Mr. Edwards mentions that it is not obliged to go through the Warehouse Operator. Farmers can also directly go to the market, however not always the knowledge to create business models exists on the ground.

Ms. Ellen Mangnus from the KIT mentions that research can help in analyzing in which settings these mechanisms could work. She raises the question whether these systems would work in thinly-populated areas. So how rural can you go with this approach? Mr. Nijhoff mentions that indeed the subsistence farmers are not in the picture as volume is needed. But research could look/identify a sort of break-even point of how ‘rural one can go’ for warehouse operators to be commercially viable and for linkages to the Exchange to be possible.

Mr. Frits van der Wal: mentions that in Ethiopia there is awareness of the model although they are not yet ensured of the benefits. He suggests to see if there are linkages and examples provided by ECOWAS / COMESA / CAADP. What works there and what not? Find out what are the principle structures that need to be in place. What are the thresholds needed, e.g. how mature should the private sector be? Mr. van der Wal suggests to conduct a comparative study on e.g. ECOWAS and also to bring warehouse operators together. He mentions that this is where knowledge institutes can play a role and he notes that IFPRI is working in this area and that we should link up with them.

A course participant mentions that training of farmers is also directly necessary. You need to go to the ground to reach the farmers. According to him, the focus should not only be on entrepreneurs but also on farmers in order for them to understand that there is a system beyond that of dealing with traders.

Main conclusions & recommendations from the case:

- Policy
- Infrastructure
- Capacity Development
- Comparative Studies

## 3.4. Greenhouse horticulture and integrated pest management in Ethiopia, Carin van der Lans, PPO

After the fall of the communistic regime, the Ethiopian government introduced a free market policy at the beginning of the 90’s. The government started to attract foreign investors to obtain foreign exchange for economic growth and private companies were allowed in the agricultural sector.

Within five years time the protected cropping sector has developed rapidly. Ethiopia is an export country for flowers with the rose as the most cultivated flower. Therefore it is important to produce according the quality requirements of the market. The Ethiopian Horticulture Producers and Exporters Organisation (EPHEA) has taken the initiative to develop a code of conduct. There has been a project in the Ethiopia-Netherlands Horticulture Partnership Programme, in which Wageningen UR and EPHEA worked together to develop this Code of Conduct. A closely related project is also operational in the field of Integrated Pest Management. IPM enables access of Ethiopian products on the world market.

a) What business intervention took place
The case describes the introduction and scaling-up of Integrated Pest Management on Ethiopia farms and in the industry. In the project both growers, extension agents, and researchers were trained and supported in IPM. Also a supply chain between a Dutch supplier of natural predators and the growers in Ethiopia was set up.

b) What local greenhouse floriculture entrepreneurship and activities took place?
c) What has been the spin-off to the local rural economy?
In this case the intervention can be seen as a first step in a totally new development towards sustainable production. Therefore effects are in the field of services development and capacity building (not new agribusiness or development of local economy). The two most important spin-offs are:
- Training of farm managers in IPM and training of trainers-to-be
- Development of new type of professionals (by linking research training with on-farm trials).

The project has strengthened the role of EPHEA in the industry. A phytosanitary lab was set up that collaborates with the Dutch Plant Health Services.

d) How was local floriculture business catalysed or hampered?
Catalysing factors:
• Conviction of Ethiopian government and industry of the importance to introduce IPM as well as to change the knowledge infrastructure.

Hampering factors:
• lack of knowledge of IPM at farms
• no local companies that can supply natural enemies
• poorly organised logistics between airport and farms with negative effects for imported insects

### *3.4.1. Discussions on the case*

**Market intervention**
Protected cropping production started in Africa in the early 1990's and has been expanding since. The initial market was mainly Europe. The main reason to move to Africa is that total production costs are very low even when high (airfreight) costs are taken into consideration.
In Ethiopia protected floriculture started just 5 years ago. It now covers about 900 ha. and involves 40 entrepreneurs. Of these about half are Ethiopian nationals and about half Dutch growers with a few Israeli's. The initial impulse for the start of this sector was the arrival of Dutch greenhouse growers.
The Ethiopian government says it is keen to attract foreign investment and has created a number of incentives for the emerging sector:
- building greenhouses that can be leased so that starting businesses are not restrained by high capital costs. This was questioned by participants 4 with experience in Eth. (see below).
- supporting the setting up of some infrastructure facilities

- not taxing import of inputs needed for the sector.

