



**USAID** | **KOSOVO**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

# RESPONSIBLE USE OF PLANT PROTECTION PRODUCTS

KOSOVO CLUSTER AND BUSINESS SUPPORT PROJECT



**July 10, 2008**

This publication was produced for review by the United States Agency for International Development. It was prepared by the KCBS project team of Chemonics International Inc. based on a Final Report prepared by Short Term Technical Advisor, John Weatherwax

# RESpONSIBLE USE OF PLANT PROTECTION PRODUCTS

THIS REPORT OUTLINES THE CURRENT LAW AND PRACTICES ON THE USE OF PESTICIDE PRODUCTS IN KOSOVO AGRICULTURE. TWO SEMINARS WERE HELD – ONE ON SAFE AND RESPONSIBLE USE OF PESTICIDES FOR FARMERS AND THE OTHER ON THE CONTROL OF PESTICIDE USE FOR GOVERNMENT OFFICIALS

---

Kosovo Cluster and Business Support project - Responsible Use of Plant Protection Products  
Contract No. AFP-I-00-03-00030-00, TO #800

This report submitted by Chemonics International Inc. July 10, 2008

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

# CONTENTS

PURPOSE OF ASSIGNMENT.....	1
BACKGROUND .....	1
EXECUTIVE SUMMARY .....	1
FIELD ACTIVITIES TO ACHIEVE PURPOSES .....	2
TASK FINDINGS AND RECOMMENDATIONS .....	5
CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE ACTIVITY .....	8
ANNEXES.....	10

# PURPOSE OF ASSIGNMENT

The purpose of this assignment is to foster the development and implementation of political and industry policies and procedures for dealing responsibly with the import, handling and use of plant protection products. This includes reviewing present policies and legislation regarding the use of plant protection products, making recommendations to cover gaps, conducting seminars to raise awareness of related environmental issues, and to champion good pesticide management practices.

## BACKGROUND

Agriculture chemicals including pesticides are widely used all over the world to increase efficiency, productivity, quality and variety of produce all year around. Recent data collected by the Ministry of Agriculture, Forestry and Rural Development (MAFRD), reports that approximately 180 tons of active pesticide ingredients are applied annually in Kosovo. Industry estimates would suggest the amounts are much higher than that. This tremendous amount of poisons entering the environment, and potentially people's bodies, creates great concern among many Kosovars.

A long-lasting residue may be desirable in some situations because the pesticide is effective for a longer period of time. It need not be applied as often and thus may be cheaper to use. However, long-lasting residues are not always desirable. The chemicals may remain on/in food or feed and be hazardous to those eating them. The residues may remain in the soil to interfere with crops that are planted at a later date or they may remain on the surface and injure workers or others who reenter the treated area. Clearly it is important to know what residue, if any, remains after a period of time. In fact, certain foods may have no residue because they may never have been treated or were treated at recommended levels and the residues may have degraded in a timely manner.

## EXECUTIVE SUMMARY

The use of pesticides is a necessary fact of life in modern agriculture. Man must constantly compete with insects and other pests for all foods grown and consumed. However, pesticides are toxic chemicals whose use should be minimized and controlled.

This assignment had two goals – to determine what the current situation was regarding pesticide usage in Kosovo and to present two seminars – one to farmers on safe and responsible use, and the other to officials on the control of pesticide use in Kosovo agriculture.

Kosovo has national legislation to control the use of pesticides – the Law on Pesticides enacted by the Assembly of Kosovo in 2003. Unfortunately, this Law has only been implemented in part. There is a registration procedure for new pesticides and there are licensing provisions for the importation, manufacture and sale of pesticides. There is no manufacture of pesticides in Kosovo, so all pesticide chemicals used have been imported.

Both seminars were prepared and presented. There were a number of issues that needed to be addressed, both regarding the farmer's usage of pesticide chemicals and the official position on the control of pesticide use in Kosovo. These are covered in the Conclusions and Recommendations section of this report.

## FIELD ACTIVITIES TO ACHIEVE PURPOSES

A number of visits were made and persons interviewed to gather information on current pesticide use and control in Kosovo. The KCBS Crop Production Specialist, Millazim Makolli, served both as my guide and interpreter during these visits. The following visit summaries are in the order that the visits were made.

