

## India work Visit Report

**To :- Animal and Plant Health Regulatory Directorate**

**From :- Gedion Yilma**

**Coutry visited :- Republic of India (Delhi and Lucknow)**

**Date of visit :- From April 18 – 25 / 2010**

### **Participants:-**

1. Ato Belachew Hurissa, SPS-LMM, Team Leader
2. Ato Tesfaye Lemma, Acting Director of EMDTI, Vise team Leader
3. Ato Zeleke Mengiste, ELFORA Manager, Member
4. Ato Getachew Melese, Amhara NRS, BoARD, Member
5. Ato Tsehaye Kidane, Tigray NRS, LMA, Member
6. Dr. Gedion Yilma, MoARD, APHRD, Member
7. W/t Alegnta Tamiru, Adama Private Feedlot Owner, Member
8. Ato Abebe Wolde, Oromia NRS, PADC, Member
9. Ato Esayas Kebede, MoARD, AISD Director, Member

### **Objective of India work visit**

- To know how the Indian Government support the agricultural export using **APEDA** (Agricultural Products Export Development Agency) and how exporters are organized and work with the government.
- To search for the potential institutes which can support Ethiopian Meat Industry in capacity building.
- To search for the potential Investors who can invest on meat processing and exporting so that they import technology to our country.

### **Discussion with Ethiopian Ambassador and Diplomat at New Delhi**

The team was warmly welcomed by H.E. Ambassador Genet Zewdie and H.E. consular Ato Meheretab Mulugeta and other embassy staffs. The discussion included in general about Ethiopian agricultural products with special emphasize to oil crops, pulses and livestock products (meat) and skin and hides.

H.E. Ambassador Genet briefed the team about the major activities the Embassy is doing in the area of agricultural production, investment and market promotion. She indicated that the Embassy approached many companies who are involved in agricultural production and processing to invest in our country and market searching for our agricultural products.

As a result, they selected some interested companies to link with Ethiopian exporters and producers. She is also introduced us a newly assigned agriculture technical person whose responsibility is to facilitate Ethiopian agricultural investment and marketing in the Embassy. At the end, the team and the Embassy were agreed strongly to collaborate in linking of the Indian importers and our agricultural products exporters. Ethiopian Embassy is expected to nominate the potential importing company and send to Ethiopia where the team is agreed to facilitate local marketing information to stimulate local exporters to link with Indian importers based on our embassy recommendation.

**Visit to APEDA (Agricultural and Processed Food Products Export Development Authority).**

H.E. Ato Meheretab Mulugeta took the team to APEDA Head Office, and where the Officials of APEDA have warmly welcome the visiting team. After introduction to each other, the officials of APEDA briefed the team about the over all working activities of APEDA using power point presentation and promotion video film. From the presentation, the team understood how APEDA organized and conduct to support exporters in terms of capacity building, infrastructure development, market access, and market promotion.

They conduct capacity building by giving training and awareness creation, and also rendering research and development packages. They also provide consultancy services.

### **APEDA promote the following major products**

1. Meat and meat products
2. Poultry and poultry products
3. Dairy Products
4. Fruits and Vegetable products

India exports its agricultural product to both developed and developing countries. According to the APEDA's chief explanation, their export is increasing at an increasing rate to both developed and developing countries. India is the highest meat producer, second largest egg producer, and first milk producer in the world.

Based on the interest area of the team, the official focused on meat production and meat export of India. They explained that India has enough livestock to supply the export market. They have also enough facilities for export items like modern meat storage and well trained personnels. India has the highest number of Veterinarian in the world. APEDA conducts annual inspection to all meat industries in terms of quality, quantity and price.