To date domestic suppliers of the following necessary services/inputs have set up:

- Irrigation
- Labour
- Packaging (cardboard local, plastic imported)
- Producer and export associations
- Handling/storage (these are necessary because international flights are irregular)
- Joint ventures, focused on plant material and new varieties

Services not yet available:

- good laboratories: e.g. for water, nutrient analysis
- sufficient greenhouses
- etc.

All output of the sector is meant for the export market, no domestic market to speak of exists.

For details of the IPM case see case study provided.

Brief reference was made to South Africa (RSA). There a flower auction was set up 1945 and is now the largest in Africa. This is largely for the domestic market, with about 25% for export.
As a result of international boycots due to the apartheid regime, the RSA greenhouse sector was cut off from all external markets. Nonetheless, it continued to exist to meet domestic demand and is now a self-contained sector. Almost all inputs are available nationally except very advanced production technologies.
See the case paper for more details.
Training programs set up with farmers. MSc at the university where necessary links made to farmer experience.

**Factors that helped catalyse the sector and supporting ABC to date:**

- Based on literature the presenter concluded that the enthusiasm of the Ethiopian government has been a key factor by helping create an positive investment climate. Those in the audience with experience of Ethiopia were surprised and said their experience was that the government was more of a hindrance than a help (see below).
- It is unclear whether leased land and facilities are transferred in ownership after 9 years? Doubt from the audience.
- WUR involved with setting up a new curriculum. Vocational training?

**Factors that have hampered the sector:**

- A significant lack of knowledge, requiring intensive training of local farm managers. NL farmers visit farms but not are not present year-round so must rely on national managers.
- Lack of business understanding among (government) partners hampering necessary business decisions.
- No local providers of natural predators (for IPM), so must be imported.
- Poor logistics for getting the predators from Europe to Ethiopia in timely and healthy manner.
- Many government regulations.
- Government supported monopolies of key services and infrastructure:
    - o There is a virtual monopoly of transport by “Ethiopian Airlines” who have no tax to pay but are unreliable. Other more reliable airlines must pay very high taxes and cannot compete.

  - Land tenure: all land is government owned meaning there is a high risk for foreign investors looking at sinking capital in fixed assets.
- Poor infrastructure. Though the rapid (within 5 years) development of the current cluster of services is positive.

**Wider impact?**

- Serious doubts about long-term impacts. Covered cropping in Africa has already demonstrated that it shifts from country to country in search of cheapest costs. Companies/government must be aware of future cost base development and necessity to compete in short and long-term term.
- Floriculture in Ethiopia is inherently export market, nothing internal.
- Comparison with India: how will this development help Ethiopia as a whole? In Ethiopia: limited employment opportunities, foreign currency generation, a few services. But all is for a volatile export market and serviced by high-tech companies. In India there is a large and growing domestic flower market. The producer base ranges from small-scale producers to high-tech companies, all benefit from local markets ranging from low-tech daily markets through to high-tech auctions.

**Recommendations/ideas:**

- Comparison with Latin America: set up low-cost greenhouses aimed at less stringent markets. First though a market scan is needed to determine if there is an alternative market that can be built on.
- When planning a start-up sector assume that the initial market demand will be temporary and plan for that? I.e. broaden initial focus of investment impulse.
- Couple foreign investment in high-value products with lower value, more basic needs focused production for local market. Skills and services from one can generate/support improvements in the other. Can be made a subsidy requirement.
- Research alternative market opportunities with existing skill set.
- Make joint venture a condition for investment (is operational in Eth.) A local partner can gain easier access to domestic inputs. Also builds up the local capacity in case foreigners leave. BUT:
  - Often low business understanding among local partners. Takes a lot of time to make decisions.
- TRUST, TRUST, TRUST. Tackle any culture of distrust. This can have an experience basis: foreign companies have set poor examples, local partners focus on short term.
- Enable diversification: promote new market opportunities among existing clusters of services that are often single value-chain focused; support them in identifying opportunities in other sectors. This is a risk-reducing strategy.
- Education/farmer training should be an integral part of intervention for local capacity building.