Met with Professor Doctor Adem Demaj, Professor of Plant Protection, Faculty of Agriculture, University of Pristina, in Pristina. He presently has eight students in plant protection. They have a small laboratory that is now used for teaching only, and they are very interested in developing a laboratory for pesticide residue analysis on foods. No laboratory in Kosovo is presently doing pesticide residue work. They wish to develop data on the level of contamination of pesticides in foods, water and the environment.

Professor Demaj stated that he is one of an eight member panel designated as the Authority for Pesticide Registration in Kosovo. The other members include representatives from:

Ministry of Health  
Ministry of Environment  
Ministry of Agriculture, Forestry and Rural Development (MAFRD), Plant Protection Division  
MAFRD Secretary for Pesticides  
University of Pristina, Faculty of Chemistry  
Peja Institute of Agriculture  
Pesticides Importers Association

This panel is to review and approve the importation of new pesticides by granting a registration. According to Professor Demaj, this review usually consists only of data on the pesticide provided by the foreign government, which has approved the pesticide for use. The data may or may not include the food commodities involved. They also review the labeling of the pesticide to ensure it is in the Albanian language. Professor Demaj stated that unfortunately this group has met only twice in the last two years.

Next we met with Mr. Adem Arifaj, Chief of the Phytosanitary Inspection and Seed Section of MAFRD, in Pristina. He stated that there is a Law on Pesticides (passed by the Assembly of Kosovo in 2003), which is administered by MAFRD. This law includes procedures for:

Pesticide registration and licensing for import  
Licensing for pesticide manufacture and export  
Licensing for professional pesticide application  
Licensing of pesticides for sale, either wholesale or retail

The Pesticide Registration Authority, referred to by Professor Demaj above, was established by that Law. Mr. Arifaj stated that there is presently no food law as such

in Kosovo. A comprehensive draft law has been undergoing review for two years now.

As a result, there are no maximum residue limits established for pesticide residues on foods and there is no control on pesticide usage by farmers. Further, there are no controls in place on disposal of outdated, illegal or excess pesticides.

Following the meeting with Mr. Arifaj, we attended a presentation in Pristina by Organics International, a German company, on their new product for biological control of insect pests. The substance is registered in the European Union (No. 2092/1991) and is presently not available in Kosovo.

The product targets sucking insects like aphids and white flies on leafy crops in both commercial greenhouses and in the fields. It will also kill other insects. It is an oil/water emulsion that kills the insect by coating and suffocating it. As such, it is non-toxic to mammals and is claimed to not harm the environment. Spraying can be done up to the day before harvest. There is no pre-harvest interval. There is also no apparent problem with bees and other pollinating insects. There was considerable interest and discussion among the participants.

Traveled to Peja (about 100 km west of Pristina on the Kosovo-Montenegro border), and met with Dr. Fadil Musa, Director of the Peja Institute for Agriculture. The Institute has a crop protection laboratory as well as a quality control laboratory, which examines foods, drinks, soil and animal feeds for chemistry only (no microbiological analyses). Training of the laboratory analysts is done primarily by European experts. The laboratory had been donated a Shimadzu Gas Chromatograph/Mass Spectrometer for residue analysis and an Albanian expert to train the analysts in its use was expected the following week.

The Institute also has a research station and test farm where crop cultivar varieties are grown and developed.

Dr. Musa indicated that there is a national listing of approved and registered pesticides, but as a practical matter, pesticides are being used without control. He suspects that dumping of outdated or illegal pesticides is prevalent in Kosovo because there is no real control at the border.

After discussions with Dr. Musa, we were given a tour of the quality control laboratory by Ing. Viora Gashi. Food analyses include proximate determinations (fat, ash, protein, moisture and physical properties). They also examine feeds, water and wine. They are able to do a variety of elemental and metal residue analyses by both a flame photometer and an atomic absorption spectrometer.

Met next with Mr. Refik Shabani, General Manager of AgroUnion a licensed importer of agricultural chemicals. They import fertilizers, seed and various chemicals used by farmers in Kosovo. The firm is considered one of the largest. About 10% of their business is pesticides.

Mr. Shabani indicated that the total volume of pesticides imported into Kosovo, increases every year. When they wish to import a new pesticide, they register that

pesticide with MAFRD, and receive a license to import. The Customs Service is advised so that the product can be cleared on arrival.

