Ministry of Food, Agriculture and Fisheries

Danish Institute of Agricultural Sciences
Department of Crop Protection

Erik Kirknel
Research Centre Flakkebjerg
Department of Plant Protection
Flakkebjerg
DK-4200 Slagelse

Annex C to:

Training of Pesticide Residue Chemists from Poland
Phase 1

Activity 4
(Support to formulation of development plans)

Part of Final Report to
The Danish Ministry of Food, Agriculture and Fisheries
for Funding of Projects in Central and Eastern Europe

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Introduction

This report concerns reporting on the application to The Danish Ministry of Food, Agriculture and Fisheries for Funding of Projects in Central and Eastern Europe:

“Training of Pesticide Residue Chemists from Poland, Phase 3, Activity 4 “.

The project background and project objectives are reproduced in Annex I

Activity 4 comprises: Support to formulation of development plans

This report comprises only Poland.

(In an earlier report:

Training of Pesticide Residue Chemists from the three Baltic countries Phase 2,
Report on activity 4
(Support to formulation of development plans)

development of future planning has been initiated in the three Baltic countries)

Activity 4 took place on a mission to Poland, January 10 – 15. (Itinerary is reproduced in Annex II).

Based on discussions with and inspections of The Plant Protection Institute in Poznan, the attached provincial laboratories, State Sanitary Inspection in Poznan, State Sanitary Inspection in Warszawa, National Institute of Hygiene in Warszawa, planning was initiated in the laboratories.

The visit was made in conjunction with the project:

“Implementation of small equipment in pesticide residue laboratories in Poland, Activity 2 (Consultancy on Pesticide Monitoring)”

The Itinerary, Annex II, and Addresses, Annex III, indicates the visited institutions.
Conclusions from visiting the Plant Protection Institute in Torun
January 12

Participants:

Barbara Langowska, Head of Department  
Monika Michel, Assistant  
Sylwia Czarnecka, Engineer  
Bogusława Czainska, Senior technician  
Anne Łukowska, Technician  
Magdalena Madraszewka, Technician

Bozena Martinek, Plant Protection Institute, Poznan

Erik Kirknel, DIAS

This laboratory belongs to the Plant Protection Institute network of pesticide residue laboratories of total 6 laboratories spread all over Poland. It is the second largest with an output of 525 samples (2100 analysis) of pesticide residues in food in 1998. The main activities for the laboratory is

- Systematic monitoring of pesticide in food, soil and water
- Improvement and new methods of pesticide residue analysis
- Study the fate of pesticides in various crops
- Study the fate of pesticides in the environment, especially water resources.

The laboratory was extremely well organised taken in consideration the means available. But the need for training in pesticide residue analysis both for scientific and technical staff, new larger equipment etc., was apparent and expressed from the staff.

Input for an application will be done in co-operation with DIAS and the Plant Protection Institute in Poznan during the next month.
Conclusions from visiting the Plant Protection Institute in Sosnicowice
January 13

Participants:

Stanislaw Stobiecki, Head of Branch
Irena Giza, Head of Pesticide Residue Laboratory
Andrzej Silowicki, Head of Laboratory for Quality Control of Pesticides

Bozena Martinek, Plant Protection Institute, Poznan

Erik Kirknel, DIAS

This laboratory belongs to the Plant Protection Institute network of pesticide residue laboratories of total 6 laboratories spread all over Poland. The two most interesting activities in this connection is:

- A laboratory for Pesticide Residues in Food
- A laboratory for Quality Control of Pesticides

The laboratory for Pesticide Residues in Food participates in the monitoring programmes within The Plant Protection Institute and have the chair in programs concerning storage places for obsolete pesticides. Obsolete pesticides is a problem in Eastern Europe. A plant for destruction of obsolete pesticides was not build and deposition in concrete tooms below soil surface, was common practice. It is obvious that contamination of drinking water was unavoidable, and only a question of short time. An intermediate solution (8-10 years) of removal and storage on new constructed storage sites, before incineration can be done. Monitoring of the contamination of ground water below the new storage places is going on. New results indicate (report available) contamination of drinking water for a nearby village as possible in the near future, despite geological models made before the construction of the site.

The laboratories are of low standard regarding buildings and instrumentation. A renovation programme for the buildings was started in the laboratory for Quality Control of Pesticides, but there was a lack of financial resources for training of staff and instrumentation.

Input for an application will be done in co-operation with DIAS and the Plant Protection Institute in Poznan during the next month.
Conclusions from visiting the National Institute of Hygiene, Warszawa
January 14

Participants:

Jan Ludwicki, Head of Dept of Toxicology
Pawel Strucinski, M.sc. Pharm.

