HORTIN II Co Innovation Programme

Towards cost effective, high quality value chains

Sweet Pepper supply chain development
Mission April 2009

HORTIN-II Mission Report nr. 33

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The purpose of the HORTIN-II programme is to contribute to the development of cost effective high quality value chains for vegetables and fruits. Among others this can be achieved when technology development takes place in close collaboration between public institutions, farmers and private companies.

On the Indonesian side the programme is carried out by the Indonesian Centre for Horticultural Research and Development **(ICHORD),** Jakarta, with the Indonesian Vegetable Research Institute **(IVEGRI)**, Lembang, and the Indonesian Centre for Agricultural Postharvest Research and Development **(ICAPRD)** in Bogor.

In the Netherlands the Agricultural Economics Research Institute **(AEI)**, Den Haag, the Agrotechnology and Food Sciences Group **(ASFG)**, Wageningen, Applied Plant Research **(APR)**, Lelystad, and WUR-Greenhouse Horticulture **(WUR-GH)**, Bleiswijk, all partners in Wageningen University and Research centre, are involved in the programme.

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Executive summary

For the April mission, from the Netherlands preparations for the “restart workshop” were directed towards the objective of having all market actors of sweet pepper chains participate in the workshop to discuss structure and functioning of the sweet pepper chain; have them confirm identified gaps and opportunities; and together have all stakeholders define and rank market-based solutions for follow-up by Hortin. During preparations of the workshop this resulted as not feasible, after which the workshop contents were adapted in a meeting with the Hortin team (Olga, Iskandar, IVEGRI) in Bandung a day before the workshop. Workshop now focused exclusively on the introduction of innovations in one particular supply chain only (Cisarua cooperative - Emerald Company) for export.

The workshop resulted in the request by the participating actors of the export chain to develop alternatives to signaled lack of farmers’ commitment within a pilot project.

On the basis of the meeting with Emerald and farmers’ ambitions to receive credit for the cultivation of sweet pepper; a possible intervention in the export chain was discussed with Rabobank, which might prove of benefit for all stakeholders:

- Emerald giving incentives to farmers complying with GAP and sales via cooperative;
- Individual farmers getting access to credit, which may prove to be an incentive to improve commitment and having farmers demand from group staff more transparency in financial administration (monthly cash flows) and in product flow (planning and realization); to comply with bank requirements.
- Bank gets opportunity to learn small holders business models and work with coop with reduced risk;
- Hortin can monitor the impact of loans to farmers via the coop on the level of implementation of internal administrative systems; and on commitment of farmers to group marketing and compliance with market criteria (pesticide use). The interventions would be the working of the new tripartite credit scheme, and actual operation of internal administration so far was not implemented by coop staff.

Rabobank gave two possibilities for a tripartite credit scheme: 1) commercial credit, with interest rate under 10% (only possible with 2 or more year credit); 2) soft loan, only possible if Rabobank Foundation subsidized the loan. Hortin could support second option by visiting Rabobank Foundation in the Netherlands. The second option could take more time to arrange.
The supply chain facilitator (Iskandar) was given the task to further elaborate the potential pilot project with indicated parties.

In general, the supply chain focus is relatively new for the Indonesian counterparts, and they are still in a learning process on methodologies of how to collect information. How to analyze and apply this information so to rouse the interest and commitment of market actors is the next step in the learning process, which has to be done on the job because of the time pressure to have a pilot project running. The Hortin program has not (yet) fully succeeded in connecting to market actors’ ambitions with information-on-demand.

There is a need to elaborate more on the benefits and use of a supply chain analysis; considering the doubts expressed by IVEGRI on the utility of producing reports and expressed strong producer focus. Ownership of the supply chain development program is still lying with Dutch counterparts; hampering progress. The mission ended with doubts on the participation of IVEGRI in the sweet pepper supply chain for monitoring the pilot project.

The activities during the April mission were also dedicated to further explanation of supply chain research (for example the difference between a supply chain and a value chain; and that the latter is not always preferable to the first) and on-the-job training of the supply chain facilitator (explanation on the process of finding and negotiating incentives for participating in a pilot project).

Supply chain facilitation consists of several tasks for which specific competences are required:

- systematic information gathering to allow market actors and researchers more insight in the functioning of the sweet pepper supply chains and of the positions and ambitions of market actors therein;
- coaching of market actors /stakeholders for the building of (new) partnerships, including political negotiation;
- entrepreneurship to recognize and use opportunities to propose market-led interventions.

1. Workshop for analysis of sweet pepper supply chain

The April 2009 mission had as purpose to present to all stakeholders with the available information on the sweet pepper supply chain, analyze these; discuss potential pilot projects for the introduction of innovations, and reach preliminary agreements for new market alliances among project partners with roles and responsibilities.
As previously market partners had been visited separately to get to know their perspective on supply chain development, the workshop would serve to have sweet pepper supply chain actors, from producer to retailer, present their viewpoint in the development of the market chain for sweet pepper / vegetables to each other, and discuss strategic options and priorities for the whole sector including market development.

During the kick-off meeting in Wageningen in January 2009, it had become clear that there was still some confusion on the main concepts of the Hortin supply chain development program. A short summary with main concepts and approach for the development of a pilot project was sent to all involved. See Annex II.

1.1. Preparation of the workshop

During 2008, several market partners, from farmers to supermarket, have been visited and interviewed, so a lot of information was available from the Hortin mission reports (9 to 12). The supply chain facilitator was asked to make a short review and summary of available information, to be used as input in the workshop and be analyzed together according to the following questions:

a) Who are the main players in the sweet pepper supply chain?
b) What are the bottlenecks they are experiencing?
c) What solutions do they see for these bottlenecks?
d) What are the opportunities they see for supply chain development?

As the required information was not forthcoming from Indonesia, in the process of preparing for the workshop from the Netherlands a fact sheet on market partners in the sweet pepper supply chain was elaborated, see Annex IV . Also a summary of trends in the vegetable retail sector was elaborated (see Annex V, source World Bank report), with the major conclusions:

- 20% of vegetables sold in supermarkets are imported (China, Thailand), which is attributed to price and quality.
- Only a small part of small horticulture farmers (11 to 15%) participate in the supermarket retail supply chain, mainly via specialized wholesalers. They benefit with a profit rate of 10 to 30% higher than those of farmers in traditional marketing channels. These farmers belong to the upper stratum in terms of landholding and capital (irrigation tanks, educational level)
- Domestic supply chains are severely constrained by poor logistics

1.2. First outline for the workshop

In accordance with the previous, a 2 days program for the workshop was made. During the first day the focus would be on explanation of general concepts of supply chain (development); to have viewpoints on chain development from the different actors, and to discuss possibilities from two different angles: aiming at market amplification, or aiming at adding value. The second day would focus on the formation on new market alliances; reaching agreements on specific commercial transactions, and define concrete tasks in time, and its character thus be less plenary. See Annex VI.

Based on the program, an agenda was made for both days (Annex VII and Annex VIII), as well as accompanying PowerPoint presentation.
In his feedback, the supply chain facilitator (Iskandar) expressed doubts on inviting competing companies to the workshop, as he found that they would not be willing to participate freely in discussions. Furthermore there was a strong focus on having the cooperative in Cisarua benefit form the potential pilot project. When it became clear

that the participation of several market actors was doubtful, probably because the invitation stated as condition that participants had to guarantee commitment to enter into a pilot project, set-up of the workshop was revised in a Skype meeting between Olga and Iskandar (Annex IX).

Observations made:
- Hortin had not yet been able to connect with the ambitions of market partners down stream in the market chain and show its added value in services of facilitation and produced information.
- Market partners had shown reluctance to be "set-up" with partners assumably preferred by Hortin. It would seem that the perception among market actors was that Hortin would want to include the Cisarua cooperative in the pilot , narrowing down options for other types of pilot project of interest to other market partners (preferred suppliers to retail);
- Market partners had expressed fear that confidential information would becomes public by participating in a pilot project;
- Preference by market actors to work at new marketing initiatives outside of the Hortin program.

Within LEI it was discussed that trying to convince retail to enter at this stage would signify re-entering in a negotiation process for a pilot project; which at this stage was not preferable. Thus the elaborated agenda for the workshop was put on-hold until further discussion with IVEGRI and Iskandar.
On request of Iskandar, the mission was postponed with one week. In that time, a pre-workshop was held with sweet pepper farmers, in which a problem tree was elaborated.

