

Third regional meeting Riga 5-6 December 2002

The first days meeting included Basan members and local stakeholders, while the second day was devoted to a members meeting.

Thursday, 5 December Stakeholders meeting

9.30	Welcome in Riga, <i>Gundega Lapina, Finn Rexen</i>
9.40 – 10.40	LTC presentation. LTC strategies for success. Innovation policy in Latvia, <i>Dr.J.Stabulnieks, LTC director</i>
10.40 – 11.10	Overview of Latvian agriculture and agro-food industries; History, development trends and future challenges, <i>Mr. Aivars Lapins, Deputy State Secretary, Ministry of Agriculture.</i>
11.10 – 11.30	Coffee break.
11.30 – 12.15	Research and development in agro-food area in Latvia; Impact of research on regional development. <i>Daina Karklina, Dean of the Faculty of Food technology, University of Agriculture of Latvia</i>
12.15 – 13.15	SIGRA – successful research institution, developed on the basis of Soviet research institute; <i>prof. Jemeljanovs, Dr.Biol.Janis Miculis, SIGRA.</i> Lupines and wheat – Latvian opinion about business plans, <i>Dr.Agr.Dace Kravale, SIGRA</i>
13.15 – 14.00	Lunch
14.00 – 16.00	Excursion on a bus in Riga
16.00 – 16.30	Coffee break
16.30 – 17.15	Presentation of Pures cehs, Latvian fruit processing company; Fruit business in Latvia. Co-operation with Eastern and Western Europe. Pures cehs development and future plans. <i>Mr. Aivars Zimants, director; head of the Board of Marketing Council of Latvia</i>
17.15 – 18.15	Presentation of Aloja Starkelsen, Latvian-Swedish joint venture. Potato consumption, potato and potato starch business in Latvia. Creation process, operation and problems of agricultural joint venture in Latvia, <i>Dr.Juris Svinka, R&D manager of Aloja Starkelsen</i>
18.45	Departure on a bus to restaurant “LIDO”.

Members present

- Denmark. Finn Rexen: Bioraf Denmark Foundation
- Denmark. Michael Rustand: Bornholms Erhvervscenter, TIC
- Denmark. Lis Bech Hansen : Bioraf Denmark Foundation

- Finland. Anna-Maija Kirkkari: TTS Institute – Work Efficiency
 Estonia. Tonis Eerme: Tartu Science Park
 Germany. Jörg Köhn. Innovationsgesellschaft MbH
 Germany. Antje Köhn. Innovationsgesellschaft MbH
 Latvia. Gundega Lapina: Latvian Technology Centre
 Lithuania. Sutkus Arvydas. Lithuanian Innovation Centre
 Poland. Anna Grzybek: Institute for Building, Mechanisation and Electrification in Agriculture.
 Poland. Aleksander Muzalewski: Institute for Building, Mechanisation and Electrification in Agriculture.
 Poland. Jaroslaw Osiadacz: Wroclaw Centre for Technology Transfer
 Sweden. Rolf Olsson: Swedish University of Agricultural Science.

Not present

U. Wurdel: ATI Küste, Germany

Invited speakers and guests

Janus Stabulnieks: Latvian Technological Centre, Director
 Aivars Lapins: Ministry of Agriculture, Deputy state secretary
 Daina Karklina: Professor, University of Agriculture of Latvia
 Aleksandrs Jemeljanovs: Professor, Dr. habil. agr. Dr. med. vet., SIGRA
 Janis Miculis: Dr. Biol., SIGRA
 Dace Kravale: Dr. Agr., SIGRA
 Aivars Zimants: Pures Cehs, director, Head of the board of Marketing Council of Latvia.
 Juris Svinka: Dr. hab. biol., Aloja Starkelsen, R&D Manager
 Ruta Guste: Latvian Technological Centre, Financial Director
 Inese Vende: Latvian Technological Centre, project consultant
 Ints Viksna: Latvian Technological Centre, IT specialist.

Welcome

Gundega Lapina opened the meeting and welcomed the participants, and Finn Rexen gave a short introduction to the Basan network.

LTC presentation

Managing Director for LTC, Dr. J. Stabulnieks gave an overview over the innovation policy in Latvia.

Latvia is with 64.000 km². one of the smaller countries in the Baltic Sea area. The population is 2.4 million.

The growth in GDP was in 2001 relatively high – 7.5 % compared with other European countries. The GDP has however fluctuated considerably over the last ten years. Dr. Stabulnieks mentioned 6 phases in Latvian economic development (GDP pr. Capital):

1. –1991: degradation
2. 1991 – 1993: Riddance
3. 1993 – 1994: Stabilisation
4. 1994 – 2000: Recovery (institutional reforms)

5. 2000 – 2005: Exogenous innovative economics
6. 2005 - : Endogenous innovative economics

Latvia has 34.000 registered SME's, of which less than 4 % invest in R&D. More than half of the SME's are exporting their products.

There is a high number of universities in Latvia – 34 – with approximately 47.000 students.

In the year 2002 Latvia launched a national programme on innovation that has as long-term goals:

- ❑ To improve exploitation of results from applied research and innovative activities
- ❑ To create a favourable environment for innovation information, legislation and financial environment.
- ❑ To support and promote start-ups of new innovative companies
- ❑ To develop innovation support infrastructure, industrial networks and clusters.

