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HIGH LEVEL ADVISORY ASSISTANCE AND TECHNICAL SERVICES  
FOR CEREAL HERBICIDES PRODUCTION

SI/POL/89/S02

THE REPUBLIC OF POLAND

Technical report: Marketing strategy and distribution  
of herbicides and pesticides\*

Prepared for the Government of the Republic of Poland  
by the United Nations Industrial Development Organization,  
acting as executing agency for the United Nations Development Programme

Based on the work of Paul Wassermann, consultant  
in marketing and distribution of herbicides and pesticides

Backstopping officer: B. Sugavaram, Chemical Industries Branch

United Nations Industrial Development Organization  
Vienna

\*This document has not been edited.

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**ABSTRACT**

Since some time Poland is in the process of restructuring its economy including agriculture towards a free market system. Whilst in the former centralized economy system marketing was practically non-existent, it is now generally recognized that the introduction of marketing strategies for plant protection chemicals is essential.

UNDP has supported a project (No SI/POL/89/802/11-51) for the introduction of marketing strategies for plant protection chemicals. A consultancy visit to Poland for 2 weeks (June 28-July 11, 1992) was sponsored by UNIDO.

Besides a lecture giving a review on marketing aspects of plant protection chemicals held at IPO, Warsaw and at 4 chemical plants further aspects such as waste disposal, distribution network, customs policy were discussed.

There is some know-how on marketing of plant protection chemicals available, but it is generally found difficult to turn it into practice. The distribution network for plant protection chemicals shows no clear structure yet.

## INTRODUCTION

After the fundamental political changes in the former COMECON countries Poland is in the process of changing the former centralized (state planned) economy towards a free economy system.

Agriculture, as a major part of the Polish economy is embraced into this process from the very beginning.

Not only an increased use of plant protection chemicals in the country is considered necessary to improve agricultural productivity and quality of agricultural produce, it is considered as essential to introduce marketing systems for plant protection chemicals to ensure Polish agriculture to be provided with the required products at reasonable costs.

UNDP is supporting this project of Marketing Introduction for Herbicides and Pesticides by consultancy. Full details of the project are described in Document No SI/POL/89/802/11-51.

The present assignment is an UNIDO sponsored consultancy visit to Poland for 2 weeks (June 28-July 11, 1992).

The objectives of the mission are described in the Job Description Document (Annex 1) and may be briefly summarized as follows:

Discussing and advising on

various aspects of marketing and distribution of plant protection chemicals

- methods of market analysis for herbicides and pesticides
- marketing strategy
- possible ways of distribution
- price creation
- product promotion
- credit and customs policy
- disposal of products out of shelf-life
- methods used for waste management in pesticide industries

Part of the assignment involved giving a lecture on marketing of herbicides and pesticides.

### RECOMMENDATIONS

1. Polish industry should look into production of plant protection chemicals not only to meet the needs of the local market but also to cover more sophisticated markets (West Europe, USA) by having collaborating arrangements with foreign companies, e.g. modernizing MCPA production process by Sarzyna and looking for export markets.
2. A work-shop on "marketing of plant protection chemicals" should be organized for persons of the plant protection chemicals industry being responsible for marketing.
3. Waste management should be co-ordinated within the plant protection chemicals industry. Plants not being in possession of a high temperature incinerator eventually could make use of free capacity of such facilities and have their waste (liquid or solid) disposed, which could be economical to all parties.
4. Starting up distribution business of plant protection chemicals by IPO could turn out to be profitable at least medium-/long-term. However, before starting it is suggested to make a market analysis and a cost calculation for the start-up considering whether products will be distributed throughout Poland or in certain regions only.

5. It is suggested to get customs duty reduced for imported technical material and product concentrates used for local formulation of ready products.
  
6. To enable IPO to carry out toxicology studies on a contract basis for the private industry, more funds would be needed to purchase more up-to-date equipment and to introduce Good Laboratory Practice (GLP). It is recommended to carefully calculate costs of such investments and put them against realistic chances of obtaining the volume of contract work.



## I. ACTIVITIES

Visits and discussions were held with key personnel at the following Institute and Chemical Plants respectively.

1. Institute of Industrial Organic Chemistry (IPO).  
Warsaw (Annex 2)
2. Chemical Plant "Fregata" S.A., Gdansk-Oliva  
(Annex 3)
3. Chemical Plant "Rokita" S.A., Brzeg Dolny  
(Annex 4)
4. Chemical Plant "Organika-Azot", Jaworzno  
(Annex 5)
5. Chemical Works "Organica-Sarzyna", Nova Sarzyna  
(Annex 6)

A lecture on "Marketing Strategy for Herbicides and Pesticides" was delivered at the Institute (IPO) in Warsaw and all the Chemical Plants visited followed by extensive discussions by the audience which varied from 10-25 persons.