1.3. Final workshop agenda

The sweet pepper supply chain workshop was prepared on the first day of the mission, at IVEGRI offices and with full IVEGRI staff present.
The PowerPoint presentation was considered too difficult to understand for participants. Parts were adapted, for example the word "co-innovation" was substituted for "solution".
In stead of jointly analyzing the strategic options for supply chain development regarding sweet pepper, the axe of the workshop would be to elaborate a problem tree; this time for each of the different phases in the supply chain. Then for the observed constraints, options would be discussed with participants.

It was also established that in the workshop we would differ between the external contract(s) between cooperative and exporter, and the internal contracts between cooperative and members.

Main constraints identified were the lack of volume, both in absolute terms (total volume) as relative (fluctuations in production, farmers non-complying with contracts). Improved quality, thus higher yield for export; could help solve the first problem. The second constraint of non-compliance was considered due to fluctuating prices with farmers opting for the best price. Another issue identified particularly by the exporter, was the amount of residues found on the sweet pepper, which had already resulted in several rejected containers in Singapore, leading to losses.

The workshop concluded in a discussion on the perceived lack of commitment by farmers. Hortin was asked to develop a pilot project addressing this problem. However, the concept (definition) of commitment was not discussed and agreed upon in the workshop, due to a lack of time. As a result, market partners left the responsibility for formulating and initiating a pilot project to Hortin (IVEGRI), in stead of Hortin following market initiatives and strategic ambitions.

The minutes of the workshop, elaborated by Iskandar, can be found in Annex XI. For the Dutch counterpart (Olga) it was difficult to participate in the workshop; less so try to direct its course, because of language.

2. Designing the pilot project

2.1. Meeting with Emerald export company (Mr. Komar, director)

The day after the workshop, a meeting was held with Emerald Company (Iskandar, Olga, Mr. Komar).

New information on the ambitions of Emerald surged during that meeting:

- Emerald Company is dedicating time in supporting the farmers of the Cisarua cooperative so they will comply in volume and quality
- Within the coop increase in price is stimulated by withholding production, thus speculation takes place
- Emerald knows which farmers (around 10) comply with good agricultural practices and volume
- Emerald had the idea to start to work with those farmers and give them preferred contracts (through delivery of input services, like seed, capital); nevertheless this is not possible as the exporter cannot work directly with members of the cooperative.
- Emerald is a client of Rabobank but has not entered a scheme in which the company gives collateral for the cooperative, as compliance is difficult to control

Mr. Komar expressed that he would wait for the Hortin proposal for a pilot project, after which he would decide whether he preferred to start working directly with some new ideas he had, resulting from the workshop. He expressed to have benefited from the workshop because he was able to identify people with the right attitude to work with.

2.2. Designing a proposal for a pilot project

Based on previous information we had on applications by the Cisarua cooperative for credit, a pilot project was designed (Monday), which was presented to Rabobank, Bandung branch, the following day.
The crux of the proposal was to start with a tripartite pilot project between the Cisarua cooperative, Emerald Company and Rabobank, for financing members of the coop complying with specific requirements. This would include a more transparent administration by the coop.

On Monday, Iskandar and Olga, while making the presentation, discussed the incentives that the pilot project would provide. Earlier IVGRI had asked about whether the training to the Cisarua cooperative in 2008 on management control systems had been demand driven, and whether this could be said for the whole supply chain development part of Hortin. The other question by IVEGRI was whether the potential proposals for a pilot that were discussed, would really cause market to expand or value to be added, or just be to the benefit of one of the partners in the pilot project (retail / exporter).
In the first meeting with IVEGRI we had established that the training to the cooperative had not led to changes in management. Nor had agreements between Hortin and the coop management been complied with, for example to give a break down of price of one kilo of sweet pepper with analysis of costs involved during the General Assembly; probably also due to a lack of follow-up (pressure for compliance) towards cooperative board by Hortin.

Another element to be taken into account was outcome of the workshop to describe and give solutions for the lack of commitment by producers. Thus the pilot project would need to provide incentives to producers and cooperative management.

Summarizing, the problem tree during the workshop had given as main problem the fluctuation of supply, which the pilot project would need to address. This was regarded as due to two kinds of bottlenecks: technical and organizational.
The technical problems consisted of the seasonality of production (caused by climatologic and agronomic conditions); while availability of capital was also seen as barrier to a more constant supply.

The organizational problems were seen as caused by producers (member of the cooperative) selling outside the group (due to high local price); and producers retaining supply to influence price by creating artificial shortage (speculation).
For Emerald, the exporter, the incentive for participating in the pilot and to give collateral to the farmers' group, was twofold: to solve the risk of exceeding residue levels, and to obtain continuity in supply. Thus the pilot project requires and needs to give incentive to those producers who comply with Good Agricultural Practices (no residues found). This means that the cooperative needs to start to record farm practices. Credit will facilitate earlier renewal of plants, leading to higher costs but also higher yields per plant and better quality.
Both Rabobank and the exporter Emerald require transparency in administrative operations. Good farm practice recording and tracing and tracking guarantee the exporter that his support to the pilot benefits those producers complying with GAP; while the Rabobank needs to analyze the feasibility and outcome of the credit.

Hortin has given capacity building to the cooperative in planning and budgeting systems (2008), the credit scheme will give the incentive to the cooperative board to start implementing the systems. The assumption is that farmers will pressurize their management, if the credit scheme prolongs after one year to involve more farmers, providing the pilot project has been a success with on group / producer administration
So farmers will participate in a pilot project if it generates:
- Improvement of production capacity and increase of protected area (greenhouses)
- Implementation of Standard Operation Procedures (GAP) and improvement of (group) management in general
- Improvement quality (yield for export)
- More (working) capital
- Improvement of commitment by members of group

Finally, with the pilot project Hortin innovations will have been introduced with a new partnership including a credit institution. Possible elements to monitor are whether the pilot project makes the cooperative function more efficiently (for example diminishing payment period or higher price to producer), creates more transparency; and has positive effect of product flow (total amount and fluctuations).

The incentive for the Rabobank is that it will obtain, as leading cooperative bank in agribusiness; a business model for smallholder group support in horticultural commodities. Further more, involvement in an innovative pilot project will give it opportunity to engage in a shared learning process without major risk.

As conditions for the success of the pilot project, the following elements were named:
- Selection of a small group of beneficiaries; including preferred suppliers by Emerald;
- Perspective of inclusion to credit scheme for other producers falling outside pilot project

HORTIN will support the establishment of systems and monitor data generation (but without guaranteeing veracity). See figure.

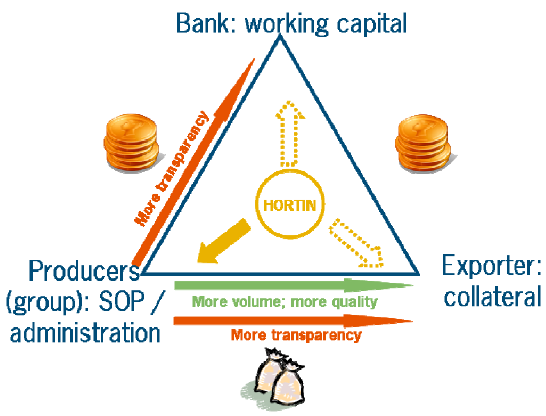


Figure 1: Tri-partite pilot project with monitoring by Hortin

2.3. Presenting the pilot project proposal to the Rabobank

The branch manager of the Rabobank in Bandung, Mrs. Kwik Sri Kinarsih, was positive about getting involved into a credit scheme for sweet pepper, particularly since the Emerald Company (exporter) is a client and possible ways of financing its operations had already been discussed.
Possibilities of flattening the interest rate were discussed. This would be possible by involving the Rabobank Foundation, which would enable interest rates of around 6%, but procedure would take longer to finalize, which would mean that the pilot project, scheduled for 2009, would not be working with the credit scheme itself.

With a commercial credit, the Rabobank would look at possibilities to keep it under 10% by extending its duration, and would be able to decide on it through the national branch in Jakarta (without involvement of the Rabobank Foundation). Thus the possibilities of working with a loan during 2009 would be larger.