The programme requires that the national innovation system is well co-ordinated. The first tasks will be to: 1) Create a harmonised and co-ordinated system to promote and support innovative activities, 2) establish a favourable environment and legal and financial basis for start-up of innovative companies, and 3) develop competitive economic structures

Creation of a co-ordinated support system for innovation

The creation of a co-ordinated system to support innovative activities requires co-ordination between various public organisations such as the Ministry of Economy, the Innovation Council and the Innovation Department at Latvian Development Agency. It also requires interaction with other national programmes (education, regional development, informatics etc.).

Dr Stabulnieks mentioned that there are many different definitions of innovations, but he prefers the following:

Innovation is the process in which an idea is transformed into the market demanded product or service.

He also claimed that:” If science is the transformation of money into knowledge, innovation is the transformation of knowledge into money”.

Establishment of favourable environment

Various activities are foreseen to establish a more favourable environment for start-up of innovative companies (National prize for innovative companies, best practice activities, Baltic Dynamics).

Innovative ideas will be supported through co-financing of EU innovation projects, promotion of co-operation between local enterprises and research institutions, support of technology transfer activities, star-up and spin-off programmes etc.

Development of competitive economic structures

The development of industrial clusters, creation of centres of excellence, development of science parks and business incubators will be encouraged, and effective ties between industrial clusters and innovative infrastructures will be established.

Budget

The budget for the above activities will increase from 2.4 million LVL in 2003 to 23,6 million LVL in 2006

Latvian Technological Centre

The centre was founded in 1993. It was the first innovation support centre in Latvia. It is a non-profit, limited liability company. The founders were: Municipality of Riga, Latvian academy of Science, Institute of Physical Energetics and the Association of Latvian Scientific and Technical Societies.

LTC has a staff of 11 and an annual turnover of 500.000 €.

The main functions are: To act as a technology business incubator, take part in international co-operation and in the development of the State innovation policy.

The technology business incubator has 28 tenant companies with 265 employees. Average company size is 4-5 employees. Average turnover = 100.000 €.

Overview of Latvian Agriculture and Agro-food industries. History, Development, Trends and Future Challenges

Aivars Lapins, Deputy State Secretary, Ministry of Agriculture

Aivars Lapins started by showing the declining share of agriculture in GDP. In 1995 it constituted 8,9 % of the GDP, while in the year 2001 it has been reduced to only 2,7 %, and the tendency is towards further reduction.

15,3 % of the total population was in the year 2000 employed in agriculture, which is lower than in Poland (18,8 %) and Lithuania (19,6 %), but higher than in Estonia (7,4 %).

The Latvian agricultural production has the following distribution on products (2001):

Product ...	Percentage
Cereal grain	18
Pigs	13
Potatoes	8
Cattle	7
Milk	24
Fodder crops	6
Eggs	6
Sugar beet	4
Vegetables	4
Poultry meat	2
Fruits and berries	2

The agricultural production is in general very traditional. However some farmers have taken the risk to start more untraditional productions like:

- ❑ Production of mushrooms. 9 large farms with 180 employees
- ❑ Rearing of quails, ostriches, pheasants. 2 pheasant farms and 5 ostrich farms
- ❑ Rearing of rabbits: 150.000 rabbits in 2001
- ❑ Rearing of wild animals: 34 farmers breed red deer, fallow dears, wild pigs, moufflons. The total land area occupied by these activities is 5720 ha, of which 1500 ha are fenced. Total number of wild animals reared on farms amounts to about 1500.
- ❑ Fur production. 14 farmers are dealing with industrial production of fur animals. In the year 2001 was produced 404 000 minks, 7600 blue foxes and 7500 foxes.

The total acreage of agricultural is 2.5 million ha, of which 55 % is arable land, 23 % meadows and pastures and 1 % orchards. A surprisingly high percentage, 21 %, is non-cultivated land. Those 500.000 ha constitute a vast reserve that might be used for agricultural production, if need should arise.

The average size of agricultural holdings is approximately 20 ha. The family farms have an average size of 35 ha, while the household plots have a size of 12 ha.

Latvia has a deficit in agricultural production. In 2001 Latvia imported agricultural products worth 283 million LVL, while the export amounted to only 111 million LVL. In 1995 there was balance between import and export.

The main problems in Latvian agriculture can be summarised as follows:

- ❑ The production is too fragmented, and the average size of farms is too small for an efficient production.
- ❑ 69 % of the farmers are above 40 years of age
- ❑ The interest rates for commercial loans are relatively high (10 % or higher), and the national investment level in agriculture is modest
- ❑ The income level in agriculture is low – 75 % of country average
- ❑ Negative foreign trade balance in agricultural goods

The Ministry of Agriculture has as objective to secure safe, reliable and good quality food and to improve economic growth in rural areas, and finally to retain a sustainable management of natural resources.

Research and development in the agro-food area in Latvia. Impact of research on regional development.

Professor Daina Karklina, Latvia University of Agriculture

Professor Karklina mentioned that the agricultural sector traditionally is the backbone of Latvia. And in the Soviet period there was an extensive agricultural research. The new situation has had as consequences that the investment in science has been dramatically decreased, and many scientists have left the scientific area.

A new concept for R&D has been developed: It implies a strengthening of research in universities, a renewal and upgrading of research staff, better financing and development of international collaboration.

The Latvian University of Agriculture has as one of its tasks to promote intellectual potentials for rural development. LUA has 468 academics and 8920 students. The research personnel constitute 168 persons.