## II FINDINGS

### 1. General Situation

In the course of changing from the centralized economy to the free market system a common aim was stated by everyone with whom discussions were held, be it at the IPO in Warsaw or the Chemical Plants visited.

All of them expressed their strong desire to look for best possible ways to market their services, technologies or products.

One basic problem is that the structure of the centralized economy is no longer existing and the build-up of the new structure in a free market system is still far from completion.

It is generally found that there is still a lack of basic technical know-how for building up a modern marketing system. Even where the technical know-how is theoretically already available (to a certain extent) it is felt difficult to turn it into practice and get the system functioning.

Another basic problem of Polish agriculture is the fact that it neither is protected by customs duty on imported agricultural produce nor it is subsidized by the Polish Government which puts most of the Polish farmers into a difficult financial position.

2. IPO, Warsaw

Although the staff of the Institute has been drastically reduced from about 730 few years ago to about 320 currently, the Institute finds the funds provided as insufficient. In order to have more funds available the different Departments of the Institute are keen on marketing their services or products.

The Toxicology Department is looking for possibilities to carry out short- and long-term tox studies as well as ecotoxicology studies for foreign companies on a contract basis. It was made clear that the chance for obtaining orders for such research work is theoretically given, provided the Institute can prove the ability to provide good data which will meet regulatory requirements. With the equipment and laboratory practices currently available it is most unlikely that data on required standard can be elaborated.

The Analytical Department producing analytical standards of quite a big number of herbicides and pesticides (Annex 3) is keen on marketing these products.

The Department of Pesticide Application considers to start distribution business with herbicides and pesticides in order to upgrade funds for the Institute.

The advantage the IPO can offer in such a business are people with the technical expertise on the products and being a Government Institution - pesticide producer/sellers will have no problems trusting them. On the other side the Institute staff naturally is lacking marketing and sales know-how.

Even if they would buy and sell without keeping warehouses and giving no further services to the endusers, certain investments, e.g. for transportation would have to be made. Short-term profit therefore could be scanty.

### 3. Pesticide Industry

All the chemical plants visited are closely co-operating with multinational companies producing plant protection chemicals.

All of them are importing ready-to-use products as well as product concentrates or technical material which are locally formulated to ready-to-use products on the licence of the respective company and marketed for Polish agriculture.

Right here it must be mentioned that the customs duty on technical material or product concentrates is the same as for the import of ready-to-use products. In some cases this may lead to the situation that the locally formulated product is more expensive when compared to the imported ready-to-use product.

In all the countries I know where technical material or product concentrates are imported the customs duty for such materials are considerably lower when compared to the duty on imported ready-to-use products.

#### Waste Management

Chemical treatment of waste water is available on all plant sites but not biological treatment methods.

The Chemical Plant Azot has already a high temperature incinerator for combustion of liquid and solid waste in operation.

Rokita S.A. is just in the process of constructing an incinerator on licence of a French company. Waste management aspects give reason for some concern but will depend on how soon funds can be made available to get the required facilities to solve waste problems.

#### Distribution of Plant Protection Chemicals

The organization of the distribution net work is still an ongoing process. There is some uncertainty left from the side of the producers/formulators on how the distribution network should be organized, e.g. how many steps should be involved in the distribution channel from the producer to the end-user of products, what the mark-up (margin) should be between the producer and the enduser.

According to information obtained from all the producers of plant protection chemicals the distribution of these products has "gone wild". Many people are of the opinion that they can make the "big money" in relatively short time in this business. Newcomers, be it individuals or small companies, frequently appear on the market, while others disappear. Too many people are going for spot business rather than building up a solid long-term business. These practices create some uncertainty on the market especially at the enduser level, when a farmer finds a product at the reseller's shelf at a totally unrealistic high price. The selling of plant protection chemicals is handled in

a very liberal way. According to presently existing government regulations everyone can go out and sell plant protection chemicals belonging to the Tox-Class II and above. Only for the sales of products belonging to the Tox-Class I an authorisation is needed.

### III ASSESSMENT OF NEEDS

#### General

Needs are diverse for the IPO as a Research Institute and the Chemical Industry as commercial enterprises. Should IPO decide to step into distribution business of plant protection products some common needs will be given.