Finally, people form INAH would be visiting the Rabobank Foundation in May. In the case the pilot project had been approved by the partners involved and they had chosen for the soft loan, Hortin Netherlands would try to be present in that meeting, to present the agreed pilot project to the Rabobank Foundation.

2.4. Wrap-up with IVEGRI

An activities time schedule for finalizing the pilot project proposal with the involved partners was made with Iskandar. See Annex XII .

With IVEGRI, the pilot project as discussed with Rabobank was explained, followed by some first ideas elaborated on how to monitor this project. See Annex XIII.

The following two general research questions were proposed:

1. Will establishment of GAP and internal management system (IMS) improve coop / group compliance with exporter?
    - Quality (GAP and residue level)
    - Quantity
2. Will establishment of GAP and internal management system improve farmers' commitment?
    - Does business model influence formal internal communication in group?
    - Does commitment by farmer differ according to his or her profile?

Besides these two questions, it will be necessary to look at the criteria used by the Rabobank to assess the success of the pilot; and how the pilot can contribute to building a business model for out rolling.

Sub-questions include:

1. Description of innovations introduced by the pilot project and current status of main elements involved:
    - How is coop functioning now?
    - What are current Standard Operation Procedures in the coop?
    - What will change in coop functioning when starting pilot?
        - In relationship between coop and exporter?
        - In relationship between coop and individual farmer?
    - Efficiency of supply chain?
2. Definition and measurement of commitment of farmers to cooperative / procedures / contracts
3. Measurement of outcomes of pilot project:
    - Volume
    - Quality
    - Good Agricultural Practices
    - Paper trail (administration): GAP; tracing and tracking; cash flow.

The first ideas a monitoring system criteria were presented with the objective to agree on a time schedule for further elaboration by IVEGRI (who, when, how), no further agreements were made.

After the comment by IVEGRI that no budget had been included for monitoring the sweet pepper pilot project t, communication lines within the Hortin program, particularly between IVEGRI - LEI and program management the meeting was discussed, and the meeting was closed without further agreements.

3. Conclusions

After the mission, Olga had a coordination meeting with the program leader, Arij Everaarts, to find out that Myrtille Danse is contact person for LEI within the Hortin supply chain development.

Arij suggested to develop an activities program per week for the rest of the year, so we are clear on the role and responsibility of each party (IVEGRI, Iskandar, team LEI) for the sweet pepper supply chain.

For this, it is indispensable that each pilot project (each supply chain) knows how many days are available to each of the parties (IVEGRI, Iskandar) for each part.
Then we can determine proper monitoring procedures and task division between the supply chain facilitator and IVEGRI.
Iskandar can be asked to give an activity report, monthly or two-weekly, on activities of ALL projects he is involved with. LEI has hired Iskandar, so has responsibility for the outcomes of his work.

For the sweet supply chain, Iskandar is expected to produce a formal report with the supply chain analysis of the sweet pepper chain with all the information gathered during 2008; as the report will represent the output of his activities last year.

3.1. Lessons learned

- The supply chain approach is a fresh approach to the Indonesian counterparts; and there are still doubts on its utility.
- Furthermore, the concept of value chain appeared to be new to workshop participants; particularly the notion of looking at the performance of the whole chain with all market partners as one entity, in stead of looking at the performance of each company in the chain separately.
- The purpose of a supply chain analysis is to show where bottlenecks are so market partners can make strategic choices. Two approaches:
    - ⇨ researcher as provider of solutions to bottlenecks (technical perspective)
    - ⇨ researcher as supplier of information for making strategic choices and as facilitator to make those possible (organizational and entrepreneurial perspective).
- There is a lot of information available on the sweet supply chain, but it is not laid down in reports for the public or the Hortin team only. This hampers backstopping for the Netherlands, both for supporting the pilot project and for capacity building of Indonesian (market) partners.
- Market partners will not only bargain with each other for a pilot project, but also with the facilitators. This is a political negotiation process, in which the supply chain facilitator is engaged as well. The outcome of the process defines the role by each of the pilot project partners and how market driven the innovations will be. Market partners in de workshop demanding Hortin to design a pilot project means that the responsibility for the sustainability of the pilot is given to researchers and researchers are expected to engage in chain activities. As we are dealing with market arrangements, subsidized chain services by the Hortin team (setting up GAP procedures; financial control systems etc.) affect long term sustainability of the pilot results and makes it difficult to assess the possibilities of upscaling the results.
- Central direction of activities of Iskandar is needed (by LEI); and the outcome assessed against job description.
- Budget agreements with IVEGRI for the different supply chains not well defined, hampering execution of pilot project.
- The experience with the follow-up of the training of the Cisarua cooperative shows that implementation of systems is more important than trying to assess the accuracy of information or have generation of detailed information. The facilitator is not an auditor. It is important that the cooperative, both management and farmers, understand and manage the systems.
- The assumption that competitors will not want to participate together in a workshop to consider supply chain development, lead to a different interpretation of workshop objectives and potential results between the Dutch and Indonesian part of Hortin team.

Annex I. Mission itinerary.

Table 1. Itinerary of mission

Date	Time	Activity	Participants
Tue April 14	20:55h	Departure Amsterdam - Jakarta	Olga
Wed April 15	17:15h	Arrival Jakarta, departure to Bandung	Olga, Iskandar
	21:00h	Arrival Bandung	
Thu April 16	10:00-17:30h	Meeting with IVEGRI, Lembang to prepare workshop	Olga, Iskandar, Witono, Rofik, Nikardi
	21:30-22:30h	Adjust presentation for workshop	
Fri April 17	8:00-17:00h	Workshop in Lembang	See participation list
Sat Apr 18	8:30	Departure to Bandung	
	10:00-12:00h	Meeting with Emerald (exporter), Bandung	Mr. Komar (owner), Iskandar, Olga
Sun Apr 19		Free	
Mon Apr 20	10:00-14:00h	Feedback on workshop and possibilities pilot	Rofik, Nikardi, Witono, Olga, Iskandar
	14:00-18:00h	Elaboration of pilot proposal and its presentation to Rabobank	Olga, Iskandar
Tue Apr 21	8:00h	Departure to Bandung	Olga, Iskandar
	11:00-12:00	Meeting with head of Bandung Branch Rabobank International Indonesia to explain proposal on pilot project	Mrs. Kwik Sri Kinarsih
	13:00-18:30h	Feedback on meeting Iskandar, planning of follow-up	Olga, Iskandar
Wed Apr 22	10:00-13:00h	Meeting with IVEGRI; explanation pilot and preparation monitoring criteria	Rofik, Nikardi, Olga, Iskandar

Annex II. Main concepts supply chain development and pilot project approach

Methodology of supply chain development has been described in mission report no. 9, December 2007. Some main concepts; highlighting the selection criteria for action research on supply chain development within Hortin can be found in this report and are reflected below.

Pilot project sweet pepper
The role of pilot value chain projects within HORTIN II is to demonstrate partners in the supply chain and to let them learn about opportunities to transform supply or production chains into value chains. Pilots have a function to escape the current stalemate and to enter into new – publicly supported - value chain configurations.
A pilot project serves as an advance or experimental version or sample of an operation. It provides a model for future development.
A pilot reveals the aspects related to up scaling which is an endeavor of an experimental nature.
Thus, the pilot needs to cover a new chain configuration; be a model for future development, and be up-scalable.

New chain configuration
Innovation in supply chains and successful introduction of new practices will only take place when supply chain partners trust each other and jointly define an innovation and development agenda
For successful value chains, benefitting all partners three conditions should be met:

- Attitude, willingness of retailers should be favourable;
- Specific skills and level for production technology should be met by farmers;
- Public (financial) support for training, reducing initial risks, credit and facilities are needed in the early phases of development.

Co innovation
Co innovation is a process of cooperation of key actors (private sector, universities, research institutes and government) – considering their specific roles and responsibilities – who jointly define objectives and activities for attaining a joint development goal in order to achieve mutual and complementary benefits. Co-innovation facilitates market and business oriented research in which private companies (entrepreneurs) are in the drivers' seat to find innovative solutions for their problems and opportunities faced in supply chains together with researchers.
I the kick-off meeting 2009, three forms of innovations were distinguished:

- Marketing innovation (new product / new market)
- Organizational innovation (new forms of collaboration and contracts between partners)
- Technical innovation

The marketing innovation is most likely to give added value in the chain, and create a shared objective and interest of a maximum number of market partners (from seed companies, input providers to retail).