The license they receive has no expiry date, does not limit the amount imported and does not specify the crops the pesticide may be used on.

AgroUnion does sell pesticides retail, but their sales are primarily wholesale to smaller suppliers who then sell retail to the farmer. Mr. Shabani keeps a record of his wholesale sales (date, amount, to whom sold) for his own information. The Ministry has no requirement for a sales record.

We visited the AgroUnion storage and sales area. The pesticides were stored neatly and in an orderly fashion. Those examined were properly labeled.

Later that day, we also visited Semenarna, a Slovenian firm which retails a variety of farm and home products, including pesticides. They also have a license to import and are licensed as well to sell pesticides retail. Their retail pesticide display and sales area was also neat and orderly.

They have a test farm behind the main building. At the time of the visit, it was planted with a number of varieties of winter wheat and on the following day they were to hold a field day where farmers would visit, view and discuss the wheat varieties.

Toward the end of the assignment and just prior to presenting the two seminars, I revisited Peja Institute for Agriculture. This second visit was to meet with Dr. Auril Nuro, a KCBS consultant hired to train Peja laboratory staff on gas chromatographic analysis of pesticides. Dr. Nuro is a professor in the Faculty of Chemistry, Tirana University, Albania. He and the Head of the Institute Central Laboratory, Mr. Bardh Begolli, were calibrating the responses of a gas chromatograph fitted with an electron capture detector sensitive to organochloride pesticides. The pesticides that they were examining were the older persistent pesticides which are no longer permitted in foods, but which can often be found in soil where they have been previously used. They also were examining a polychlorinated biphenyl (PCB) standard. PCBs are an industrial contaminant often found in the environment and sometimes in foods. They were not using the Shimadzu instrument at that time, as an un-interruptible power supply was needed to avoid damaging the unit if there was a power failure during a run. The Institute was to purchase that power supply.

# TASK FINDINGS AND RECOMMENDATIONS

## **Task 1 - Review available data/information on crop pesticide usage.**

There is no national requirement to record or report pesticide imports, sales or usage. There are, therefore, no usage data or even information on usage that could be found.

Pesticides which have been reviewed by the Kosovo Pesticide Registration Authority and which have been officially registered for use in Kosovo, are to be reported to the MAFRD Pesticide Registrar. The Ministry was asked for a list of those registered pesticides and provided a listing of 14 products. It is not known whether this was a complete list. Note, however, that according to Professor Demaj the Authority has only met twice in two years.

All pesticide chemicals used in Kosovo must be imported. Therefore, one possible source of data on pesticide use could be Customs records. However, Regulation No. 2005/39 by the United Nations Mission in Kosovo (UNMIK) lists pesticide chemicals as duty-free items (see Tariff Code 3808 in [http://www.unmikonline.org/regulations/2005/RE2005\\_39.pdf](http://www.unmikonline.org/regulations/2005/RE2005_39.pdf)). Therefore it is unlikely that the Customs Authority would maintain such records.

## **Task 2 - Review government policies and regulations presently in place regarding the control of pesticide usage in Kosovo.**

There is presently no unified food law in Kosovo. A draft of a comprehensive law, however, has been under review for the past two years. The only national law relating to pesticides was enacted by the Assembly of Kosovo in 2003 and is entitled "Law on Pesticides". A copy is attached as Annex I. In January, 2005, the United Nations Mission in Kosovo reviewed the implementation of laws passed by the Assembly of Kosovo in 2002 and 2003 (see [http://www.osce.org/documents/mik/2005/01/4099\\_en.pdf](http://www.osce.org/documents/mik/2005/01/4099_en.pdf)). Their comment regarding the 2003 Law on Pesticides was:

"The main purpose of the Law on Pesticides is to regulate the manufacture, import, export, distribution, sale and use of pesticides in Kosovo. The MAFRD has started the initial implementation of the Law by issuing AI No. 2004/1 on the Establishment of Terms for Licensing Pesticide Importers to Trade and Store Pesticides. Further subsidiary acts referred to in Sections 2.2, 4.1, 14.4 and 19.1 need to be adopted."