#### IPO- Toxicology Department

Should the Institute be determined to take up toxicology studies on contract basis to elaborate data required for regulatory purposes, it would have to make vast investments in order to be able to produce data of required standard. This is well-understood by the management. It is suggested that the Institute limits its activities to short-term tox-studies as those are considerably less costly.

#### IPO - Department of Pesticide Application

The Department is considering to start business with distribution of plant protection chemicals. Even if they will act just as buyer and reseller without keeping warehouses, having no product promotion activities, giving no services to the farmers, some investment will still be required (e.g. personnel, communication - and transportation facilities, etc.). The size of investment will also depend on the size of the area the products are to be distributed.

Plant Protection Chemical Industry

It is generally felt that the industry has good prospects when farmers obtain a fair price for their produce.

The market potential for increased use of plant protection chemicals is given.

Customs duty: A reduction on customs duty on product concentrates of technical material not only would help the product formulator but eventually also the farmer who could buy the product at a lower price.

Environmental Aspects and Waste Management:

This certainly is a field where considerable work is left to be done. Problems are increasingly recognized and understood by the management, but achievements are hampered by lack of equipment and facilities. However, there is in this industry already one high-temperature incinerator in operation and another one under construction. If there is free capacity the disposal of waste including products out of shelf-life should be co-ordinated between the chemical plants.

Distribution of Plant Protection Chemicals:

No doubt there are companies which have already settled in this business, but for a lot of people the structure of the distribution network is still in an experimental stage. It will take some time before the



chaff will disappear from the market place.

It certainly would help to calm down the market, if the distribution would be handled in a somehow less liberal way showing that not everyone can step into this business.

Marketing of Plant Protection Chemicals:

It is generally accepted that a good marketing strategy is a basic tool for being successful in the market. In the lectures given on all the places visited a review on the various parameters a marketing strategy is built was given. In the discussions following the lecture it became very clear that people are most interested in marketing but have some problems as on how and where to start action in practice. It has been suggested by some chemical works that a work-shop on marketing know-how for persons responsible for marketing of plant protection chemicals would be most useful. One company offered even the possibility of boarding and lodging for the participants in such a work-shop.

ANNEX 1

**JOB DESCRIPTION**

SI/POL/89/802/11-51

Post Title: Marketing Strategy for Herbicides

Duration: 0.5 months

Date required: June 1992

Duty Station: Warsaw, Poland

Purpose of project:

To develop cleaner technology and promote market strategy for herbicides.

Duties: The expert, in consultation with project counterparts, should discuss the various aspects of marketing and distribution of herbicides. He is expected to discuss:

- marketing strategy
- methods of herbicidal market analysis
- organization of supply with herbicides
- credit and custom policy
- prices creation
- active forms of selling
- principles of herbicides allocation
- network of herbicide selling
- wholesale and quasi-wholesale (without own warehouse)
- distribution of herbicides and environment protection (disposal of out of shelf-life herbicides)
- examples of solutions existed in some countries.

The expert is expected to deliver the lecture on marketing of herbicides (at our institute and chemical plants).

He/she is expected to submit a report giving his findings and recommendations.

Qualifications

Chemist, or chemical engineer or economist with extensive experience in marketing strategy for pesticide, should have experience with companies having strong herbicide sales. Experience in Eastern Europe would be an advantage. He should have a good knowledge of developing quality assurance, develop export marketing strategies, setting up distribution networks and in customer services.

Language: English

Background information:

Poland in its new strategy on agrochemicals, is in the process of streamlining its pesticide industry and in improving safety, quality control and export promotion strategies. UNIDO has been providing assistance to Institute for Industrial organic chemistry, Warsaw, Poland, to provide necessary assistance to industry to promote essential agrochemicals especially for cereals production. With this in view, the production of MCPA herbicides has been optimized for scale up operation to reduce unwanted, toxic side products in the effluents.

ANNEX 2

Institute of Industrial Organic Chemicals (IPO)  
Annapol 6  
03-236 Warsaw

Dr. W. Moszczynski - Director  
Dr. J. Legocki - Deputy Director

1. Department of Pesticide Application

Head of Dept.: Prof. J. Kroczyński  
Herbicides - Prof. J. Ostrowski  
? Insecticides - Prof. E. Bakuniak  
Fungicides - Mrs. M. Bielska  
Toxicology - Mrs. Brzinska  
Analysis - Dr. L. Konopski  
Formulation - Mrs. M. Biernacka  
Synthesis - Dr. Z. Czerwinski