Value chain
There are subtle differences between production and value chains. Partners in a value chain have a shared chain objective and coordinate activities for the development of an specialty product. Information flow is extensive and continuous and in function of the chain objective. Instead of the market actors striving at individual company profitability, the profitability and competitiveness of the whole chain is developed. In general value chains are more profitable for all supply chains partners and are more sustainable and development oriented. However value chains are also more demanding in terms of knowledge, inputs etc. One of the challenges of HORTIN II is to transform conventional production chains into value chains.

Approach

Development of pilot project
During 2008, ample attention was given to the development of specific skills and production technology by producers, and all public actors. Nevertheless, no momentum could be build so market partners would take the lead in the pilot and form new forms of collaboration. The process of matchmaking so the market chain will take control of the development of a new value chain, will require ample attention in the first months of 2009.

Looking at the position of the stakeholders that have been approached for possible participation in a pilot project, the assessments have shown that supermarkets have identified products for which a new market can be developed; and have shown interest in participating, but not in taking the lead in developing new chain collaboration for the introduction of co-innovations. More than that, they have expressed that it should be a private party in the chain, not a public party (Hortin), functioning as a leading party in developing the pilot project, for the sake of sustainability.
The farmers who have been participating in training on the other hand, are not in the position to be the leading party, as they lack the conditions to be direct suppliers to the supermarket.
This makes that for domestic market development, preferred suppliers to supermarkets play a key role for developing new value chains; thus will have a prominent say in deciding whom to involve in a pilot.
Nevertheless, other options for value chain development may be discerned.

Monitoring
The HORTIN research team consisting of IVEGRI and LEI will get involved during the formulation and inclusion of the topics for action research. A plan for research activities will be developed and fine tuned in collaboration with partners; following the innovation and development agenda (see workshop).
Research activities will focus on:

- Monitoring of the process of co-innovation and impact assessment (base line, performance indicators etc.)
- Institutional analysis (role for public institutions)

Harmonizing technical research with supply chain development
In the kick-off meeting for 2009 it was agreed that as soon as the pilot supply chain is up and running, more intensive integration between the agronomic and supply chain research component of HORTIN II will be sought. For instance a farmers-led monitoring of technical-economic performance of experiments (currently lacking) can be linked to a monitoring and evaluation program of supply chain performance. Capacity building on IPM practices will be executed in accordance with formed market alliance for supply chain innovation.

Possible research questions.

How were agreements on innovations reached between the partners? What innovations?
What binding conditions were set by market parties for entering new partnerships? For new innovations?
Did outside facilitation help to reduce risks? What risks?
What new elements are introduced in the supply chain?

What methodology has been followed by supply chain facilitator to bring market parties together?
What bottlenecks have to be solved (organizational / socio-economical) How can governments / researchers provide support to facilitate supply chain development in future?

Annex III: Summary of sweet pepper supply chain description.

(Adapted excerpt from mail sent to Iskandar, March 5 2009)

1.- Information needed as input for the workshop. The following questions need to be answered:

a) Who are the main players in the sweet pepper supply chain?
b) What are the bottlenecks they are experiencing?
c) What solutions do they see for these bottlenecks?
d) What are the opportunities they see for supply chain development?

2.- From the information gathered under question 1, an assessment needs to be made on the probability that market players will want to collaborate to solve bottlenecks and/or develop new market opportunities.

Thus we can assess what option is most attractive for each party to invest in; and whom would be preferred as a partner to work with in a pilot project. It might be necessary to bring some market actors together in a preliminary meeting to discuss collaboration options and conditions. The objective is to have all those market actors participating who have the decision power to make commitments to other market partners on future collaboration, and who will form a complete coalition to formulate shared objectives.

These questions cover the steps 1 to 4 of the quick scan (program 2009 elaborated by Witono and edited by Rolien Wiersinga).
Point five, the selection criteria, both depend on the assessment of potential collaboration between partners; as well as on our joint assessment on co-innovation and added value. This can be done in the workshop itself with participants (and also look at potential for upscaling) and decide on the choice for a pilot together.

The output of the workshop will be an " innovation agenda" (what are shared objectives; who will work together with whom; agreements and activities in time). If the workshop goes well, the role of each market partner and of Hortin researchers will become clear from the coalitions formed and subsequent agreements made.

Annex IV. Fact sheet market actors

MataHari

- Has 2 distribution centers for organizing quality control; packaging and distribution
- Supplier of all MataHari Capsicum prodcuts are supplied by the DC of Amazing Frams (hydroponics and organic produce)
- Ambition: to become number 1 retailer in Indonesia in 2010.
- Opens 10 to 12 outlets per year (FoodMart and Hypermaket are best known formulas)
- Important issue is communication strategy on fresh quality and safety issues to their consumers. Food safety will be a crucial issue in the years to come.
- MataHari has in the past years encountered problems with the commitment (i.e quality, continuity and quantities) of smallholders and possibilities for GlobalGap certification.

Conditions to deliver to MataHari:

- Suppliers need to comply with food safety and quality standards set by MataHari with firm guarantees for compliance
- MataHari stores will be ISO 22000 certified from 2008 onwards and this will have implications for their fresh produce suppliers.

MataHari manages three food safety levels for vegetables

A. All residue limits below the Codex Alimentarius threshold levels including organic produce
B. Safe to consume but occasionally above threshold levels; bebas pestisida residues
C. Wet market quality, no compliance with food safety standards

Amazing farm

- Has packaging, washing and storage facilities
- About 10 preferred suppliers
- Supplies to leading retailers and hotels in Jakarta and Bandung
- New DC opened in July 2008 with cold rooms and packaging and grading facilities in Jakarta
- AF mobilized technical support and organizes training sessions for its members
- Members must share the vision of; organic and lowchem production and good quality products
- Ambition is to become an A-label in the market specialized in organics and lowchem

Ranch Market

- Ranch Market and Food / Farmers Market have separate supply lines. HORTIN will focus project its activities on Ranch Market.
- 7 outlets in Jakarta and is in the process of opening at least two more outlets in 2008.
- Interest in new market concepts to service their clients better. Opportunities for organic produce, flow packed sweet pepper
- Customers are aware of high quality fresh products and are willing to pay more
- 70% of all fresh vegetables that are sold in RM are organic vegetables
- Suppliers of organic vegetables need to be certified(Sucofindo)
- RM Quality Assurance team performs tests and pays random visits to production sites in the case of organic supply produce
- Preferred suppliers (AF; Saung Mirwan) enforce RM quality standards to their contract farmers
- Local product quality does not comply market requirements, for example local broccoli is yellowish of color compared to imported broccoli
- RM already offfers "ready to eat" salads, supplied by Saung Mirwan
- RM has been informed about the presentation of EWINDO products early July 2008.

Cisarua coop

- Potential supply traded through the coop is currently 5 tons per week. However it is estimated that only 20% of the total supply of the members is exported through the cooperative.

- Strong relationship with exporter. Exporter defines production scheme and monitors compliance with required volume
- Exporter supplies coop with packaging material
- Supply sold through coop has been irregular in volume
- Cooperative members don’t keep records on inputs, crop performance and other key performance indicators. For any type of future certification programs this is mandatory, but also for the evaluation of the HORTIN program itself.
- Cooperative members don’t keep records on inputs, crop performance and other key performance indicators. For any type of future certification programs this is mandatory, but also for the evaluation of the HORTIN program itself.
- Fluctuating prices at export and domestic markets often lead to opportunistic behavior of cooperative members. Non-compliance of the cooperative with contracts is a serious issue / risk.
- Apart from packing sweet peppers in industrial (30 kg plastic bags), the cooperative does not add any value after harvest. The coop does not provide washing, grading or packaging or transport facilities for their members.
- Coop has started to experiment with traffic light packaging for sales to local retail (Bandung)
- Seed companies do some try outs with the coop (mini-vegetables)?
- The management of the cooperative is interested to explore new markets such as pizza, cut salads etc.