Bozena Martinek, Plant Protection Institute, Poznan
Erik Kirknel, DIAS

The National Institute of Hygiene belongs to The Ministry of Health and Social Welfare. The Institute had before January 1 1999, the responsibility for providing of the analytical methods for pesticide residue analysis for the laboratories in all 49 voivoidships. After this date the number of voivoidships was decreased to 16. The future for these laboratories, which are performing pesticide residue analysis in food, is uncertain. A national policy for monitoring program is not visible and will maybe be more difficult to establish due to a lack of central planning. The number of laboratories is at least 49. A centralisation of laboratories or centralisation of tasks will be desirable in the present project before inclusion.

It was discussed to introduce, along with pesticides, heavy metal monitoring in food.

It was decided that DIAS should approach The Ministry of Health and Social Welfare in order to clarify the desire for participation in the project. Erik Kirknel will write the Ministry a letter in January 1999.

Input for an application will be done in co-operation with DIAS and the Plant Protection Institute in Poznan during the next month.
Conclusions from visiting the State Sanitary Inspection, Warszawa
January 14

Participants:

Wojciech Zabicki, Director
Jan Ludwicki, Head of Dept of Toxicology
Bozena Martinek, Plant Protection Institute, Poznan
Erik Kirknel, DIAS

The laboratory was a general sanitary laboratory, biological, occupational and chemical laboratory. The condition of the building and the instrumentation was well below the acceptable. Pesticide residue analysis was done in 200 samples for Warszawa per year! No plans existed for co-ordination of doing the analysis in the new voivoidship. The director expressed uncertainty about the future, was interested in the co-operation, but had understanding for my requirement for a larger flow of analysis in the laboratory.

It was agreed that the contact could be established to the programme, if re-organisation of the laboratories would take place in the future.
Conclusions from visiting the State Sanitary Inspection, Poznan
January 15

Participants:

Hubert Rokossowski, Director
Andrzej Wieland, Deputy Director
Elsbieta Kedziora, Head of laboratories
Bozena Martinek, Plant Protection Institute, Poznan
Erik Kirknel, DIAS

The laboratory had the same function as described for the laboratory visited January 14. In the new voivoidship of Poznan there was 5 other local laboratories doing pesticide residue analysis and heavy metals. The laboratory had a GC-MS for pesticides in food, mainly the organochlorines, such as DDT, Lindane etc. Only 50-80 samples were done per year.

It was discussed to investigate the possibilities for participating in the programme on monitoring of heavy metals in food. At present 10,000 analysis totally for the region was done per year.

Input for an application will be done on heavy metals in co-operation with DIAS and the Plant Protection Institute in Poznan during the next month.
Conclusions from visiting the Plant Protection Institute, Poznan January 15

Participants:

Alicja Niewiadowska,  
Ministry of Agriculture,  
Head of Department of Pharmacology and Toxicology,  
National Veterinary Research Institute, Pulawy

Erik Kirknel, DIAS

A representative from The National Veterinary Research Institute, Pulawy, was met for the first time. The representative Alicja Niewiadowska, informed of the monitoring programme of pesticide residue analysis in animal food, mainly chlorinated hydro carbons, OP-compounds and heavy metals. The network of laboratories consist of 9 laboratories analysing annually total 1950 samples of organo chlorine pesticides, 1950 PCB samples, 850 OP-samples and 5900 samples for heavy metals.

Input for an application will be done on heavy metals and pesticides in co-operation with DIAS and the Plant Protection Institute in Poznan during the next month.

Final meeting

Participants:

Jercy Dabrowski, Head of the Pesticide Residue Laboratory in Poznan  
Bozena Martinek, Chemist from The Pesticide Residue Laboratory in Poznan

Erik Kirknel, DIAS

The Pesticide Residue Laboratory in Poznan is the co-ordinator of input from own institutions, The State Sanitary Inspection, Poznan from and from The National Veterinary Research Institute, Pulawy.

It is important to have a local co-ordinator, because we are going to make only one application in 1999 to the Ministry.

A common frame was agreed for input to application. The Pesticide Residue Laboratory in Poznan will work out such a frame and distribute the frame (background, short term plans etc) for each laboratory

All input from partners should be addressed to both The Pesticide Residue Laboratory in Poznan and Erik Kirknel, DIAS by electronic mail only!!
Final Conclusions and recommendations

Development of plans for 1999 and next 3-4 years have been initiated for Poland.

Relevant institutions have been visited and procedures for development of plans for the future, have been initiated.

It has been agreed on input of ideas to plans for application for 1999 and next 3-4 years. Poznan will distribute the frame for input. The frame is made in agreement with Erik Kirkenel.