2. Department of Feromons

Prof. Sobotka

3. Engineering Dept. (Pilot Plant)

Dr. M. Kwiatkowski

4. Department of Auxiliary-Products  
(Food industry, textile, paper)

Mr. A. Jozwik

ANNEX 3

**Certified Pesticide Reference Materials**

**from**

**Instytut Przemysłu Organicznego Poland**

**A u g u s t 1 9 9 1**

Code	Product	Use	Unit
IPO 003	Alachlor	H	250 mg
IPO 004	Aldrin	I	250 mg
IPO 005	Atrazine	H	250 mg
IPO 007	Anthraquinone	Rep	250 mg
IPO 050	Bentazon	H	250 mg
IPO 060	Bromferwinphos	I	250 mg
IPO 063	Brompropylat	I,A	250 mg
IPO 088	Captan	F	250 mg
IPO 093	Carbaryl	I	250 mg
IPO 095	Carbendazim	F	250 mg
IPO 100	Carboxin	F	250 mg
IPO 104	cis-Chlordane	I	20 mg
IPO 105	trans-Chlordane	I	20 mg
IPO 107	Chlorferwinfos	I	250 mg
IPO 113	Chloridazon	H	250 mg
IPO 111	iso-Chloridazon	H	250 mg
IPO 112	Chlomequat	H	250 mg
IPO 110	Chlorothalonil	F	250 mg
IPO 114	Chlorotoluron	H	250 mg
IPO 116	2,4-D	H	250 mg
IPO 117	2,4-D methyl ester	H	250 mg
IPO 118	p,p'-DDA	Met	250 mg
IPO 119	p,p'-DDE	Met	250 mg
IPO 120	o,p'-DDE	Met	250 mg
IPO 122	p,p'-DDD	Met	250 mg
IPO 124	p,p'-DDMU	Met	250 mg
IPO 125	o,p'-DDT	I	250 mg
IPO 126	p,p'-DDT	I	250 mg
IPO 127	Deltamethrin	I	250 mg
IPO 128	Diazinon	I	250 mg
IPO 130	Dibromobenzophenone	Met	250 mg
IPO 129	1,2-Dibromoethane	I	250 mg
IPO 131	Dicamba	H	250 mg
IPO 132	Dichlofluanid	F	250 mg
IPO 134	1,2-Dichlorobenzene	Met	250 mg
IPO 135	1,3-Dichlorobenzene	Met	250 mg
IPO 136	1,4-Dichlorobenzene	I	250 mg
IPO 139	Dichlorprop	H	250 mg
IPO 142	Dichlorvos	I	250 mg
IPO 145	Dieldrin	I	250 mg
IPO 146	Dimethoat	F	250 mg
IPO 147	Dinoseb	H,F	250 mg
IPO 150	Diuron	H	250 mg
IPO 155	DNOC	A,I	250 mg
IPO 160	Dodine	F	250 mg

IPO 181	alpha-Endosulfan	I	250 mg
IPO 182	beta-Endosulfan	I	250 mg
IPO 187	Endrin aldehyde	Met	20 mg
IPO 188	Endrin	I	250 mg
IPO 189	Endrin ketone	Met	20 mg
IPO 190	Ethylene thiourea	Met	250 mg
IPO 197	Fenclorphos	I	250 mg
IPO 198	Fenoxycarb	I	250 mg
IPO 199	Fenitrothion	I	250 mg
IPO 200	Fenthion	I	250 mg
IPO 202	Fenuron	H	250 mg
IPO 270	alpha-HCH	I	250 mg
IPO 271	beta-HCH	I	250 mg
IPO 275	gamma-HCH	I	250 mg
IPO 276	delta-HCH	I	250 mg
IPO 283	Heptachlor epoxide (isomer B)	Met	20 mg
IPO 290	Hexachlorobenzene	F	250 mg
IPO 310	Isoproturon	H	250 mg
IPO 398	Lenacil	H	250 mg
IPO 425	Linuron	H	250 mg
IPO 460	Malathion	A, I	250 mg
IPO 461	iso-Malathion	I	250 mg
IPO 464	MCPA	H	250 mg
IPO 465	MCPA methyl ester	H	250 mg
IPO 470	Mecoprop	H	250 mg
IPO 472	Metamitron	H	250 mg
IPO 473	Metalaxyl	F	250 mg
IPO 474	Methabenthiazuron	H	250 mg
IPO 475	o,p'-Methoxychlor	I	250 mg
IPO 476	p,p'-Methoxychlor	Met	250 mg
IPO 478	Metobromuron	H	250 mg
IPO 480	Metribuzin	H	250 mg
IPO 499	Napropamide	H	250 mg
IPO 510	Nitrofen	H	250 mg
IPO 530	Pendimethalin	H	250 mg
IPO 540	Pentachlorobenzene	P	250 mg
IPO 560	Pentachlorophenol	H, F, I	250 mg
IPO 565	Pirimiphos-methyl	I	250 mg
IPO 570	Prometryn	H	250 mg
IPO 575	Propazine	H	250 mg
IPO 580	Propham	H	250 mg
IPO 590	Propyzamid	H	250 mg
IPO 582	Propoxur	I	250 mg
IPO 692	Simazine	H	250 mg
IPO 700	2,4,5-T	H	250 mg