Trends / potential pilots:

- Mata Hari: There has been a steady trend towards large scale producers because of economies of scale and easy procurement procedures. In future political pressure to source more products form cooperatives and smallholders in Indonesia may arise.
- Matahari has interest to participate in the following activities:
  - Strategy development for sustainable and eco friendly products at management level;
  - Staff training activities on strategy development and positioning of sustainable and eco-products on the shelves;
  - Consumer research on the market for these products
- Cisarua: Supply chain facilitator and cooperative management will explore opportunities to cater exclusively for new markets with retailers participating in the project. Availability and accessibility of credit facilities to enable the realization of investment in facilities for value adding (wrapping machine …?) will be explored by the project.
- Amazing farms:
  - In process of setting up a greenhouse with Cisarua cooperative.

Annex V. Trends in vegetable retail sector

(from: World Bank report, 2007)

After 1998 (spurred by liberalization of foreign direct investment in retail and complemented by income growth and urbanization and their concomitant changes) supermarket sector has grown very quickly to now occupy roughly 30 percent of overall food retail. Traditional retail loses about 2 percent of its share each year. Informed observers believe within a decade modern retail will dominate the majority of the food market in Indonesia. Key features of these changes are as follows:

(a) Industry estimates of the share of FFV retail stand at about 10-15 percent share for supermarkets. This is still minor, but up from nearly zero a decade ago, and likely to continue to grow along with the overall retail transformation.
(b) The wholesale sector has been differentiating and segmenting over the past decade, partly independently of the retail transformation, with the rise of large, and more capitalized, wholesalers in rural areas, and the decline of small field brokers.
(c) Recently there have emerged specialized/dedicated wholesalers focused on the supermarket and other modern food industry segments.

Approximately 20 percent of the vegetables sold by supermarkets are imports. This is at least double to triple the imports share in supermarket FFV sales in comparable developing countries (Mexico, Guatemala, Thailand, and China). And this share is even on the rise.
Interestingly, the smaller local chains had the highest share of imports in their FFV sales, and the large chains had a lower share of their sales from imports.

The causes of the high level and rapid rise of imports in supermarket FFV sales are attributed to price and quality: fruit and vegetables from China and Thailand in particular are usually cheaper (as products, and in terms of transaction costs) and at the same time higher quality.

Indonesian farmers trying to sell to supermarkets are severely constrained by poor supply chains –poor roads, corruption, and lacking cold chains and logistics services. Retailers see large potential for local products in supermarkets if only the supply chain problems could be resolved. To enable farmers to earn higher profits by selling into modern domestic, let alone export, channels, there will need to be a significant improvement of domestic supply chains.

Trends in local horticulture

In the 1990s rural West Java was nearly totally dominated by many small brokers. Today, in its majority it is dominated by large, more capitalized wholesalers, with still an important remnant of small brokers. This has happened very fast in West Java with a cropping pattern shift to horticulture. This shift has many farmers shifting from low-value commodity vegetables like cabbage to intermediate-value products like tomatoes and potatoes and even into high-value vegetables – climbing a “value ladder”. An offshoot of that process has been that some lead actors are shifting commodity vegetable production to islands where land and labor are cheaper (Lombok).

Farmers’ participation in supply chains

Despite the horticulture boom and the dynamic development of the wholesale sector, there is little opportunity for farmers to sell their produce graded by different qualities. That means that there still is little to no reward to farmers to produce quality. But the wholesalers sell by grades and capture the profit differences.

Depending on the area in West Java, the small horticulture farmers are starting to participate in sales to the supermarket channels, mainly via the specialized wholesalers but also via some large wholesalers, and a few groups, directly. However, the share of farmers in this new channel is small – varying between 11 and 15 percent over areas. The farmers participating in the new channel are small farmers – but they are the upper stratum of small farmers in terms of landholdings, and in terms of capital, such as irrigation tanks and education. Their profit rates are also 10-30 percent higher than farmers in the traditional channels.

Public agricultural services do not have the necessary skills and knowledge to effectively help horticultural farmers. Nearly all the farmers receive technical assistance from the agents of input companies. Nearly all credit comes from input credit fronted by local wholesalers or input companies, with basically no access to other credit sources apart from friends and local high interest-rate individual local lenders.

Annex VI: Program for April workshop, 23 March 2009

Objective of workshop
To form new marketing alliances for between chain actors co-innovation in the sweet pepper supply chain.

Outputs of the workshop:
- Intended co-innovations in the sweet pepper supply chain(s) are defined by market actors
- Agreements have been formulated between stakeholders for the introduction of innovations in the sweet pepper supply chain;
- Roles and responsibilities for each stakeholder have been defined;
- A time table has been set for activities for all stakeholders.

Day 1

Introduction on the Hortin program

Introduction to concept of the value chain:
  a. Value creation and added value (customer value; communication in chain; quality control)
  b. Chain performance
  c. Chain reversal

Exercise 1: Name examples of value chains
Exercise 2: How to add value / amplify Indonesian market (brain storm)

Key note presentations with theme: ambitions for strategic marketing development into the future. Speakers:
- Amazing Farms
- Ranch market
- Cisarua coop

Presentation by Iskandar on trends, constraints and opportunities in sweet pepper supply chain
Exercise in small groups:
Are observations correct? Please complement (constraints; opportunities)

Exercise in small groups:
Criteria for co-innovations in supply chain:
- How can we amplify market for sweet pepper?
- How can we add value to sweet pepper?

What innovations can be discerned to make amplification market / adding value possible?
How do they score on three dimensions? Please rank.

Which innovation will
- bring most market amplification?
- bring most added value to market actors in the chain?
- give new opportunities for new (small scale) suppliers / customers to participate in the supply chain (it is not just substitution of current suppliers and/or customers?)
- be easiest for duplication and up-scaling?

Please rank.

Selection of innovation and most suitable market partners for the pilot project to make innovations possible.
What are minimal conditions for each market actor to enter in partnership with others?

What are desired conditions of collaboration?

Day 2

- What is needed to make innovations possible?
- Volumen + quality of product
- Quality assurance system
- etc.

What are main threats for the success of the innovations?

- Poor infrastructure
- Lack of credit
- etc.

What are main weaknesses of market actors / stakeholders that may hamper success of the pilot project?

- Make a risk assessment of non-compliance with pilot objectives.

Annex VII. Initial workshop programme, Day 1.

As prepared by Olga before mission (March 31), with participation of all supply chain partners envisaged.

Time	Min	Topic	Concepts / Exercise	Objective	Methodology	Person	Material needed
April 8		**Introduction**					
8:30	30	Registration					
9:00	10 10 15	Introduction of workshop Presentation program Short exercise	Pilot / innovation agenda / agreements to be reached Introduction main concepts (Value chain) Give examples of value chain	What to expect / is expected Understanding of objective Hortin and pilot.	Plenary Powerpoint presentation Three working groups	Iskandar Olga	Beamer / ppt slides? Ppt slides 1-11 Slides 12&13; A-4 sheets / markers
9:45	 10 10 10	Keynote presentations Q&A	Marketing ambitions: - Ranch market - Emerald	Mutual understanding of strategies, possibilities for pilots	Plenary	Iskandar	Ppt slides??
		Value chain					
10:15	10 20	Exercise Analysis results	Amplify market / add value	Understanding of objective Hortin and pilot	Individually	Olga	Ppt slide 14, tape Flipover, Sheets,
10:45	15	Coffee break					
		Supply chain analysis sweet pepper chain					
11:00	15 15	Presentation Discussion	Trends, constraints and opportunities in sweet pepper supply chain Additions; corrections?	Conditions for pilot projects, review antecedents Views participants	Presentation? Plenary, on flip-over	Iskandar	Ppt slides?? Sheets, markers
		Innovations					
11:30	10 30 20	Presentation Exercise Analysis results	(Co-innovation) Identification of innovations in sweet pepper chain	Brainstorm on supply chain development Clustering results	PPT Presentation Three working groups Plenary	Olga Iskandar, Olga	Slides 15-37, Slide 38-39, tape sheets, markers
12:30	90	Lunch					
		Towards innovation in the sweet pepper chain					
14:00	30 20 10	Exercise & Analysis results Exercise	Qualify innovations for pilot project according to criteria	Agreement when pilot is considered successful Assess willingness to engage in pilots by actors	2 or 3 working groups Per cluster innovations Per market actor	Olga	Slide 40 Slide 41
14:30	30 30	Pilot exercise Choice for pilot(s)	Time horizon, risks, progress	Defining partnerships	Per cluster innovations Plenary	Iskandar	Slide 43
15:30		Closure					

Annex VIII. Initial workshop programme, Day 2.

