native cattle.

Average milk yields are: 4 liters per day for cross-breeds; 12 liters per day for purebreds; and 1 liter per day for native cattle.

Milk prices:

Farmer:	1.69 MD/liter (approx. 27¢ US/l.)
Retailer:	2.42 MD/liter (approx. 38¢ US/l.)
Consumer:	2.50 MD/liter (approx. 40¢ US/l.)

Production of processed milk products is primarily in products such as yogurt. Whole milk usage is apparently very low in Morocco.

Comparison of yogurt production in Morocco vs. Tunisia:

Morocco	200,000,000 yogurt cups (8/liter)
Tunisia	350,000,000 yogurt cups (8/liter)

Importation: Essentially no fresh milk is imported to Morocco. Last year 3000 MT of powdered milk was imported, and under a recent agreement, Morocco will obtain 12,000 MT from the US over a three-year period. This is under the World Food Program. (Note: it is forbidden to reconstitute powdered milk for human consumption in Morocco.)

Visit/Mission Ended.

CONTACTS

NAME	FIRM	CITY	TELEPHONE	TYPE OF BUSINESS
J, Othman (Director)	Office du Gharb	Kenitra		Government
, Mohamed (Chief of Agromic Studies)	"	"		"
Abdulatif (Agricultural Specialist)	"	"		"
SI, Mbarek (Chief, Misc. Office)	"	"		"
s, Oulahora M.	SIGO - Gharb	Kenitra	016-5955/5803	Commercial Oil Seed Crusher
3DULLAH (Director)	ORMVAG	Kenitra	-	Government
, Mohamed (Farm Manager)	COMAGRI	Kenitra area	-	Government
IN, Thami	Cattle Breeder	Kenitra area	-	Farmer
JI, Ahmed	Dairy Producer	Hamidia	-	Farmer
JA, Mohamed (Regional Director)	MINAG, Regional	Khemisset	-	Government
JM, Johamed (Director, Livestock)	"	"	-	"
JOUN, Zahr Mohamed (Director Extension Services)	"	"	-	"
JA, Azahri (Manager)	SCAM	Khemisset	2128	Government
J, Abdellaziz (Director)	MINAG Regional	Maazizi	-	Government
JH, Bassou	"	Khemisset	-	Government
JK, HAJ Laabid	Farmer	Maazizi	-	Farmer
J, Ahmed	CICALIM	Rabat	35 or 74	Commercial Feed Compounder
JUF, Ahmed (Technical Director)	"	"	"	"

CONTACTS - Page 2

<u>NAME</u>	<u>FIRM</u>	<u>CITY</u>	<u>TELEPHONE</u>	<u>TYPE OF BUSINESS</u>
ST, Louis (Director General)	INAM-PROVIMI	Rabat	24 81 88/24 36 61	Commercial Feed Compounder
SI, Smires Mohamed (Director al)	SEPO	Rabat	24 10 96	Commercial Oil Seed Crusher
SEF, Mohamed (Chief of tion)	"	"	"	"
SEbderrahman	"	"	"	"
SHA, Mohamed (Director)	SOSIPO	Casablanca	27 42 02	Government (Port Authority)
SH, Abdurahan (Director)	MINAG, Regional	El Jadida	-	Government
SH, Abdulkadu (Director)	SCAM	El Jadida	28 73	Government
SHH, Abdulatif (Manager)	Hatchery	El Jadida	-	Private
SHI, Abderaham	El Jadida Flour Mill	El Jadida	-	Private
SHI, Said	"	"	-	"
SH, Lamsiah (Commercial tor)	SAIDALIM	Sidi Bennour	(034) 9155	Government
SHUI, Abdulatif (Agronomist)	ORMYAD	Sidi Bennour	(034) 24 99	Government
SHUCHAIB BEN MILOUD	Farmer	Sidi Binnour	-	Farmer
SH.E, Abbes (Director of stock)	MINAG	Rabat	-	Government
SHIDA, Taleb (Assistant tor of Livestock)	"	"	-	"
SHI, Mustapha (Director of -Industry)	Ministry of Commerce and Industry	Rabat	-	Government
SHVI, Ahmed (Director General)	SNDE	Rabat	314-70	Government
SHV, Simon (Director)	CMA	Marrakesh	316-03	Government