42 % of the research is performed at the university, while 40 % is performed in institutions integrated in LUA. The remaining 18% is performed in other institutions such as a centre for horticulture, an agro-chemical research centre etc.

The age distribution amongst Latvian scientist is rather uneven with 45 % of the total academic and research staff been above 51 years of age. Therefore a special programme for “rejuvenation” of the staff has been established.

The total expenditure in agriculture and food science is 21 million Ls, of which public expenditure is 8.7 million Ls, and the industry spends 6 million Ls pr year.

An expert commission in Agricultural Sciences is responsible for distribution of the money 40 % is spent on classical agriculture, 20 % on classical agro-engineering, 10 % on husbandry, 20 % on water management, 7 % on veterinary medicine and 3 % on food science

The university participates in EU 5th Framework programme and in EU COST projects. Besides it has research collaboration with other Baltic countries like Finland, Sweden and Denmark.

The scientists from LUA are significant players in the planning of regional strategies. A technological science part is been developed in Jelgava to create an information network, to establish new business support and to support technology transfer and innovation.

SIGRA Successful research institution developed on the basis of Sovjet research institute

Aleksandrs Jemeljanovs, Dr.habil.agr., Dr.med.vet. Jānis Mičulis, Dr.biol.

The Research centre “Sigra” of the Latvia University of Agriculture was founded as the Institute for Zootechnology and Veterinary Hygiene of the Latvian Academy of Sciences on 21 February 1946. Its founder and first director was President of the Academy of Sciences academician Paulis Leyinsh. Since 1956 till 1991 the Institute has been functioning in the system of the Ministry of Agriculture of the Latvia SSR.

The headquarters of the Institution since May 1963 is at one of Latvia’s beauty spots – Sigulda. With its very first days the Institution started active research in various fields of natural science and has become the leading centre of livestock breeding, animal sanitation, veterinary medicine and pharmacy in Latvia Republic and was well known in former Soviet Union and foreign countries.

The years since the foundation of the Institution have witnessed many innovations. It was in the lead in the use of active biological substances in the rations of farm animals and in the scientific validation of creating the enriched mixed feed industry of the USSR. The institution had the priority in this country in the establishment of pig test-fattening stations, young bull testing stations, ram, bull stations and boar test-rearing stations as well in following branches:

- the reforming of breeding records using computers;
- creation of a new branch in veterinary medicine;

- veterinary pharmacy;
- development of intensive livestock farming principles

and in other directions of animal husbandry and veterinary science.

In the year 1990 shortly before destruction of USSR Institution consisted of 17 departments, laboratories and sectors employing a staff of 230 including over 60 researchers. The total number of employed in the system of "Sigra" amounts to 4 thousand, over 70 researchers, because it included 6 research farms "Krimulda", "Sigulda", "Lielplatone", "Jaunpils", "Latgale", "Aiviekste". Agricultural production was intensive on the research farms – over 120 tons of milk and nearly 30 tons of meat were produced per 100 hectares of agricultural land, average milk yield was approaching 6000 kg (at standard milk fat content 3,5%). We had 8000 beef cattle, 4000 dairy cows, about 20000 pigs, 845 sheep and about 58000 poultry in all research farms. Total area of arable lands was 185000 hectares.

In 1990 the Law on Land Tenure reform in Rural Areas of the Republic of Latvia was adopted which led to revision of all management system of agriculture, regulation of land use relations, and providing for efficient use of land. The main of this law was to divide land between people, who wish and are able to cultivate it in accordance with following principles:

- land is handed over with management rights;
- free choice of tenure of land;
- free choice of the kind of land use and economic organisation.

In total the following laws were adopted regulating the agriculture development and that of course influenced agricultural research development too.

THE LAWS REGULATING AGRICULTURE DEVELOPMENT IN LATVIA

The Law on Land Tenure Reform in Rural Areas	1990
The Law on Land Using and Exploitation	1991
The Law on Land Privatisation in Rural Areas	1992
The Law of Agriculture	1996
The Law of Reform Finishing in Rural Areas	1997

According to adopted laws the changes taking place in various areas of political and economic life should be followed by reforms in research. The Latvia and other Baltic States have long traditions of excellence in research. The main goals of the reforms were the re-structuring of research the rising of the international competitiveness of research and it's integration into European research framework. The changing economic situation in market economy required for a definite actions in a form of appropriate modifications for scientific programmes. It was necessary to evaluate the content of scientific programmes according to new situation. Attainment of those objectives could be fostered by international collaboration in the methodology and management of research programmes, quality assessment of research systems, involvement of young scientists in research programmes, staff exchange. Latvia and other Baltic countries are small. Therefore the only way to build up the competence in all aspects of research should be based on cooperation and specialisation including collaboration outside the Nordic – Baltic countries. Domestic and international cooperation in research promoted more intensive use of available scientific resources and mutual experience.

All these activities caused lot of questions:

- What forms of cooperation and specialisation and in what areas can be the most effective in the nearest future?
- What have research community to do today to meet needs of society now and after 10 years?

- How to use issues of science in Latvia to increase efficiency of the Nordic – Baltic cooperation?
- Should universities and research institutes have a closer collaboration?
- Should research institutes also deal with education for practical farmers?
- How should a country utilise results of research, development, education and extension from another countries?
- How to deal with the questions mentioned above in extremely limited funding situation etc.?