Section 19.1 is especially important as it details the administrative instructions on the implementation of the Law. I could find no further administrative or other actions taken to implement the provisions of Section 19.1, or the other sections, for that matter.

Pesticide chemicals are a big business world-wide. There are unscrupulous exporters who are always looking for countries where they may dispose of substandard, outdated or banned pesticides. Kosovo has very likely already been a target for such operators. As example, farmers have complained that some pesticides do not seem to be effective when applied. These could be substandard or outdated chemicals (pesticides have a specific shelf life and will degrade on long standing or after improper storage).

There are provisions in the Law for registration of pesticides and for a Registration Authority which would review applications and grant registrations where needed. There is also a provision for a Registrar of Pesticides within MAFRD. From what I could determine, however, the Registration Authority is nearly inactive (has met twice in two years) and their

review does not include all of the elements required by the Law on Pesticides. To do a complete review, they would have to be provided with much more data than they now are.

Licensing for all aspects of pesticide import, export, manufacture and sale are also covered in detail by the Law. Once issued, a license is valid until revoked and it is not clear in the Law what would constitute grounds for revocation.

**Task 3 - Meet with Peja Agriculture Institute staff and review their capability for dealing with pesticide control issues and monitoring usage.**

As noted in the Field Activities above, I visited the Peja Institute for Agriculture on two occasions and reviewed their present laboratory capability.

It is my considered opinion that with some training and minimal purchase of supplies and glassware, the Peja Institute laboratory could do analyses on pesticide formulations. To do pesticide residue analysis, however, the laboratory staff would need considerable training, plus purchase of specialized glassware and sample processing equipment, in addition to ultra pure solvents and additional chromatographs with specific specialized detectors.

Pesticide residue and pesticide formulation analyses cannot and must not be done in the same laboratory, or even in the same building, because of cross-contamination problems. Therefore, there must be two physically separate analytical facilities, one for formulations and one for residues. MAFRD will need to identify both laboratories and to provide the necessary funding to equip, supply and train the laboratory staffs.

**Task 4 - Conduct seminar for government officials on typical policies and procedures for controlling the proper handling and use of approved plant protection products**

A seminar entitled "Control of Pesticide Use in Kosovo Agriculture" was prepared and presented at the Peja Institute for Agriculture on 20 June 2008. In attendance were officials from the Institute as well as Peja Municipality and MAFRD inspectors. The slides used are attached as Annex II.

In preparing the presentation, I considered that seven areas and issues needed to be addressed to adequately control pesticide use. These were:

- Registration procedures
- Licensing
- Import controls
- Formulation analysis
- Monitoring sale and use of pesticides
- Disposal of pesticides and wastes
- Extension services (for farmers)

During the presentation, I outlined the present Law on Pesticides provisions (if any) and what I understood to be the current situation in Kosovo to be, for each topic. I then suggested what the long-term goals might be for each area and proposed some immediate and/or short term actions to consider.

**Task 5 - Conduct seminar on responsible use of plant protection products for suppliers, extension workers and other crop production advisors.**

A seminar entitled "Safe and Responsible Use of Pesticides" was prepared and presented at a school in a village near Gjakova in western Kosovo. There were 55 participants who were primarily farmers, but who included officials from the Gjakova Department of Agriculture, Heifers International and the Vegetable Farmers Association. Also present were the President of the Farmer's Union and a camera and farm news reporter from the Kosovo public television station, RTK. The slides used in the presentation are attached as Annex III. A brief interview was given to the television reporter following the presentation.

This presentation was aimed at farmers, so I included all of the topics that a farmer should know or be aware of in the handling and application of pesticide chemicals. These included:

- The hazards of pesticides
- Use of protective clothing and equipment
- Choosing a pesticide wisely
- Understanding the pesticide label
- Mixing and loading pesticides
- Calibration of application equipment
- Applying pesticides properly and safely
- Transportation, storage and disposal of pesticide chemicals
- Record keeping

I was informed that many, if not most, of the farmers in attendance did not use specific protective clothing or equipment when mixing, loading or applying pesticides. I am sure they were suitably cautious when handling the concentrated pesticide, but I am equally positive that they did not have a real appreciation of the potential effects of long term sub-acute exposure to diluted pesticide sprays.

Some useful formulas were presented for percentage mixing of wettable powders and other dry formulations, as well as liquid concentrates.