CONTACTS - Page 3

<u>NAME</u>	<u>FIRM</u>	<u>CITY</u>	<u>TELEPHONE</u>	<u>TYPE OF BUSINESS</u>
Kamal (Director)	CMA	Agadir	218 37	Government
Charles (Director General) (Manager of Cattle :ion)	Centrale Laitiere Maroc Lait	Casablanca	24 27 95	Commercial Dairy Processing
	"	"	"	"

APPENDED LISTS OF GRAIN AND FEED PRODUCERS AND DEALERS

- Appendix I: "Morocco: Potential Feed Ingredients Importers"  
Appendix II: "Morocco - Grain and Feed Mailing List"  
Appendix III: List of Moroccan Feed Suppliers  
Appendix IV: List of Members of "AMIPROS"

Appendix I

MOROCCO: Potential Feed Ingredients Importers

12/79

While it is impracticable to provide a complete list of processors, dealers, etc., this partial list is furnished for your information with the understanding that no discrimination is intended and no guarantee of reability implied.

State farming organizations:

COMAGRI

B.P. 297

Rabat, Morocco

(Dr. Mohamed Sedrati, Director)

SAIDALIM

Km 2, route de Jema Beni Hlal

Sidi Bennour, Morocco

( Mr. Ahmed Kettani, Président)

Feed Millers Association:

Association des Fabricants  
d'Aliments Composés (AFAC)

s/c CICALIM

B.P. 2606

Casablanca, A , Morocco

Private Feed Mills:

EL ALF

Nouveau Secteur Industriel

Fès, Morocco

(Mr. Fouad Chaoui, Director) Tel. (06) 410.07; 417.27

CICALIM

B.P. 2606

Casablanca, Morocco

(Dr. Ahmed Berdai, Director)

LABOMAV

76, rue Mohamed Diouri

Casablanca, Morocco

(Director Mr. Ahmed Charbi-Tounsi)

Telex: 236-76

Tel: 26.08.32; 35.08.61

MOROCCO: Potential Feed Ingredients Importers

Private Feed Mills - Page 2

PROVENDA

211-213 Boulevard Moulay Ismael  
Casablanca, Morocco  
(Mr. Joseph Siino, Director)  
Tel: 24.35.16/17

PROVIMI-MAROC

149. rue des Ouled Ziane  
Casablanca, Morocco  
(Mr. Louis Defcoort, Director General)  
Telex: 236-18      Tel: 24.81.88; 24.36.61; 24.28.08

SELMA

36, rue Emir-Abdelkader  
Meknès, Morocco  
(Mr. Abdellah Zizi, Director)  
Tel: (05) 218.45

SINA

rue Beni-Ouarain  
B.P. 710  
Rabat, Morocco  
(Mr. Felix Chatelier, Director General)  
Tel: 500.61; 508.75

GRAIN AND FEED MAILING LIST

1. U.S. Wheat Associates  
c/o U.S. Consulate General  
Casablanca
2. Etablissements Abergel  
B.P. 382  
Casablanca
3. Le Directeur Général  
Societe ORBONOR  
20, Rue Mustapha El Mzani  
Casablanca
4. Mr. Pierre Decamps  
SOCOPROS  
7, Rue Pilot  
Casablanca
5. Monsieur le Directeur General  
ONICL (*Cereals Office*)  
25, Charia Moulay Hassan  
Rabat
6. Raissi and Co.  
323, Boulevard Mohamed V  
Casablanca
7. Mr. Gerard Demaurex  
FORAFRIC, S.A.  
24, Boulevard Mohamed V  
Casablanca
8. Mr. Azzam Sebti  
SCHAMASH-MAROC  
Arab Bank (Immeuble)  
42, Avenue Hassan Seghir
9. Mr. Jaafar Sebti  
MAROPORT  
6, Rue Caporal Gastous  
Casablanca
10. Mr. Albert Abenaim  
COGEL  
84, Boulevard Lalla Yacout  
Casablanca
11. Monsieur Defoort (feed)  
INAM  
149, Route des Ouled Ziane  
Casablanca
12. Monsieur le Directeur (feed)  
CICALIM  
Km. 9 Ain Sebaa