It was not possible to answer these questions in short time period, but it was clear that our institution can not survive the period of changes with previous heavy structure. It seems now that Director of our Institution prof. A.Jemeljanovs choosed the right strategy and tactics in the transition period. In up-to-date agricultural production, besides high productivity and economical effectivity the quality of production and preserving of environment have very high demands. These requirements can only be fulfilled using the achievements of science as much as possible in practical production. It is important to mention, that the agricultural production is remarkable wider in comparison with other specialities. It is like a large complex of different branches. Objects of wide biological branches of science – plants, animals, soil and other problems of surrounding environment preservation are included into them. How to unite the modern achievements of science in molecular biology and engineering of gene and other biotechnological methods with practical production in the agricultural farms?

We can not say a day when our Institution started to work according to new thinking. It was hard many years process of old values reestimation. Not everybody was ready to such process and hard work. Many researchers and technicians have gone for another job with higher salaries. Our staff decreased by four times and now we have staff of 27 researchers and 23 technicians. There are four doctors habilitatus and sixteen doctors of sciences among researchers. At present time the structure of the Research Centre "Sigra" of Latvia University of Agriculture consists of three Departments:

- Department of Animal Research,
- Department of Veterinary Medicine,
- Laboratory of Biochemistry.

During the process of land privatisation we lost our research farms. At the same time we have good contacts with many farmers in different regions of Latvia to carry out the investigations of scientific projects. There is no problems with investigations in animals feeding, welfare but some complications take place with organisation of experiments on infectious diseases prevention and treatment in the private farms. Besides Institution there is vivarium for experiments with poultry and pigs. We have the biggest vivarium for poultry in Latvia.

From the beginning of nineties our Institution started intensive international cooperation. We had scientific cooperation Programmes with Iowa State University and Sweden Agricultural University in Uppsala. Its included not only cooperate investigations, but scientific exchange projects too, when our researchers had study courses in Iowa and Uppsala but lecturers from partner countries went to the Latvia.

Researchers from our Institution presented their works in different scientific Conferences and Workshops in many countries of the world (Table 3) during the last *evaluated in abroad*. 10 years and their presentations always have arisen great interest and have highly Five our researchers prof. Dr.habil.agr. A.Jemeljanovs, Dr.biol. J.Mičulis, Dr.agr. D.Kravale, Dr.agr. J.Nudiens, assistant M.Beča are members of the Nordic Association of Agricultural Scientists and according to possibilities take part in seminars organized by this Association. Our Institution together with our international cooperation partners submitted scientific project proposal for 4th Framework. Project title was "**Monitoring of agricultural products yield and quality in**

industrial polluted areas and strategies to overcome the constraints” (Table 4). Sorry but this attempt was not successful in the last stage of evaluation. We are looking forward to submit scientific project proposal for 6th Framework that will start from next year. Traditional partners of our scientific contracts to improve fodder producing technologies are Finland company “Kemira” and Sweden company Alfa *De Laval*.

As we concluded later all those international contracts helped to us to choose the right methodological approach and scientific directions correspondingly to at present time research actualities and consumers demands. The investigations of the research Centre “Sigra” are carried out in two basic directions:

- veterinary medicine,
- animal research.

The special attention was paid in our investigations to ensure consumers with high quality, safe, non hazardous and healthy animal products and it caused necessity to establish risk factors in all stages of production.

Our original line in high quality food production is healthy products producing by regulation with feeding the content of cholesterol, unsaturated fatty acids, amino acids in pork and poultry meat. As we know the funding of research in Latvia is one of lowest in the Europe. Therefore the question of investigations funding is very actual for every research Institution of this country. Funding of our Institution is done mainly in two ways and it is similarly with other institutions. About 60% of funds are from Latvia Scientific Council. On the base of competition Scientific Council has funded 5 four years research projects of our Institution for 2001-2004 years period.

Collaborative project include several subprojects and project performers are from different research institutions.

Another part of research projects forms about 40% of total funding and composes from different contracts with companies, associations, joint-stock companies, organizations, research projects funded by the Ministry of Higher Education and Science and the Ministry of Agriculture.

Today we can say with great assurance that there is no problem for us to find a work in the field of our research activities. We have good achievements. Only we must plan more rational distribution of our scientific potential.

As a result of the many years work by using different methods and technologies including gene engineering several groups of a new generation effective immunogenic preparations for animals and poultry diseases prevention and treatment were elaborated.

Peroral vaccine for poultry salmonellosis prevention. Live salmonella enteritidis mutagenic culture is non harmful for macroorganism and if added to poultry drinking water or feed in first days of life can prevent its from diseasing with salmonellosis.

Serum for pig measles prevention and treatment. Serum was obtained in experimental series from horses, pigs and cattle. During the experiments it was concluded that the most rational is the method when serum is obtained from horses and cattle, but because of a little number of horses in country cattle are recommended as donors for pig measles serum obtaining.

Vaccine for mastitis prevention caused by Staphylococcus aureus. Staphylococcus aureus cultivations isolated from cows udder secretion, diseased with acute clinic udder inflammations, were used for vaccine elaboration. Pregnant heifers five weeks before delivery and dairy cows independently of time of pregnancy were vaccinated. Antibodies preserve during five months in the immunized animals organism in 1:64 up to 1:2048 titres, therefore to ensure continuous level of antibodies in immunized animals blood serum the revaccination after each five months must be carried out.