Activities of APEDA are complimented by well organized government institutions. Such as:-

1. Research and Development (R & D)
2. India veterinary Institute (IVI)
3. Nation Dairy Research Institute (NDRI)
4. Meat Technology Institute (MTI)

### **Major Livestock Product for Export**

1. India exports Deboned frozen buffalo meat to Malaysia, Egypt, Philippines UAE, Saudi Arabia, etc. Some of the questions raised by the team to the officials include the analysis of the livestock export support, for instance, how

they help the exporter in the area of capacity building, market links, dissemination of market information.

At the end, the team asked the official how they can assist Ethiopia in the area of capacity building of meat technology, specially how we can get expertise in meat cuttings or meat fabrication. The official indicated that they have potential sources for this specific task, so in the future, they will be communicated to get a solution.

### **Super Limited Shoes Company Visit**

This company has 2 leather tanneries. The company is using simple and efficient technology in which different departments of leather processing for choices is very organized. They produce different types of shoes for local and export markets. They indicated that similar to meat industry the Indian government is also taking care for their leather industries.

The owner of this company wants to invest in Ethiopia. The team indicated the current situation of leather industry in Ethiopia and the possibility of investing in Ethiopia. They replied that they will come to Ethiopia very soon for investment situation analysis.

### **J.S. International Meat Factory**

The delegate was warmly welcome by the Managing Director and owner of the company. After welcoming, the production Manager, with his group, were assigned to assist the team and help to visit the processing factory while on production. The visit was started from finished products. Finished products were fabricated meat products which are of higher standards.

### **Major Observation in J.S. International included**

- Well organized and trained personnel
- The company equipped with the highest technology
- The process of meat products starts from ante-mortem inspection which take at least 24 hours before slaughter and then slaughtering with high degree of sanitation, hygiene and quality. After that the post

mortem inspection carried out in different areas. The approved carcass goes to the chiller room for about 24 hours.

After that, the carcass is taken out from the chiller room to deboning room, deboned and cut in to special cuts, packed labeled and frozen in -30°C and store for export.

- The inspection is helped by laboratory facilities, which is equipped with latest technological instrument and plentiful reagents, and well trained lab technicians.
- The main objective of this laboratory is to conduct microbiological and chemical analysis of meat and meat products.

The microbiological analysis include E-coli, salmonella etc.

The biochemical analysis includes PH of meat, water chemical analysis etc.

### **Animal supply**

Three types of marketing networks were established for their animal supply.

These are:-

1. Farmer – assembler-supplier-factory
2. Farmer- supplier- factory
3. Farmer-factory

These all are located with in 100 km radius of meat processing factories.

- The supply is from small scale farmers who own up to 15 animals each. In this case there is similarity with Ethiopian animal supply. But small scale farmers of India, their animals are identified by ear tag system, which is very helpful for traceability.
- The final product is loaded to the thermo king car to Mumbai for export.

The major importing Countries of Indian meat are Egypt, UAE, Saudi Arabia, Oman, Iran etc. The inspection is strictly adhering to prescribed norms for disease and general health of the individuals and certification is given accordingly.

Livestock are inspected before they are purchased at livestock markets by the company veterinarians, and sent only healthy animals to the factory. The payment to the animal is based on carcass weight.

### **Indargo Foods Limited**

Indargo Foods Limited (**IFL**) is part of Allana Group, which is the largest exporter of processed agro products from India. Presently Allana's accounts for about 55% of the meat export from India.

IFL in the State of Uttar Pradesh was set up in 1998. This facility is an ultra modern, integrated and state of the art meat preprocessing complex, which complies with the stringent international design standards for Abattoir/ Meat Plants incorporating EU and USDA standards. It is equipped with fully automatic, wet rendering system to process the inedible materials into sterilized Meat and bone meal and tallow.

### **Abattoirs**

The abattoirs comprises systems for mutual halal, mechanized overhead rail, saws for dehorning, brisket splitting, carcass splitting, leg cutter etc. It also has a mechanized hide removal machine and moving top evisceration table for inspection of the offals. Needless to mention that all the equipments are of stainless steel and sterilizers are available at all relevant areas. By products are disposed via commercialized operation.