Appendix III

THIS LIST IS FURNISHED WITH THE UNDERSTANDING THAT NO DISCRIMINATION IS INTENDED AND NO GUARANTEE IMPLIED

feed ALF (EL)

PCS ..... NI 106 413 07 - 417 37
Région de l'Est - 1961
S.A. 2 200 000 dh - création 1971 - P.C. 14 955
Banques : am - ep - em - em - em - classe 4
Effectif du personnel : 62 à 100
Conseil d'administration : conseil mixte (am)
Direction : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits laitiers
Surface : 6 000 m2 avec 2 500 m2 couverts
Capacité de production : 3 000 t/lait

feed CERNA MAROC

TEMAZA ..... NI 671 410 21
S.A. 200 000 dh - création 1977 - P.C. 24 838
Banques : am - ep - em - em - em - classe 2
Effectif du personnel : 12 à 15
Conseil d'administration : conseil mixte (am, ep, em, em, em, em)
Direction : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits laitiers
Surface : 7 000 m2 avec 400 m2 couverts
Capacité de production : 2 000 t/lait

CHERIFIENNE D'ENGRAIS & PRODUITS CHIMIQUES

CASABLANCA ..... NI 134 01 43 - 74 21 21
S.A. 500 000 dh - création 1961
Banques : am - ep - em - em - em - classe 1
Effectif du personnel : 275
Conseil d'administration : conseil mixte (am, ep, em, em, em, em)
Direction : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits chimiques
Surface : 7 811 m2 avec 2 200 m2 couverts
Capacité de production : 1 000 t/lait

feed SICALIM

INDUSTRIELLE DE COMMERCIALISATION D'ALIMENTATION
SICALIM ..... NI 21 07 77 - 21 07 04
S.A. 1 750 000 dh - création 1968 - P.C. 9 439
Banques : am - ep - em - em - em - classe 4
Effectif du personnel : 70 à 110
Conseil d'administration : conseil mixte (am)
Direction générale : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits laitiers
Surface : 10 000 m2 avec 500 m2 couverts
Capacité de production : 70 000 t/lait

feed LABOMAV

LABOMAV ..... NI 23 676 - 23 676
S.A. 6 000 000 dh - création 1973 - P.C. 31 047
Banques : am - ep - em - em - em - classe 2
Effectif du personnel : 85 à 100
Conseil d'administration : conseil mixte (am, ep, em, em, em, em)
Direction : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits laitiers
Surface : 10 000 m2 avec 500 m2 couverts
Capacité de production : 250 000 t/lait

HOECHST MAROC

HOECHST MAROC ..... NI 21 67 10 - 21 67 10
S.A. 3 472 000 dh - création 1954 - P.C. 23 217
Banques : am - ep - em - em - em - classe 4
Effectif du personnel : 100
Conseil d'administration : conseil mixte (am)
Direction générale : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits chimiques
Surface : 4 500 m2 couverts
Capacité de production : 1 500 t/lait

SOMADIET

SOMADIET ..... NI (07) 727 30 - 727 30
S.A. 10 000 dh - création 1972 - P.C. 22 478
Banques : am - ep - em - em - em - classe C
Effectif du personnel : 8
Conseil d'administration : conseil mixte (am, ep, em, em, em, em)
Direction : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits laitiers
Surface : 10 000 m2 couverts
Capacité de production : 250 000 t/lait

PROVENDA

CASABLANCA ..... NI 24 25 16 / 17
S.A. 120 000 dh - création 1955 - P.C. 29 279
Banques : am - ep - em - em - em - classe B
Effectif du personnel : 100
Conseil d'administration : conseil mixte (am)
Direction : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits laitiers
Surface : 10 000 m2 couverts
Capacité de production : 1 500 t/lait