Vaccine for mastitis prevention caused by Streptococcus agalactiae

At the same time we are looking on future with good hopes, because 6 doctorates who are working in the Research centre “Sigra” finish their doctorates studies and will defend doctors thesis soon. From the year 1998 our Institution is integrated with the Latvia University of Agriculture (LUA) and is one of the Institutes of Faculty of Veterinary Medicine. Now our researchers are involved in the studies process organization of University. Part of students lectures and practice take place in the Research Centre “Sigra”. Together with researchers from the LUA we are involved in different cooperative research projects as well as in conference and seminars organization. Our researchers take part in the LUA governing bodies (Convention, Senate, Councils) as well as in the work of Councils of Promotion. At the same time our Institution have independent legal status and separate bank *account*.

One of the main indices of research work effectivity is number of publications and participation in scientific conferences. During last three years our Institution has published about 100 publications and took part in about 50 international and local Conferences yearly.

During the last ten years our researchers were awarded 5 times by the Ministry of Agriculture with the highest annual prize in agricultural research “Sējējs” and one time by the Latvia Scientific

C) Table 1 best individual prize in agricultural research named in honour to prof. Paul Lejiņš.

Lupines and wheat – Latvia
Dr. Agro Dace Kravale, SIGRA

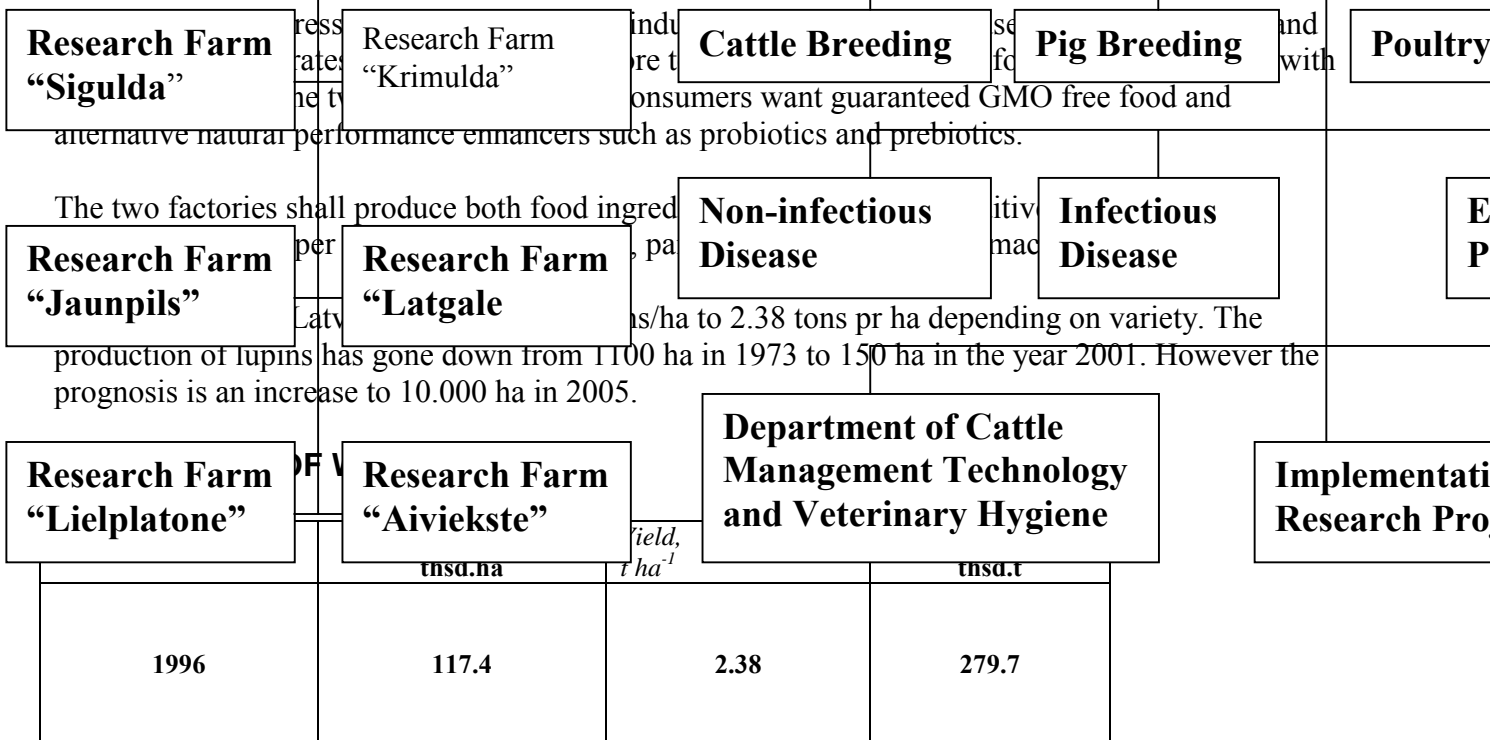
The Latvian Research Institute of Animal Husbandry and Veterinary Science

Concerning the Vita Wheat project, of wheat, Dr. Kravales mentioned that the Latvian wheat production has increased slightly from 1996 to 2000. Today the production is 226 000 tons with an average yield of 2.38 t/ha.

Experimental Basis

Research Departments

Latvia has 19 factories for production of compound feed and 3 pet food factories. To this comes 9 meat and bone meal factories and three factories producing feed mixtures.