IPO 720	Terbutryn	H	250 mg
IPO 725	1,2,3,4-Tetrachlorobenzene	P	250 mg
IPO 726	1,2,3,5-Tetrachlorobenzene	P	250 mg
IPO 727	1,2,4,5-Tetrachlorobenzene	P	250 mg
IPO 730	Tetradifon	A	250 mg
IPO 740	Thiram	F	250 mg
IPC 753	Triadimefon	F	250 mg
IPO 756	1,2,3-Trichlorobenzene	P	250 mg
IPO 757	1,2,4-Trichlorobenzene	P	250 mg
IPO 758	1,3,5-Trichlorobenzene	P	250 mg
IPO 763	Trichlorophon	I	250 mg
IPO 767	Trifluralin	H	250 mg
IPO 812	Vinclozolin	F	250 mg
IPO 840	Warfarin	R	250 mg

ANNEX 4

"Fregata" S.A.  
Ul. Grunwaldska 497  
80-309 Gdansk-Oliva

Mr. A. Dorant	- General Director
Mr. T. Martyni	- Technical Director
Mr. P. Ropel	- Marketing Manager
Mrs. E. Majewska-Ohler	- Marketing

Company Profile

The former state-owned company is since December 31, 1991 a private undertaking and established as Fregata S.A.. Shares are held to 100% by company employees. In near future legal actions may be taken to entitle also Polish citizens not being employed by the company to buy shares.

Fregata S.A. currently has a staff of 220 people.

ANNEX 5

"Rokita" S.A.  
ul. Senkiewicza 4  
56-120 Brzeg Dolny

Mr. Z. Kowal - Marketing Manager  
Mr. R. Bajda - Supply Manager for Product Intermediates

Company Profile

"Rokita" S.A. is a state-owned enterprise and the only producer of 2,4-D herbicide in Poland.

The enterprise employs about 6,700 people but only about 60 are working in the herbicide department (practically in the production of 2,4-D herbicide).

The main production are industrial chemicals. However, the herbicide products produced and/or formulated on licence from multinational companies count for about 8% of the total turnover of the enterprise.

ANNEX 6

"Organika-Azot"  
ul. Chopina 94  
32-510 Jaworzno

Mr. S. Zielek - General Manager  
Mr. A. Domin - Technical Director  
Mr. R. Walaszek - Marketing Specialist  
Mr. R. Tokarczyk - Marketing Specialist

Company Profile

"Organika-Azot" also is a state-owned enterprise. It employs about 900 people of which 600 are working in the herbicide and pesticide department.

Organika-Azot is running a small formulation laboratory at the plant site.

ANNEX 7

"Organika-Sarzyna"  
37-310 Nowa Sarzyna

Company Profile

"Organika-Sarzyna" is a state-owned enterprise. It is the only producer of MCPA herbicide in the country and currently working on up-grading the production technology which after completion will enable the plant to produce a more pure product containing 95-96% active substance compared to about only 80% achievable with the old technology.

The enterprise has about 1800 employees of which 250 are working in the plant protection chemicals department.

UNIDO Comments

The report clearly brings out the situation that exists in Poland with regards to the pesticide industry and how it is adjusting itself to the changing political and market situation. His observation that Poland has a very high potential for joint ventures by improving their product quality and waste minimization and it is also evident that other developing countries could benefit through their experience.

The project has been beneficial to the company Sarzyna in cleaning up their MCPA production and UNIDO could further assist in scaling up of the process to improve the quality of the product. There are also good opportunities in this area for joint ventures and export potential to Western Europe and USA as indicated in his report.

This report would be an useful document for future planning in marketing of pesticides produced by the industry for local use and export.

The author has recommended organizing a Workshop on Marketing of Plant Protection Chemicals and this could be arranged by UNIDO's Chemical Industries Branch and Feasibility Studies Branch if officially requested subject to availability of funds including on a cost sharing basis.