SOMADIM

SOMADIM ..... NI 23 25 27 - 23 25 27
S.A. 6 000 000 dh - création 1967 - P.C. 29 991
Banques : am - ep - em - em - em - classe A
Effectif du personnel : 200
Conseil d'administration : conseil mixte (am, ep, em, em, em, em)
Direction : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits laitiers
Surface : 10 000 m2 couverts
Capacité de production : 2 500 t/lait

SUPERLAIT

SUPERLAIT ..... NI 14 24 18 01
S.A. 1 000 000 dh - création 1972
Banques : am - ep - em - em - em - classe P
Effectif du personnel : 62 à 100
Conseil d'administration : conseil mixte (am)
Direction : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits laitiers
Surface : 10 000 m2 couverts
Capacité de production : 2 500 t/lait

TOUTELEVAGE

TOUTELEVAGE ..... NI 23 67 10 - 23 67 10
S.A. 10 000 dh - création 1972 - P.C. 22 478
Banques : am - ep - em - em - em - classe C
Effectif du personnel : 8
Conseil d'administration : conseil mixte (am, ep, em, em, em, em)
Direction : conseil mixte (am, ep, em, em, em, em)
Genre d'activités : fabrication de produits laitiers
Surface : 10 000 m2 couverts
Capacité de production : 250 000 t/lait

## Appendix IV

ASSOCIATION MAROCAINE INTERPROFESSIONNELLE DES PRODUITS DU SOL  
" A M I P R O S "

Aug 1, 1971

AUG 1 1971

59, Av. Hassan II - CASABLANCA - Tél.....

Télex n° 23704 AMIPROS

Résidence. Z. Ibn Zaidoun

Sommette Avenue el Anfa

LISTE DES SOCIETAIRES

B Apt n° 26, 12<sup>ème</sup> Etage, Casa

NOM OU RAISON SOCIALE	ADRESSE	TELEPHONE	TELEX & ADRESSE TELEGRAPHIQUE
BITTON Jacob	199, Rte d'El Jadida - CASA	25.96.33	22.879 Bittonja
C A F I C	7, Rue Pillot - "	30.02.41 30.02.27	21.040 Textigrain
MANCOURI H/Mohamed	Quartier Industriel Bd. Al Moukaouama - BP 633 MARRAKECH	04 319.84	72.965 Huilmans
STE FORAFRIC	24, Bd Mohammed V - CASA	22.41.32	21.022 Forafric
CRAIBI H/Kabbour	Centre de Benguerir	04 580.72 DI 581.22 BI	Hjkabbour
ZAGMOUZI H/Mohamed	Av. Al Moukaouama/El Mers MARRAKECH	04 318.43	
H/MOUMEN ABDELILAH	206, Rte des Ouled Ziane - CASABLANCA	24.08.27	
STE ORBONOR	20, Rue Mostafa El Maâni -	31.07.01 31.09.74 31.09.47	21.078 Orbonor
RAISSI & Cie	323, Bd Mohammed V - CASA	30.24.04 30.29.47 30.25.53 30.21.79	21.023 Rais
S O C O P R O S	7, Rue Pillot - "	30.02.41	21.040 Textigrain
S M S C C	210, Bd Abdelmoumen - "	25.30.11/12	Semenroc
U S C A H	64, Rue d'Alger - "	27.60.79	23.761
RAHAM Omar	Quartier Industriel - ESSAOUIRA	047 22.34 27.11/27.18	71.019 Raham
C A R O U B E X	24, Bd Mohammed V - CASA	22.41.32	21.059 Forafric
LEVY Ichoua	89, Rue Marmoucha - FES	06 243.91	
BATTAHI H/Driss	57, Rte de Médiouna- CASA	28.05.15	
LOUHMAI ABDELLATIF	1, Rte de Béni Mellal Quartier Industriel D.P. 67 - KELAA DES SRAGHNA	041 22.93 21.51 22.05	72.094 Mano

AUG 1 1971