1997	109.7	2.70	296.5
1998	109.2	2.69	293.4
1999	95.0	2.61	247.9
2000	117.5	2.96	336.0

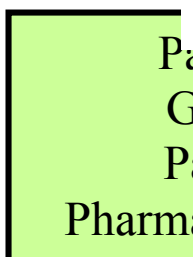
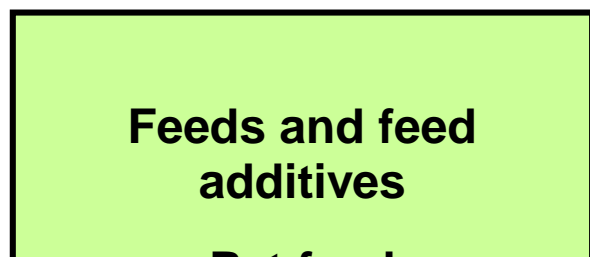
Establishments producing feeds in Latvia

<i>Products</i>	Number of establishments
Compound feeds for productive animals	19
Pet foods	3
Complimentary feeds of animal origin	9
Premixtures	3
Feed additives	0



New enterprises for lupine and wheat processing

Yield of lupine seeds in research station Lejaskurzeme in 1990



	Variety	Yield, t ha ⁻¹
<i>Lupinus luteus</i>	‘Kastričņik’	1.72
<i>Lupinus angustifolius</i>	‘Helēna’	2.48
<i>Lupinus angustifolius</i>	‘Danko’	2.38

The future research on protein feeds for animal production should cover:

- Intensification of agronomic studies regarding production of protein feed plants
- Studies on their processing (new products, new processes, new technologies)
- Studies on determining the most efficient way in converting plant material in animal products (new formulation of diets)
- Protection of the environment
- Sustainable animal farming systems

The sown area of lupine for seed production in Latvia



<i>Year</i>	Sown area, ha
1973	1100
1980	100

2001	150 (? seeds or green forage)
Prognosis: 2005	10 000

The area of abandoned farmland is 468 thsd ha

Presentation of PURES cehs. Latvian Fruit Processing Company; Friut business in Latvia. Co-operation with Eastern and Western Europe. Future plans
Director Aivars Zimants, head of the board of Marketing Council of Latvia

PURE FOOD is a fruit and vegetable processing company. It was founded in 1994 is a private company. The number of employees is 99, and the annual turnover was in 2001 approximately 4 million US\$.

The main products are fruit berry ripples for dairy products and confectionery, made from ecologically pure fruits and berries.

The fruit ripples are used in yoghurt and syrups for other dairy products like ice cream. Fruit fillings are used in confectionery and biscuits. The factory also produces juices and syrups for drinks and lemonades, and finally pickled/preserved vegetables in light marmelades.

As raw-materials for the berry products are used domestic garden berries and fruits like red and black currants, strawberries, chokeberries, apple, plum, pumpkins and rhubarbs. To some extent is also used wild berries such as bilberry, sea buckthorn and cranberry.

The vegetables used are: Cucumber, tomatoes, marrow, carrot, sweet pepper, garlic, onion, celery, horse radish, basil and dill.

Part of the raw-materials are imported from Europe and e.g. South America.

The company puts much emphasis on quality , and it has introduced the control management system ISO 9001:2000

One of the secrets behind the high quality standard is the aseptic production line that has been purchased in Holland. The finished products are sterile and no preservatives are needed. The capacity is 10 tons pr day, however the capacity can easily be increased by 60 %.

Approximately 70 % of the production is sold on the domestic market. The remaining 30 % is exported to Lithuania/Estonia (15 %) , Russia (9 %) and USA (6 %). The company plans to increase its export to Russia and USA and to begin an export to the Scandinavian countries

The company has its own research facilities, and new innovative products will be developed for the expanding markets.

The company has experienced a considerable growth rate with an increase in turnover from 1.5 million LTS in 1998 to 3 million LTS in the year 2002.

**Presentation of Aloja Starkelsen. Latvian-Swedish joint venture.
Dr. Juris Svinka, R&D manager of Aloja Starkelsen**

The Joint venture was established in June 1991 as the first food industry in Latvia with foreign capital. Aloja Starkelsen is situated in the Northern part of Latvia in the city Aloja.

Until 1999 was produced glucose syrup, but today the main product is potato starch. Aloja Starkelsen has 68 employees, and the annual turnover was 2.4 million LTV in the year 2001

Most of the production is sold to the Baltic countries.

According to Dr. Svinka potatoes have a number of advantages over other crops: From an energy point of view the crop is very efficient. Only sugar beets have a better output/input ratio for energy. The climatic conditions and soil quality are suitable for potatoes in Latvia.

On the negative side can be mentioned that potatoes are an expensive crop that is weather dependant, and that potatoes need expensive storage facilities.

The potato production in Latvia has been rather constant during recent years. In 2001 was produced 615 000 tons on 53 000 ha. Average yield was 11,2 tons/ha.

Starch potatoes have a higher yield – 24 tons/ha, and in 2002 were grown starch potatoes on 1216 ha with a starch content of 20 %. Approximately 19.000 tons was processed into starch.

On 282 ha was in 2002 produced industrial potatoes for production of crisps and fried potatoes.