Low pressure sprayers must be calibrated to determine the amount of spray delivered over a given area. This permits the farmer to adjust the amount of pesticide mixed into each tank so that the proper amount of pesticide is applied to the crop. A simple calibration procedure was presented along with a way to calculate the amount of pesticide needed to be mixed in the tank.

In discussions after the presentation, I gained the impression that the farmers had never received training or instruction in the transportation, storage and disposal of pesticides. I was told that, in fact, the labels that are on the pesticide chemicals that they use often do not include information on protective clothing required, disposal procedures, or other information considered standard on pesticides sold in the EU or the US.

There is no record keeping requirement by farmers (or sellers, for that matter) in Kosovo. I included record keeping in the presentation, with an example record, and suggested to the farmers that they should keep records of pesticide use for their own purposes. Such records should include the farmer's comments on efficacy or problems noted for future consideration.

There was an additional deliverable listed in the Scope of Work for this assignment. This concerned input to a brochure on responsible crop protection product usage. After discussion with the KCBS staff, it was decided that the most useful brochure would be information on mixing pesticide spray solutions and calibration of low-pressure sprayer applicators. The text for this was prepared and is attached as Annex IV.

# CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE ACTIVITY

My conclusions and recommendations will be listed by area of concern:

Registration of pesticides – This is the first line of defense in the control of pesticide usage. Registration provides a means for officials to define what pesticides are going to be permitted to be used in the country.

The Registration Authority must meet more often and must review new pesticide applications using the requirements outlined in Section 14.8 of the Law on Pesticides. This will require more data be submitted with new pesticide applications. Suggest that the Authority meet at least four to six times per year. On those occasions when no new applications have been received, the Authority could review those pesticides which were granted registration previously, but which were not reviewed in detail.

Licensing – Licensing is covered in detail in the Law on Pesticides. Licensing should be a dynamic process with the license subject to review and reissue on a periodic basis. Recommend that MAFRD consider license review and reissue every three years. Some licenses have a performance requirement. If so, there must be a system in place to report and review that requirement to maintain the validity of the license. Suggest that for wholesale and retail licenses, a formal yearly report be made by the licensee to MAFRD that there is no change in business location or agronomist status of the salesperson.

Import controls – Farmers and others have stated that both registered and unregistered pesticides are freely available on the market. There is no pesticide manufacture in Kosovo, so the first step in controlling indiscriminate pesticide usage, is to enforce border controls on imported chemicals. The Law on Pesticides clearly states that the only pesticides that can be legally sold and used are those which have been registered and imported under a license granted by MAFRD.

Imports are under the jurisdiction of the Customs Authority. To enforce the control of the importation of pesticides, there should be an agreement and cooperation between the Customs Authority and MAFRD, where Customs notifies MAFRD of arriving lots of pesticides and confirms that the pesticides are on the approved registry list. Those not on the list would be denied entry. MAFRD, in turn, should aggressively inspect wholesale and retail pesticide outlets for unregistered pesticides.

Formulation analysis – Analysis of imported pesticide formulations is necessary to ensure that substandard or outdated pesticide products are not sold in Kosovo. All countries with an effective pesticide control system have some form of formulation analysis to confirm the labeled composition statements.

Recommend that MAFRD identify and establish a national formulation testing laboratory. As stated earlier, I believe that the Peja Institute for Agriculture could be a formulation testing laboratory with training and minimal purchase of reagents and glassware.

Monitoring sale and use of pesticides – There is presently no official requirement to monitor or report the sale or use of pesticide products in Kosovo. However, until the present proliferation of pesticides is brought under control, the MAFRD should require that all sales of pesticides for commercial application be reported to MAFRD, to include the name of the

buyer (and presumed applicator). If evidence is found that a sale is not reported, the appropriate wholesale or retail license should be revoked. This is a draconian step, but one that I believe is needed to gain some measure of official control over pesticide usage in Kosovo.