There are two mechanized slaughtering facilities having a capacity to slaughter a total of 1000 buffalos per day.

We have also been informed that the facility is certified as per the ISO-9001 and the HACCP standards, more over it is under the process of getting ISO-14000 certification for environmental aspects.

All the meat export establishments are regularly inspected and certified by APEDA, Ministry of Commerce, which is a Government body with a mandate of regulating the meat exports from the country.

***The main features of the integrated meat processing are as follows:***

**Anti Mortem Inspection (AMI)**

There are numerous covered lairages having well slopped and concrete flooring and sufficient water troughs. The total holding capacity is about 3000 buffaloes livestock.

AMI is performed by competent designated Government Veterinary authorities. They are strictly adhering to the prescribed norms for diagnosing livestock diseases, pregnancy diagnosis, and general health of the individual animal. Certification of conformity is given accordingly.

It may be noted that animals are prescreened at the livestock markets by the company Vets before they are purchased.

**Post Mortem Inspection (PMI)**

PMI starts as soon as the animal is held. Veterinarian checks whether bleeding is efficient and adequate.

**The major inspection parts of the animals include:-**

- Examination of foot, udder, penis, male and female genitals and their lymph nodes.
- Examination of stomach, membrane and associated lymphnodes (LNS)
- Lungs : Lymph-nodes and bronchioles inspected
- Liver : Lymph-nodes, gall bladder and whole other organs.
- Heart : - Pericardium
  - Valves
  - Whole organ
- Kidneys- Lymph-nodes and organs
- Spleen- whole organ
- Carcass

- Head- Lymph-nodes
- tongues
- associated muscles

After the above thorough inspection, the company inspectors with the District government inspectors give the final judgment to the carcass and offal according to OIE and FAO guideline. Separate enclosed lockable detention and condemnation rooms are available for this purposes.

### **Personnel/Plant Hygiene and Sanitation**

- The plant has been designed and purposely built according to the constructional standard and accrediting to EEC rules.
- In all the processing areas, the impervious and drained tiled flooring and ceramic tiled walls up to the height of 10 feet has been maintained here.
- At the end of the slaughter and processing operation, experienced and trained special task force is always there to carry out the sanitation and disinfection of the entire plant according to the procedures of the hygiene documents. The next day, they determine the level of sanitation and the laboratory personells takes surface swabs to checks for bacterial load.
- Foot and vehicle baths are available in different required areas for disinfection.
- Personal hygiene is controlled by the supervisors at all times.
- Workers of each department of the plant has different color uniform and any inter departmental movement is strictly controlled and monitored to avoid cross contamination.
- Detailed for physical and pathological examination (health certificates) of each worker is under take twice a year and recorded. Random checks are performed specially from the slaughter and deboning section.

### **Carcass Chilling Rooms**

Eight chilling rooms with a capacity of 3200 animals are available in which carcass is stored for about 24 hrs at temperature 0 to +4°C.

### **Deboning Section**

This section is directly connected by overhead rail, where in the carcass are removed from chillers to deboning hall. Prior to deboning, the examination is done for each carcass. The PH should be less than 6. The deboning hall is regulated to attain 15°C. About 200 experienced and trained butcher/workers are assigned for deboning and deglanding of the carcasses.

### **Meat Grading and Packing Section**

This is connected to the deboning hall by conveyors. Meat is graded and put in poly bags prior to freezing .

The main activities are controlled by the veterinarians from the company and checked by state veterinarians.

### **Freezing Sections**

There are a total of 9 blast freezers each with a capacity to freeze 15 tons of raw materials in a period of 8 hrs. The freezing is at - 40°C using pumped ammonia system. There are a total of 21 plate freezers. Each plate freezer can accommodate about 1200 kgs of meat at one time and each load is frozen at -40°C in approximately 90 minutes.