Day 2: first follow-up meeting with working group per pilot project

Co innovation is a process of

- ⇒ cooperation of key actors (private sector, universities, research institutes and government)
- ⇒ considering their specific roles and responsibilities –
- ⇒ who jointly define objectives and activities for
- ⇒ attaining a joint development goal in order to achieve mutual and complementary benefits

Questions block 1: Road towards new value chain
Previously, we described development goal, and innovations needed to reach that goal.
Can these (goal and innovations) be further defined?

1. Description of final chain product / market
2. Specific goals to be met by each stakeholder => To time calendar
3. Information / research / training needed? Specify. => To time calendar
4. Investments needed? By whom? => To time calendar
5. What lessons do we want to learn from the pilot project?

Questions block 2: Commitments by stakeholders
Can the cooperation between key actors be further defined?

1. What other market players need to be invited to the partnership?
2. What are minimal conditions for each key actor to comply with?
3. What are main risks of noncompliance? How will each stakeholder guarantee risk reduction?
4. Commitments in terms of:
    a. services rendered
    b. volume
    c. quality
5. Commitments: who will do what? When? => To time calendar
6. How will coordination between stakeholders take place?
7. What information will be exchanged? How often?

Action	Name of responsible	When: (week, month)

Second follow-up meeting: for each stakeholder (internal)

1. Adjustment of marketing / company strategies
    a. supply / purchase
    b. quality control
2. Plan of risk assessment and preventive actions within partnership
3. Task and responsibility distribution within organization / company

Annex IX. Skype meeting Olga van Iskandar 8 April 2009

Key issues and conclusions for workshop agenda

Workshop attendance

- In the formal invitation the condition was mentioned that participants should be willing to commit themselves to get involved in pilot project; which might be the reason why retail and Amazing Farms did react positively on informal invitation but have not yet confirmed as reaction on the formal one
- MataHari; Ranch market; Amazing Farms do not see benefit of participating in a Hortin pilot. They already have started interesting new initiatives themselves. On the other hand, Iskandar remarked that there is a demand for market-led research from market partners.
- Olga explains that during the first day of the workshop we will NOT yet work with partnerships; but be analyzing market sector development, which is why she prefers to have as much different parties present as possible.

Interest in doing a pilot

- Retail might be interested if new market presentation with inclusion of other products is one of pilots (for example ready-to-eat salads).
- Retail / trader have no interest in doing trial investments if these do not work out: they cannot start a trading relationship with a (new) partner if this partner cannot comply.
- Iskandar views difficulties to analyze constraints and opportunities (do a kind of SWOT) with competitors present, for example two different seed companies.
- Iskandar remarks that reluctance to participate in a pilot is because of fear of confidential information becoming public.

Conclusions:

- We will do workshop with those attending. First choice for a sweet pepper pilot is the export supply chain. We will analyze added value and possible co-innovations for export.
- Start with one sweet pepper pilot project in the Hortin program with the Cisarua coop involved. Iskandar has prepared a partnership with Emerald en Cisarua coop.
- Thus NOT start new talks with retail regarding pilot for new presentation including more products (like ready to eat). They are very welcome to participate in the workshop.

When all pilots for each product (sweet pepper; hot pepper etc.) are up and running; then analyze whether it is possible to take on another pilot in a second phase.

Annex X: List of participants to workshop, update April, 15

#	Organization	Location	Name	Role
1	Hortin-IVEGRI	Lembang	Witono Adiyoga	Reseacher
2	Hortin-IVEGRI	Lembang	Nikardi Gunadi	Reseacher
3	Hortin-IVEGRI	Lembang	Rofik Sinung Basuki	Reseacher
4	Hortin-INA	Bogor/Jakarta	Iskandar Zulkarnain	Facilitator
5	Hortin-LEI	Lembang/Jakarta	Olga van der Valf	Researcher
6	Coop board	Cisarua/Bandung	Sutardi	Producer-Trader
7	Coop board	Cisarua/Bandung	Dindin Chepy	Producer-Trader
8	Dewa Family	Cisarua/Bandung	Deden	Producer
9	Dewa Family	Cisarua/Bandung	Up	Producer
10	Ermis Group	Cisarua/Bandung	Ermis	Producer
11	Ermis Group	Cisarua/Bandung	??	Producer
12	Nendi Group	Cisarua/Bandung	Nendi	Producer
13	Nendi Group	Cisarua/Bandung	?	Producer
14	Sodik Group	Cisarua/Bandung	Sodik	Producer
15	Sodik Group	Cisarua/Bandung	?	Producer
16	Emerald	Bandung	Komar	Exporter(Direktor)
17	Emerald	Bandung	Tommy Sudihartanto	Exporter(Field Spvisor)
18	Emerald	Bandung	Arie Permadi	Exporter (Production)
16	BIC	Jakarta	Endang TR	Retail Consultant
17	Rabobank	Bandung	Kwik Sri Kinarsi	Finance Institution
18	Rabobank	Bandung	Martius	Finance Institution
19	Syngenta	Bandung	Mukhayan	Pesticide Company
20	IVEGRI	Bandung	Tony Mukasan	Pest & Diseases exp.
21	EWINDO	Purwakarta	Wahyudin	Seed supplier
22	EWINDO	Purwakarta	Atmadi Saleh	Seed supplier
23	HCC-INA	Bogor/Jakarta	M. Hariyadi Setiawan	BDS

Annex XI Minutes of Workshop

1. Opening speech By Mr. Ashol Hasyim

2. Introduction of Hortin by Witono

Introduction of hortin, hortin what it is and what is done by hortin.
In the Hortin I (2003-2006) hortin research most focus on a thematic research, such as food safety, seeds health, and so on. Research was involving the private sector. In the hortin II, the theme is focus on co-innovation in supply chain towards cost effective and high quality value chan.

hortin II have two activities, technical research and supply chain improvements. Working together with various stakeholders such as farmers, private companies. Constraints along the whole chain and its solution are identified. Technical research has been conducted from the years 2007-2008. There are 3 of the selected commodities (shallot, hot pepper and Sweet pepper). For year 2009 there is additional one commodity that is Rambutan
.
Ideally, the research for the improvement supply chain must be done first, followed by a new technical research where research is a technical research for solutions on the technical constraint that are found in the research of supply chain.

3. Supply chain and value chain by Olga

What is the supply chain: all activities from input supply to the consumer. All activities related to each other and become look like as one body. What implications for export? Consumers who use the end product resulting from activities along the chain are outside the country, the competition does not occur in the chain, but with another country . Our products will compete with products that produced by Vietnam, Malaysia and China.

Technically, the supply chain see more on the aspects of the product flow from the input supply to consumers. In the value chain more emphasis on aspects of how the actors in the chain can provide added value that can increase benefit for all actors in the chain. Added value, distribution of added value, create value and performance actors in the chain's emphasis to be important in the value chain. Such as how efficient the process that runs along the value chain and which has been running well and which not.
With the added value to the product, in this case sweet pepper, the packaging is better and more secure, then the consumer will appreciate the value and will pay more for that value.
Value added can also be applied through the approach throughout the supply chain efficiency, for example, by reducing the costs that do not contribute to added value, combining similar activities (delivery) and so on.

The parameters that can be used as a reference for the improvement of the chain is how to create value throughout the supply chain activities to become more efficient, how to create added value and how to make all better.

Comparison between supply chain and value chain:

In the supply chain communication between chain actors are none of few but in the value chain there is extensive communication such as information exchange.

Supply chain pay attention to cost and price of the products, but in the value chain more attention to the value and quality.

If we look to the product, in the supply chain product is bulky, relationship between actors is driven by supply and the philosophy is how to optimize the company but in the value chain look into product differentiation and driven by demand and philosophy is how to optimize the chain.

Question and answer:

Mukhayan (Syngenta)
Q: For which market supply chain and value chain can be applied so that the market actors can take advantage?

Olga
A: The important thing in the supply chain and value chain is how the added value can be given. These added value can be about efficiency along the whole chain. If we look at to the modern market, this is a company, so there are more efficient and there is added value to the product itself as well as the added value in term of services compared to the traditional markets. If we want this case also occurred in the traditional market for the future then those things must be considered. Indeed, we see that traditional markets provide many job opportunities, but as a result inefficiency is also rise compared to the modern market.