Disposal of pesticides and wastes – This is not a critical issue at present, but could become one in the future if stocks of illegal or substandard pesticides must be disposed of. Section 13.4 of the Law on Pesticides provides that stocks of banned, severely restricted or severely hazardous pesticides shall be “disposed of according to applicable laws on hazardous wastes and administrative instruction made under this Law.” There was a Waste Law passed in 2005 ([http://www.assembly-kosova.org/common/docs/ligjet/2005\\_02-L30\\_en.pdf](http://www.assembly-kosova.org/common/docs/ligjet/2005_02-L30_en.pdf)) which included hazardous waste. It would appear, however, that that Law was never intended to accommodate large amounts of extremely toxic materials, such as stocks of pesticides. The administrative instructions under the Law on Pesticides refer only to disposal of pesticide waste (e.g. spillage clean-up materials) and empty pesticide containers.

MAFRD in cooperation with the Ministry of Environment should establish official procedures for the decontamination and disposal of stocks of pesticides that have been condemned, as well as large amounts of pesticide wastes. MAFRD should also establish official procedures to be followed by farmers and applicators for disposal of empty containers and pesticide waste from minor spillage, as well as training in those procedures.

Extension services – At present, those persons licensed to sell pesticides are required to have training in agronomy or agricultural sciences. They can then provide the buyers (usually farmers) with some information and advice on pesticide usage. The problem is that their main function is to sell pesticides, not to advise the farmer on problems. What is needed in the long term is a professional agricultural extension service which can provide farmers with advice and training on all agricultural issues. Some countries have established an extension service within their food control agencies, while others rely on the services of agricultural universities. See <http://www.oneglobe.com/agriculture/extnsion.html> for an international listing of extension services.

# ANNEXES

Annex I	Law on Pesticides .....	i
Annex II	Slide presentation “Control of Pesticide Use in Kosovo Agriculture” .....	ii
Annex III	Slide presentation “Safe and Responsible Use of Pesticides” .....	iii
Annex IV	Information for brochure on “Mixing Pesticide Spray Solutions and Calibration of the Low Pressure Sprayer” .....	iv

## ANNEX I: Law on Pesticides

## ANNEX II: Slide presentation “Control of Pesticide Use in Kosovo Agriculture”

## ANNEX III: Slide presentation “Safe and Responsible Use of Pesticides”

## ANNEX IV: Information for brochure on “Mixing and Loading Pesticides and Sprayer Calibration”

**UNITED NATIONS**  
United Nations Interim  
Administration Mission in  
Kosovo



**NATIONS UNIES**  
Mission d'Administration  
Intérimaire des Nations Unies  
au Kosovo

UNMIK/REG/2003/35  
8 December 2003

---

**REGULATION NO. 2003/35**

**ON THE PROMULGATION OF  
THE LAW ADOPTED BY THE ASSEMBLY OF KOSOVO  
ON PESTICIDES**

The Special Representative of the Secretary-General,

Pursuant to the authority given to him under United Nations Security Council resolution 1244 (1999) of 10 June 1999,

In conformity with paragraphs 9.1.44 and 9.1.45 of the Constitutional Framework for Provisional Self-Government in Kosovo (UNMIK Regulation No. 2001/9),

Taking into account a communication from the President of the Assembly of Kosovo, dated 6 November 2003, concerning the Law on Pesticides adopted by the Assembly of Kosovo on 16 October 2003,

Hereby promulgates effective as of the date of signature the Law on Pesticides attached to the present Regulation (Law No. 2003/20), provided that its provisions, in particular those set out in sections 13.3, 17.2 (a) and (f), and 19.1 (a) and (c), shall be interpreted in a manner consistent with sections 8.1 (f), (j), (k), (n), (o), and (p) of the Constitutional Framework for Provisional Self-Government in Kosovo.

Signed on this 8<sup>th</sup> day of December 2003.

Harri Holkeri  
Special Representative of the Secretary-General

## PROVISIONAL INSTITUTIONS OF SELF GOVERNMENT

**KUVENDI I KOSOVËS  
СКУПШТИНА КОСОВА  
ASSEMBLY OF KOSOVO****LAW NO.2003/20**

The Assembly of Kosovo,

Taking into account United Nations Interim Administration Mission in Kosovo (UNMIK) Regulation No. 2001/9 of 15 May 2001 on the Constitutional Framework for Provisional Self-Government, articles 9.1.26 (a) and 5.1 (n).