Institutions expected to supply with input (not limited to)

- Plant Protection Institute in Poznan and local laboratories
- National Institute of Hygiene in Warszawa
- State Sanitary Inspection in Poznan
- National Veterinary Research Institute, Pulawy and local laboratories

A collection of pictures from the laboratories was made during the visit.
Annex I

Project Background

Project Objectives

Project Background

Project Justification

This project is part of a much wider programme aimed at developing and implementing crop protection strategies that will contribute to environmentally and economically sound agricultural production in the Baltic Countries and Poland.

A fundamental pre-requisite for Good Agricultural Practice is the use of the principles of Integrated Pest Management (IPM). Programmes for development of IPM based crop protection strategies include many factors such as climatic conditions, cropping systems, economic forces, agricultural policies, pesticide and other technologies. In order to monitor and measure the presence of pesticides in the environment and agricultural produce to ensure that IPM principles are adhered to, it is necessary to have access to laboratories with appropriate resources. These resources include trained staff and appropriate equipment.

The Council Directives 91/414/EEC (concerning the placing of plant protection products on the market) and 93/99/EEC (on the subject of additional measures concerning the official control of foodstuffs) describe the requirement for well functioning chemical pesticide residue laboratories in member states, in order to be able to bring pesticides through the national registration process and to monitor foodstuffs on the market for residues of pesticides. Further Directives and standards are in focus on MRL (76/895/EEC, 90/642/EEC last amended 97/41/EEC), on reports (90/642/EEC), on sampling (75/700/EEC, 89/397/EEC), on methods of analysis (85/591/EEC, 90/642/EEC) and Laboratory quality assurance, Draft guideline for methods 7826/VI/97, EN 45001 and ISO 5725/1981.

In Denmark, these two activities are under the auspices of The Ministry of Food, Agriculture and Fisheries. It is, therefore, a natural part of the Environmental Related Sector Programme of the Danish state’s East Assistance Programme.

This part of the project aims at providing training of chemists, implementing small, urgent needed equipment so that modern techniques and methodologies, complying with EU requirements, can be used in the laboratories. This will work towards enabling pesticide residue laboratories in The Three Baltic Countries and Poland in the future to meet EU standards in this field.

Background

The Danish Ministry of Food, Agriculture and Fisheries, requested a survey be carried out by The Danish Institute of Agricultural Sciences (DIAS) in late 1997 and early 1998 to assess the need for support and possibilities of co-operation in the process of harmonization to the EU directives. The survey covered efficacy testing system for pesticides, quality assurance systems and residue analysis for pesticides suitable for the purpose of registration and monitoring of pesticides in food, as well as a basis for providing advice to farmers based on environmentally sound agricultural production principles.

Relevant chemical pesticide residue laboratories in the three Baltic countries and Poland were visited (see Final report for the project: Project Identification in the Three Baltic Countries and Poland in the
Environment Related sector Program). Within the area of chemical pesticide residues, the following areas of co-operation were identified:

1. Training of chemists
2. New equipment
3. General Co-operation between the Nordic countries, the Baltic Countries and Poland
4. Support to formulation of development plans for future activities in pesticide residue work

The survey revealed a strong wish and a pronounced need for co-operation on all four subjects. This application includes activities aimed at the first area - training of chemists; aims at producing an identification of area 2 - need for new equipment as well as the fourth area - supporting development plans.

The four reports: Identification of possible partners (in Estonia, Latvia, Lithuania and Poland) in environmental related sector programs of the Danish Ministry of Food, Agriculture and Fisheries revealed a clear need and wish for training of pesticide residue chemists in modern methodologies. The three sectors of food, soil and water were given high priority as well as the introduction of quality assurance systems in the laboratories.

The present situation regarding the skill and capability of the analytical chemists in the four countries is somewhat similar. Equipment and methodologies are very closely related in modern chemistry in general and this is also the case in the Baltic countries and Poland. Laboratories employ chemists that are skilled in methodologies and use of equipment which are in use at the present. These are out of data and inadequate to meet EU standards.

During the project identification mission it was realised that there is a general need for purchase of modern equipment for laboratories. The quality and quantity of equipment needed varied, however, at the various laboratories. It was not possible during the mission to make a specific identification of needs. The equipment available at present is in general old equipment from the Soviet Union era - often 15-20 years old and in most cases practically worn out. Chemists must be informed of the availability and options of newer equipment which will enable them to meet EU standards. They must, of course, also receive training in the use of such equipment, which should also include quality assurance. This is a prerequisite for the harmonisation process for EU.

Relatively limited investments are necessary at this moment to improve the quality of analytical work: information on equipment, training in the uses of this equipment and identification of the most important equipment.