### **Packaging rooms**

These rooms are connected to plate freezer hall and the blast freezer rooms to ensure that the meat is put in the carton immediately and the removal of the plate freezers, with the assistance of 8 automatic strapping machine and 2 automatic shrink wrapping machines.

### **Cold Storage Ware Houses**

There are a total of 10 rooms with ground + mezzanine level to accommodate 5,450 tones of frozen products. All rooms are maintained at a temperature of -18 to -21 0c, where the cartons are stored prior to export.

### **Rendering Plants**

Two continuously operated rendering plants were installed having a combined capacity of 15ton/hr. In this plant, all by products like Bone and blood meal are used for poultry feed.

### **Regulation of plant room**

The plant is computer controlled, where the temperature is monitored automatically resulting in power savings.

### **Power supply**

The company has got independent feeders through government power board for about 4500KVA for insuring uninterrupted power supply. In addition the company has also invested on generators with a capacity of 6000 KVA to use as standby.

### **Water**

Pre-chlorinated water is supplied by the local municipal which is stored in over head storage tanks. This is regularly chlorinated prior to usage in the processing areas.

### **Effluent treatment**

An ultra modern efficient effluent treatment plant is installed to treat the contaminated water prior to discharge from the factory. The treated water is ultimately discharged into the company owned farm lands, where various agricultural products are grown.

### **Utilities**

The company has got facilities for the worker like canteen, changing rooms washing rooms, medical facilities etc, for all their requirements.

### **Quality Control Laboratory**

The company is equipped with best quality control labs in India, meets international standards for both microbiological, biochemical analysis of frozen meat and processed meat.

How ever APEDA of India under takes the compulsory pre-shipment examination and give certificate for all export consignments of both products in their own laboratories and exports are permitted only after presentation of official sanitary certificates.

### **Microbial section**

This room is equipped modern instrument and testing facilities to undertake:-

- Analysis of meat at various stages during its processing to frozen meat, and canned processed meat products.
- The pre-shipment testing of the finished goods prior to exports for the companies own record.
- Water analysis determination of overall hygiene of the plant by conducting the surface checks routinely in the slaughter hall, carcass chillers, deboning hall meat packing section and cooking and canning departments.. This work is carried out by graduate microbiologists under the direct supervision of a senior experienced manager with post graduate degree in public health and microbiology.

### **Chemical section**

This section undertakes the analysis of processed canned meat products for fat, protein moisture, residual NaOH, NO<sub>3</sub>, salt and trace elements like tin, arsenic, Cu, Zn and Hg. Live stock by products also tested similarly. Water is treated for hardness and chlorine level and treated effluent is also tested for BOD, COD total dissolved solids and other critical parameters.

## **Conclusion**

The purpose of work visit to India is to learn how the Indian government supports meat export industries, to visit Indian meat industries and learn new technologies and to link Ethiopian meat industry with Indian meat industry. This link can help both countries to help each other in the area of capacity building, investment and market promotion. Based on the above mission, visits and discussions were made with APEDA, Allana son meat industry, J.S. international meat industry, super limited shoes factory and Ethiopian diplomats there.

The work visit was conducted on meat production and processing through all value chain in which all participants get valuable information.

All Ethiopian delegate participants indicated that they realized the difference between India meat industry and Ethiopian meat industry where they picked new information from visit made. They indicated that they found the visit valuable to their future work careers. Also they mentioned that they will apply what they gain from the visit. The delegate from EMDTI has got new information which will help to give support to Ethiopian meat industry. In addition the contact to the visited organization will be continued to get help in the area of capacity building.

The visit created very good forum to MoARD, the Agricultural Investment Support Directorate. The Director of AISD discussed many things with Indian

potential investors and the Ethiopian diplomats in India. In general the visit was successfully carried out and indispensable to the participants, and also what is collected and learnt there will be used to push the meat industry one step ahead from where it is now.