Dr. Svinka mentioned that the potato starch business might grow in the future in Latvia. The starch quality is high, the production costs are competitive and the market is growing. The factory is however faced with quota and market restrictions that limit the expansion possibilities.

Friday, 6 December

Members meeting

9.00	Conclusions about the first meeting day. <i>Gundega Lapina</i> Approval of the minutes of the previous meeting in Helsinki, <i>Finn Rexen</i>
9.30 – 10.30	Report of Finnish partner:

	Conclusions about the previous meeting. Results of the questionnaires, etc., <i>Anna-Maija Kirkkari</i>
10.30 – 11.10	Successful Baltic Sea regions versus regions lagging behind. What is the recipe for dynamic agro-industrial development? Agri-production or agri-culture? Importance of local universities/research centres ? Introduction: <i>Finn Rexen</i>
11.10 – 11.30	Coffee break
11.30 – 13.30	Discussions: Local examples of successful/unsuccessful regions: Incentives needed, barriers to be removed etc. <i>Intervention from all members</i>
13.30 – 14.30	Lunch
14.30 – 15.30	BASAN www page development and practical usage. <i>Jorg Kohn.</i> <i>All members</i>
15.30 – 16.00	Any other business Agro-industrial research in the EU 6 th Framework programme Report from IENICA meeting Other

Conclusions from first day

Gundega Lapina briefly summed up the results from the first days meeting.

First announcement of the final Basan conference in September next year.

Lis Bech Hansen handed out a number of flyers to all members present, and they were asked to *distribute the flyers to potential participants in their home countries and elsewhere.*

The conference programme will hopefully be ready for distribution next spring. All members will be asked to suggest speakers.

Approval of minutes from the second regional meeting

The minutes were approved without changes

Country report from Finland

Anna-Maija Kirkkari presented a report on the situation in Finland concerning agro-industrial and rural development, including Finnish answers to the questionnaires.

The report in its full length is attached as an appendix to the minutes.

Anna-Maija Kirkkari pointed out that the graphic map in the flyer is not correct, especially concerning the size and form of Finland. The map will be corrected, before the conference programme is printed.

Discussion 1: Successful Baltic Sea regions versus regions lagging behind. What is the recipe for a dynamic agro-industrial development.

F. Rexen introduced the topic by presenting a document “ *Regional development. Why do some regions perform better than others*” that was distributed to the members before the meeting.

It was suggested to structure the discussion on the basis of the following questions:

- ❑ Are there examples of dynamic regions and clusters, preferably agro-industrial) from your area?
- ❑ Can the creation of clusters help regional development?
- ❑ How important is access to knowledge (local research centres, universities etc)?
- ❑ How important is an official local innovation strategy?
- ❑ How important is geographical location?
- ❑ What are other important factors?
- ❑ On page 3 in document 1 are suggested potential agro-industrial clusters for the Baltic Sea region. What is your opinion? Do you have other suggestions?
- ❑ On page 5 is suggested to establish a “Baltic Sea Agro-industrial research network” (virtual research centre). What is your view?
- ❑ Other discussion points?

A number of examples were given of clusters that have played a role in development of regions. For example Umeå in Sweden, and Oulu in Finland and Lolland in Denmark. Rolf Olsson also mentioned a successful production of tomatoes in greenhouses in Sweden. In spite of a rather expensive production method (greenhouses) the tomato growers could compete with Dutch and Mediterranean tomato growers. The reasons are probably that they have excellent packaging systems, produce high quality products, and the transport distance to the (local) consumers is short. It was mentioned that it might be possible to improve economy by changing the lighting in the greenhouses, Light is normally very inefficiently used in traditional greenhouses. Research on better use of light (utilisation of the whole light spectrum) is being performed in Latvia.

Many examples of successful and not so successful regions in Poland were given. It was stressed that there are very large differences between regions, which to some extent is due to the geographical location. Remote areas have higher transport costs and the technical and social infrastructure is often weak. Creation of agro-industrial clusters may be one instrument to vitalise the less dynamic regions. Another important issue is collaboration with (dynamic) regions both locally and other countries.

Creation of local innovation strategies is important. It must be dynamic and be prepared at district or provincial level.

In the above mentioned basic document was suggested to establish “Baltic Sea clusters” on e.g. biofuels. This led to an interesting discussion on the prospects of producing biofuels in the Baltic Sea area.

One point of view (Latvia) was that today there are few incentives to produce biofuels. They cannot compete with natural gas in price and they are polluting.(e.g. particle and NOx emissions)

Another point of view (Germany, Sweden and Denmark) was that biomass production could become a good business in the Baltic Sea regions, where plenty of biomass is available. It is still an emerging industry, and there are many possibilities for technical improvements. In the three countries fossil fuel is heavily taxed, while bio-fuels are exempted from tax. Therefore biofuels are competitive in those countries even today.

The advantage of using pellets instead of (wet) wood chips or straw bales was emphasised. The EU financed network CARMEN was mentioned as an example of a successful project that has as objective to help marketing the use of biomass both towards politicians and consumers. In Germany it has politically been decided to increase the use of renewable energy – including biomass and windmills- from 20 % to 40 % of the total energy demand.