Where relevant, aspects regarding Nordic-Baltic regional collaboration on pesticide residue issues in food, water and soil will be included. All Nordic and Baltic countries are characterized by being relatively small with limited resources. There is often a lack of results from areas with similar growing conditions. In order to support the process of harmonization to EU standards for the four countries, interactions between all the countries is a necessity. It is extremely important that optimization in the chemical analytical area is coordinated within the region, so that results from areas with similar growing conditions, become available for others within the region. A region with limited economic resources, would benefit on co-operation on important issues such as residue analytical activities when producing GAP (Good Agricultural Practice) values for the national authorities.

There is a general need for regional work on pesticide residue activities in order to ensure a harmonisation with EU-standards. This includes Inter calibration, workshops, exchange of student’s etc. Support is needed for formulation of development plans within the area of pesticide residues.
Project Objectives

Wider Objectives

The main development objective is to promote the environmentally safe use of pesticides in the three Baltic countries and Poland and to contribute to the process of harmonisation with relevant EU directives.

The immediate objective of this project (Poland phase 3) is to support pesticide residue laboratories in Poland in the process of harmonisation with relevant EU directives.

Specific Objectives

The specific objectives of phase 3 of the project include:

• training of four Polish pesticide residue chemists in modern pesticide residue methodology

• identification of necessary equipment for the participating Polish pesticide residue laboratories and elaboration of short term work plans

• support to formulation of development plans

This report is describing Phase 3, Activity 4: Support to Formulation of Development Plans.
Annex II
Itinerary

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<tr>
<th>Date</th>
<th>Time</th>
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<td>18.55</td>
<td>LO 468 Dept.</td>
<td>Kastrup</td>
<td>Jens Hinge Andersen + Erik Kirknel</td>
<td>Plant Protection Institute</td>
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<td></td>
<td>20.25</td>
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<td>Department of Pesticide Residues Research Poznan</td>
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<td>Jan 11</td>
<td>16.50</td>
<td>SK 1756 Dept.</td>
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<td>Plant Protection Institute</td>
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<td>Erik Kirknel</td>
<td>National Institute of Hygiene,</td>
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**Bold framed:** Itinerary for the present project.

**Normal framed:** Itinerary for project 00048 (Implementation of small equipment in pesticide residue laboratories in Poland, Activity 2: Consultancy on pesticide monitoring).
### Annex III
### Addresses

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<thead>
<tr>
<th><strong>Plant Protection Institute</strong></th>
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<tr>
<td>Department of Pesticide Residues Research</td>
<td><strong>Field Experimental Station</strong></td>
</tr>
<tr>
<td>60-318 Poznan, ul.Miczurina 20</td>
<td>Poland, 87-100 Torun, ul. Zwirki i Wigury 73</td>
</tr>
<tr>
<td>Phone: +48 61 8674841, +48 61 8649046</td>
<td>Phone: +48 56 623 56 99</td>
</tr>
<tr>
<td>Fax: +48 61 867 63 01, e-mail: <a href="mailto:gruchot@ior.poznan.pl">gruchot@ior.poznan.pl</a></td>
<td>Fax: +48 56 623 69 23</td>
</tr>
<tr>
<td>Head: Dr Jerzy Dabrowski</td>
<td>Head Station: Dr Heliodor Banaszak</td>
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<td></td>
<td>Responsible leader for</td>
</tr>
<tr>
<td></td>
<td>Pesticide residues analyses: Barbara Langowska</td>
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| **Plant Protection Institute** | **National Institute of Hygiene,** |
|-------------------------------|**Department of Environmental Toxicology,** |
| **Laboratory of Pesticide Residues Research** | Chocimska 24 |
| 44-153 Sosnicowice, ul. Gliwicka 29 | 00-791 Warsawa. |
| Phone: +48 32 2387596 | Phone: +48 22 497 084 or +48 22 494 051 ext. 328 |
| Fax: +48 32 2387503 | Fax: +48 22 497 441 |
| Head of **Branch:** Stanislaw Stobiecki | e-mail: pestpzh@pol.pl |
| e-mail: stocki@os.ior.gliwice.pl | Deputy Director: Prof. Dr. Habil Jan K. Ludwicki |

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<tr>
<th><strong>State Sanitary Inspection</strong></th>
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<td>For The Province Warszawa</td>
<td>For The Province Poznan</td>
</tr>
<tr>
<td>Zelazna 79 00-875 Warszawa</td>
<td>Ul. Noskowskiego 23</td>
</tr>
<tr>
<td>Phone: +48 22 203-719</td>
<td>61-705 Poznan</td>
</tr>
<tr>
<td>Director Wojciech Zabicki</td>
<td>Phone: +48 61 852 99 18</td>
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<td>Fax: +48 61 852 50 03</td>
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<td>e-mail: <a href="mailto:wsse@man.poznan.pl">wsse@man.poznan.pl</a></td>
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<td>Director Hubert Rokossowski</td>
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