Wahyudin (East West Seed Indonesia)
Comment: If the farmers want to build a supply chain, then they need to trust each other with a partner in the chain such as traders, when mutual trust is owned by them the supply chain can run well but if there is no sense of mutual trust then the supply chain can not work properly. In Europe, consumers understand about food safety, understood how to choose good quality products. Different with consumers in here, more focus on the cheaper price. Therefore, all stakeholders in supply chain and value chain should sit together and determine the strategy. They must have same perspective about supply chain and value chain in Indonesia.

Olga
Responses: A comment was very good. If we see from the point of view of the middle-up group, they are looking for better products, and if the actors in the supply chain want to get more profit it is necessary to have efficiency. When we look at to the product differentiation, then the chain actors do not to compete each other, but must become as one body. There are differences in value between the desired consumers in the Netherlands with the consumer in Indonesia. In the Netherlands almost everyone go the supermarket, while in Indonesia does not yet. Therefore, what kind of shop to be discussed for Indonesian consumers. Through this, all the actors and the parnert in the supply chain exchange their information.

Talking about trust, depending on with whom you work together and how satisfied you are, if each actor in the supply chain fell satisfied and then trust will be built.

4. Existing sweet pepper supply chain by Iskandar

If we look at from downstream to upstream based on the product flow from input supply partners till consumers, the existing sweet pepper supply chain (especially in the village of sweet pepper production center Pasirlangu) can be described as follows

Input supply provider
Well known input supply providers for fertilizers are Buana Tani and PT. JORO. Both of them are also supply pesticides and seeds. The seeds that used by the farmer in Pasirlangu mostly imported from The Netherland (ENZA Zaden and De Ruiter Seeds). Enza Zaden products are imported by PT. East West Seeds Indonesia and De Ruiter Seeds product imported by PT. JORO. Farmers can buy those seeds in Buana Tani and PT. Joro or direct to PT. East West Seed Indonesia.
Vaieties from Enza:

1. Chang (Green-Red)
2. Edison (Green-Red)
3. Sunny (Green-Yellow)

Varieties from De Ruiter Seeds:

1. Spartacus (green-red)
2. Athena
3. Gold Flame (green-yellow)

Most of the farmers (coop member) use seed from Enza. Some varieties trial also done by farmers. Trial seeds usually provided by seeds company.

Relation between coop and buana tani
Buana Tani give credit to the coop in kind of fertilizer, seeds and pesticedes. Buana Tani also buy sweet pepper to coop. This sweet pepper for Hoka-hoka Bento Restorant. Payment from coop to Buana Tani can be deducted from sales of sweet pepper form coop to Buana Tani.

Producers
In the sweet pepper supply chain, farmers are actors who work as producers. Sweet pepper's farmers in the village pasirlangu joined in groups. Known at this time there are 5 groups of sweet pepper's farmer. They are cooperative MSM has about 5.5 ha, farmers' groups Dewa Family has around 2, 5 ha, Ermis group, Dikdik and Obay group with acreage around 4-6 ha. Total acreage op plastic house in this village about 27 ha. with the number of farmers aare not less than 100. Each farmer has plastic house about 500 - 2000 m2.
Estimation paprika production per day in the cooperative average 1000 kg, with the quality of the export around 50%. Sweet pepper with export quality sold to Emerald for the Singapore market, while not including the quality of the export sale to local markets. There are more than 25 buyers who act as brokers.

Collectors
Act as collectors in the sweet pepper supply chain in Pasirlangu is in charge of the group. As previously mentioned that there are 5 groups of farmers in pasirlangu. Through those groups then sweet pepper distribute to various other actors in the supply chain. Most of the sweet pepper absorbed by the supplier that will supply to the another next supplier or the next user. Activities that are done to provide added value to the sweet pepper on the collector are sorting and grading. Activities for consumer packaging is not nearly done by the collector. Sweet pepper is received from the farmers packed in HDPE plastic bag. Farmer deliver sweet pepper in the HDPE plastic bag to the accessible road, the collector's car will bring them to warehouse. This activities done from 7 to 10 am

Suppliers
Suppliers is the actor the supply sweet pepper to super market, hotels and restaurants. Suppliers get supply from collectors (group) and from some of the farmers directly. There are many suppliers who have known well such as CV. Bimandiri, Amazing Farm, Saung Mirwan, Kem Farm..

Exporter
Exporter is a supplier to foreign markets countries. Some sweet pepper exporter ever been exist are Asep Tisna, Asep Dindin Diana, PT. Corona, Saung Mirwan, Emerald and Amazing Farm. Exporter get supply from farmers and groups. Both of them need supply about 10 ton / week. Market destination is Singapore. Now emerald has request from Korea and Middle East.

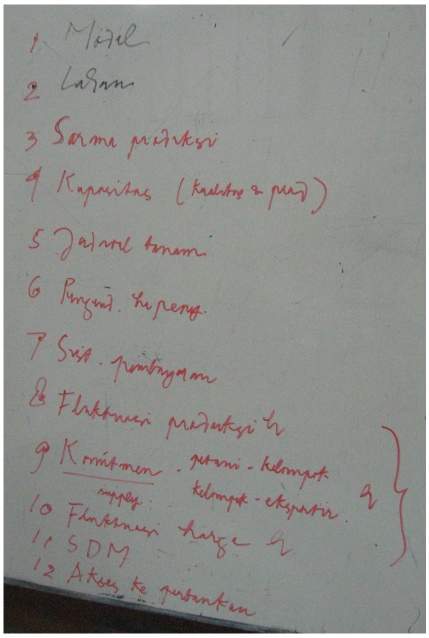
Retailer
Retailer is in the chain actor nearest end users (consumers). Sweet pepper can be found in modern markets, such as Giant, Hypermart, Foodmart, Carefour, Ranch Market and the Farmer Market. It can also be found in the traditional market such as in Caringin wholesale market Bandung

Consumer
Consumption of sweet pepper by the Indonesian people has not been so big. Through modern markets, known that demand of sweet pepper is between 30-80 kg / week, influenced by the location of the outlet..

5. Identification of Constraint

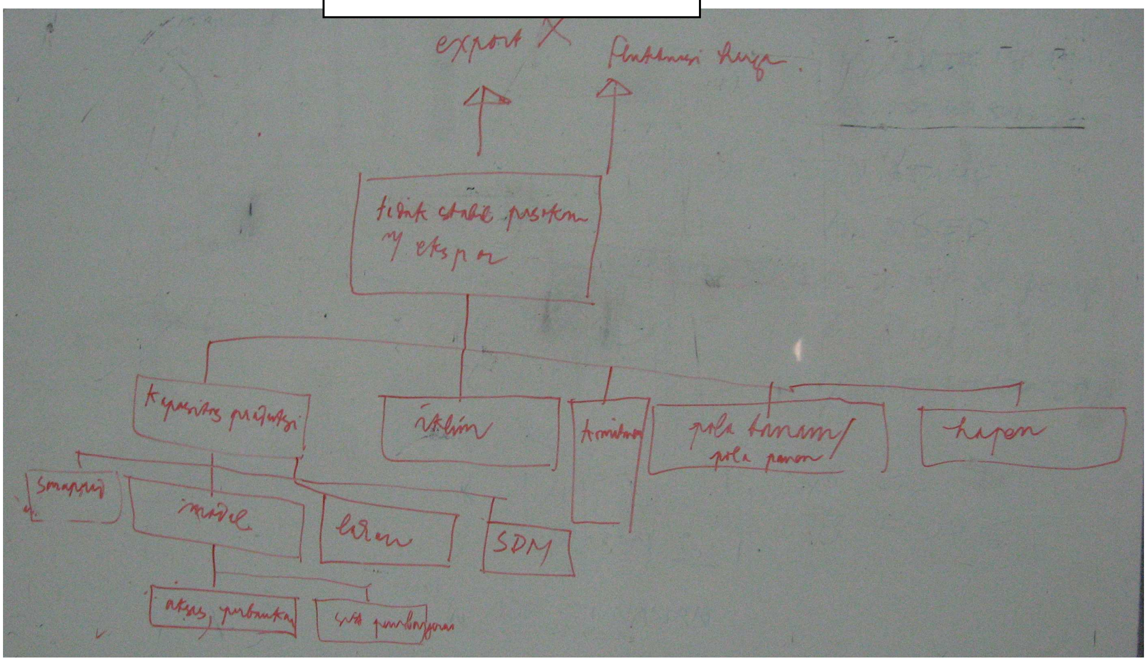
Along the chain from the input supply to the consumer, the identification is done by all the workshop participants divided into three groups. Each group represented at least by the respective actors in the chain. Through these activities many constraints have been found:

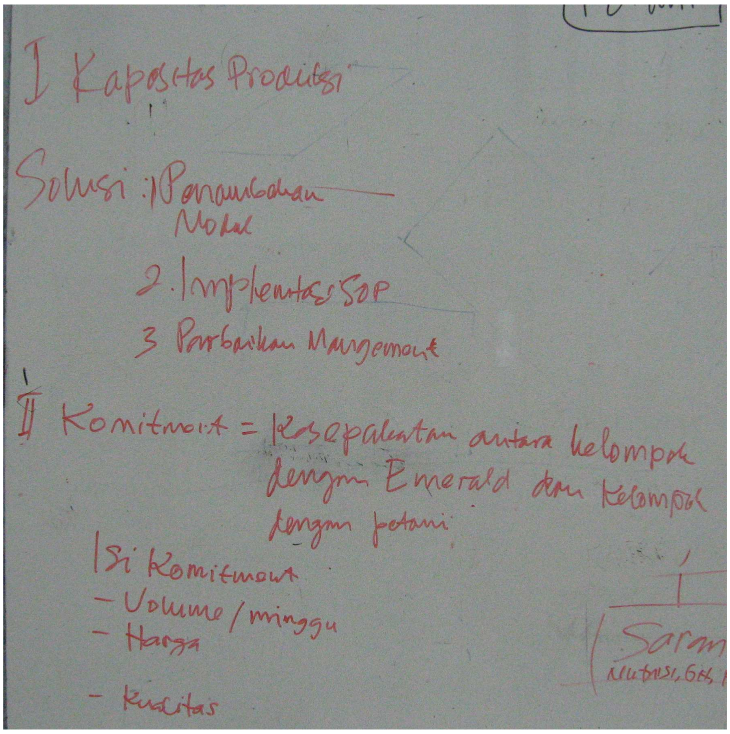
1. Capital
2. Land
3. Input supply
4. Capacity (yield and quality)
5. Planting schedule
6. ?
7. Payment system
8. Fluctuation of yield
9. Commitment between producers group and exporter and between producers group and its farmers
10. Price Fluctuation
11. Human Resources
12. Access to the financial institution

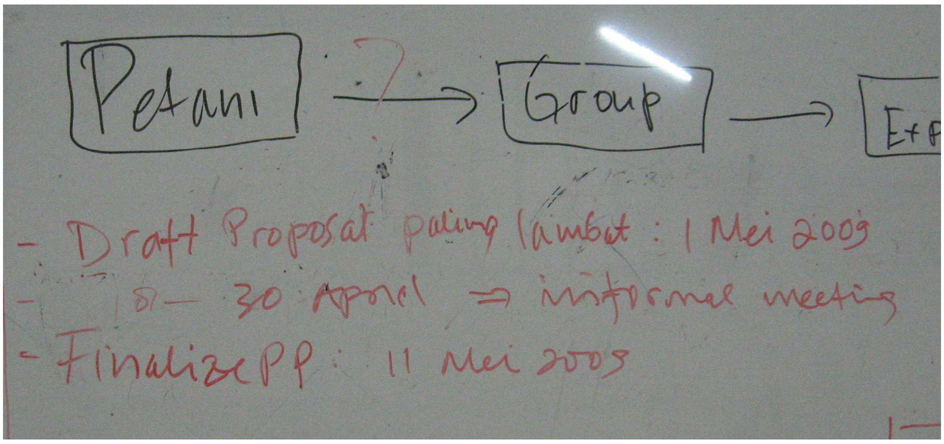


From the list constraint, the workshop participants are invited to analysis what is the main constraint. Problem tree analysis is used and this is the result.

Unstable supply for export




I Kapasitas Produksi
Solusi : 1 Penambahan Modal
2. Implementasi SOP
3 Perbaikan Management
II Komitment = Kesepakatan antara kelompok dengan Emerald dan kelompok dengan petani
Isi Komitment
- Volume / minggu
- Harga
- Kualitas


Petani
Group
- Draft Proposal paling lambat : 1 Mei 2009
- 18 – 30 April ⇒ informal meeting
- Finalize PP : 11 Mei 2009

Annex XII. Outline activities Iskander until May 7.

Meeting with Emerald

Purpose

- Inform of our meeting with Rabobank; and that we will meet with Rabobank Foundation in Netherlands: show him presentation
- Get his opinion on both alternatives (we start pilot with commercial scheme; or wait for soft loan from Rabo Foundation)
- Ask him if Rabobank has had contact with him after our visit to their offices and what was result
- Ask him how much farmers he would like to involve and whom; whether farmers may decide who will enter, if so, what criteria
- What will he do if farmers decide on other participants to the pilot than those he wants to support, will he still give collateral? Under what conditions?

Role to play by Hortin: farmer registration form; management system coop
Invite him to the meeting with the farmers

Agreements

- How to select farmers: he / coop / both?
- Visit to farmers to communicate on criteria for collateral
- Agree on agenda for farmers meeting

Meeting with coop (all members)

Purpose

To inform about meeting with Rabobank and possibility of pilot

Characteristics of pilot:

- Collateral by Emerald: bank will finance individual farmer through coop, and get loan back from Emerald
- Bank will not enter if no guarantee of compliance with volumes
- Hortin acts as internal auditor for management system coop (cash flow; planning versus realization)
- Pilot will give perspective to other farmers to obtain loans after pilot

Prerequisitives by bank and Emerald:

Bank:

1. List of collateral of individual farmers participating in pilot asked by bank in order to know total amount of loan and distribution key;
2. Credit must be used as working capital (no investments)

Emerald:

1. Farmers implement SOP; compliance of each producer with volume according to planning

Agreements

- Whether coop agrees to enter
    - If so: which option
    - If so: selection of farmers: see meeting Emerald (if not during same meeting*; then set date before end April)
- Can only be done if Emerald is present; or after knowing his conditions

Workshop agreement: participants asked HORTIN to design a pilot that gives solution to lack of farmers' commitment.

Annex XIII: Brainstorm of monitoring criteria for pilot project

Description of innovations: what does pilot do?			Introduction of GAP recording and implementation business plan	
	How is coop functioning now?		internal communication?	
				for commitment, for business purposes
				coop to farmer; farmer to coop
	What are current Standard Operation Procedures in the coop?			
	What will change in coop functioning when starting pilot?		payment conditions; input services; credit; new SOPs, etc.	
		In relationship between coop and exporter?	contracts; price, volume, services rendered	
		In relationship between coop and individual farmer?	contracts; price, volume, services rendered	
	Efficiency of supply chain?		compared to previous data if possible	

What is farmer's commitment?		How to measure	Remarks
For coop:			between who and who?
	get 100% volume by farmer		thus farmer accepts price by exporter / set by coop
	get high price	interview?	
	get stable price	interview?	
	comply with agreements within group		What are existing agreements?
	Why does farmer sell outside?	interview?	Price motivation
	what is motivation for farmer to belong to group?		
	what is motivation for farmer to belong to group?		
	what is motivation for farmer NOT to belong to (a) group?		
	what are advantages / benefits that farmer receives now?		services, political support
	what are disadvantages / costs for farmer to belong to group?		
What if:	coop would not supply fertilizer / pesticide any more?		
	coop would not collect harvest from farmer's place?		

Make profile of different farmers' group:			
	Compliance with GAP ??		
	Compliance with volume to coop??		
	Different economic activities		
	area of greenhouses etc.		

How is compliance with exporter's / bank's standards measured?		
	How?	Who?
continuity in volume	planning versus realization	
compliance with quality	% of export quality	
compliance with GAP (no residues)	GAP registration form	designed by IVEGRI in accordance with Alamanda / Emerald
compliance with "paper trail" (internal administrative control system)		designed by Hortin in accordance with bank for coop
		designed by bank for farmer

How will we get to a business model to be used by bank; by others?
=> pilot itself will be experimental business model => monitoring framework!
=> lessons learned