It was stated that the energy supply area is very much politically determined, and therefore it is difficult for companies to make long term planning. The market driver may be the CO₂ issue. Bioenergy is CO₂ neutral and will therefore contribute positively to the country's CO₂ balance. When this externality is capitalised, then bioenergy will have a much better competitive strength. Holland is together with Denmark and Sweden important biomass importers, which could lead to increased export possibilities from the Baltic countries with surplus of biomass (wood). It would mean new jobs not only in the forest sector, but also in the production and transport sectors. Another important (political determined) market is public owned buildings like schools, hospitals etc.

Poland has adapted a new law that makes it possible to include 4.5 – 5 % biodiesel or bioethanol in dieseloil. This will create a new market of 300 000tons of biodiesel or bioethanol. West Poland with its large previous state farms would be a logical place to build biofuel factories. The biodiesel project that was discussed at the Warsaw meeting was mentioned. It seems that it is difficult for the entrepreneur behind the project to raise the necessary capital. There is no tradition in Poland for investment in agro-industrial production.

It was generally agreed that the cluster principle can become an important instrument also in the agro-industrial area. It was stressed that clusters must be based on international orientated companies. Regional production, but international or global thinking. The clusters should preferably be created in connection with a university or research centre. Access to technological competence is very important not least when trying to attract foreign investors. Another observation is that companies often prefer to co-operate on technological development through a university. Besides universities foster coming entrepreneurs.

Agro-industrial clusters may be vertical integrated including primary producers and industrial companies and perhaps even retailers. (examples: the concepts introduced by Mac. Donald and Nestle).Marketing cluster may be the solution for small scale producers that not alone can market their products outside the local region.

The idea of a virtual Baltic research and development centre was supported. It was suggested to establish a virtual “campus” including the virtual research centre and a training centre for entrepreneurs (language skills, IT, “entrepreneurial spirit thinking” etc,) and a market study unit. The virtual campus should focus on one or a few key technologies.

It was mentioned that Estonia has started creating a new development strategy with focus on bridging R&D and entrepreneurship. It was strongly emphasised that the set up of new institutions like a virtual campus can only succeed, if a dynamic management can be found. The right persons are simply crucial for the success of such a project.

It was agreed that access to knowledge and an official innovation strategy are important elements in successful development of regions.

In Estonia a new development strategy to bridge R&D and entrepreneurship is currently being set up.

Discussion 2: Agriculture versus Agri-production

F. Rexen introduced the topic by presenting a paper “*Agriculture – Agriproduction*” that was distributed to the members before the meeting.

It was suggested to structure the discussion on the basis of the following questions:

- ❑ Does it make sense to distinguish between agri-culture and agri-production? And do the two dimensions require different innovation strategies?
- ❑ Does it make sense to suggest centralised marketing and quality control functions for specialised foods produced by local SME’s?
- ❑ What is your opinion about the bio-refinery strategy?
- ❑ What is your view on the three scenarios for possible future development in the food sector(page 6)? Are they valid also for your region?

The discussion started with an intervention from the Polish members. Poland is a large country with 2 million farmers with various skills and knowledge and the farm structure is disperse. Therefore Poland needs more than one development strategy. The distinction between agri-culture and agri-industry seems therefore logical in connection with polish agriculture. Poland has many small farms especially in the eastern part, and some very large former state owned farms in the western part. The latter are at present not very efficiently managed, and they represent a large potential for efficient agri-production. The small farms could improve their income with specialised productions, and there are examples of farmers who have success with production of e.g. special cheeses and vodka with their own brands.

From Swedish side it was doubted, whether it was possible/necessary to make a distinction between bulk producing farmers and speciality farmers (landscape preservation, ecology etc.). It was also doubted whether people would understand the distinction. It was therefore discussed, if it was possible to find other names. Ex agriculture based production and agriculture high value production.

It was discussed whether farmers were interested in investing in production companies, and examples of such cases were given. Apart from the many examples of farmer owned slaughterhouses and dairies, examples of chipboard factories, cellulose factories, vegetable oil factories partly or totally owned by farmers were given. A serious constraint to farmer ownership is that banks often are very reluctant to invest in farm owned companies. Another obstacle is that EU farmers that are used to fixed product prices and subventions are very reluctant to invest in activities outside their farm.

Regional innovation strategies are important. It is important to have a regional entity where entrepreneurs can have their ideas tested and business plans approved on the local level, before they contact investment funds and banks. Instead of spreading their activities in many different directions the regions should have visible profiles, prioritise and focus on specific directions of development. (example Hamburg: Guidelines on maritime development). Potential Baltic focus

points could be: Bio-energy regions, CO2 neutral regions, agro-technology nuclei, organic fibre technology clusters, biorefinery clusters etc. etc.

An example of a joint cross border (Poland/Germany) regional marketing project in Schlesien was mentioned.

Centralised quality control systems especially for food products are important especially for small food companies, who often do not have the skill and money to establish the necessary control schemes required by national and EU authorities. It was mentioned as an example that in Ostra Botnia a dozen of small producers have established a technology service centre to control their product quality and to give export quality assurance.

All Baltic Sea countries have their own labelling system, and also the EU Commission has introduced labels especially for food products. Therefore there is no need for more types of labels.

Web site

Antje Köhn gave an introduction to the newest developments on the web site and handed out the individual member passwords needed to enter the **intra-net**.

F. Rexen mentioned that a lot of statistical material about the Baltic Sea countries has been added to the web-site and he asked *all members to check and correct the figures for their own country*.

Any other business

A steering group meeting will be held in Copenhagen on January 27.

Next members meeting: **13-14 March in Wroclaw**.