For the purpose of regulating the manufacture, import, export, , distribution, sale and use of pesticides in Kosovo,

Hereby approved the following:

**LAW ON PESTICIDES****Section 1  
DEFINITIONS**

For the purposes of the present Law:

- (a) “Active substance” its mean any chemical substance or micro-organism including viruses, which is the biologically active part of the pesticide present in the formulated product;
- (b) “Advertising” shall mean the promotion of the sale or use of any pesticide by print, audio or visual media, signs, displays, gifts, demonstration or word of mouth;
- (c) “Analyst” shall mean any person appointed or designated under this law for examination of pesticides;
- (d) “Biocidal products” shall mean the active substances and formulated products containing one or more active ingredients, in the form in which they are supplied to the user, intended to destroy, deter, render harmless, prevent the action of, or otherwise exert a controlling effect on any harmful organism by chemical or biological means;
- (e) “Common Name” shall mean the name assigned to a pesticide by the International Standards Organization (ISO) to be used as a generic or non-proprietary name for that particular active ingredient only;

- (f) "Container" shall mean any thing in which or by which pesticides may be encased, covered, enclosed, contained, or packed, including material in contact with the pesticide;
- (g) "Employer" shall mean any person who employs, directs, supervises or controls one or more persons engaged in the handling or application of pesticides;
- (h) "Environment" includes water, air, land, wild species of flora and fauna, climate, and any inter-relationship between them, as well as any relationship with living organisms;
- (i) "Export" is distribution of pesticides outside Kosovo. Export shall include re-export;
- (j) "Import" is entry of pesticides in Kosovo. Import shall include transit through Kosovo to a final destination outside Kosovo
- (k) "Formulated product" is the combination of various substances (active and inert) designed to render the product useful and effective for the purpose intended in the form as supplied to the user;
- (l) "Harmful Organism" mean plants, animals, insects, fungus, viruses, bacteria and other pathogens the presence of which is harmful or which has a detrimental effect on humans, their activities or the products they use or produce, or on animals, plants and the environment;
- (m) "Inspector" shall mean the person appointed or designated under this Law for inspection of pesticides;
- (n) "Instructions of use" are written or graphic Instructions for the use of, or description of a pesticide, which is found inside the container or attached to the pesticide container, not given in the label;
- (o) "Integrated Protection " shall mean the rational application of a combination of biological, biotechnological, chemical, cultural or plant-breeding measures whereby the use of chemical pesticides is limited to the strict minimum necessary to maintain the pest population at levels below those causing economically unacceptable damage or loss;
- (p) "Label" shall mean the written, graphic or printed matter on, or attached to, the pesticide, or the immediate container thereof and the outside container and retail package of the pesticide;
- (q) "Manufacture" shall mean preparation, compound, formulation, mix, make, or otherwise process a pesticide in order to supply it to users, including packaging and repackaging;
- (r) "Packaging" or "repackaging" is the transfer or repackaging of pesticides from any container into other container;
- (s) "Pest" shall mean every animal, organism including insects, nematodes, mites, rodent, etc. harmful to humans, animals, plants and their activities;

- (t) "Pesticide" shall include all plant protection and biocidal products including rodenticides, molluscicides, nematocides ;
- (u) "Professional Pesticides Applicator" shall mean any authorized person who applies or uses pesticides;
- (v) "Pesticides Retailer" shall mean any registered person to the authorized body who places pesticides on the retail market;
- (y) "Pesticides Wholesaler" shall mean any registered person to the authorized body who places pesticides on the wholesale market in order to distribute them unchanged, in bulk;
- (z) "Placing on the market" shall mean any importation, sale, distribution, use, storage or supply of a pesticide to a user in Kosovo, whether in return for payment or free of charge;
- (aa) "Plant protection product" shall mean active substance and formulated product containing one or more active substances, in the form in which it is supplied to the user, intended to –
- (i) protect plants or plant products against all harmful organisms or prevent the action of such organisms
  - (ii) influence the life processes of plants, other than as a nutrient;
  - (iii) preserve plant products
  - (iv) destroy undesired plants
  - (v) destroy parts of plants, deter or prevent undesired growth of plants;
- (bb) "Registration" shall mean the approval by the competent authority for the placing on the market and use of a pesticide.
- (cc) "Registering authority" shall mean the authority conducting the registration of pesticides in Kosovo.
- (dd) "Licensing authority" shall mean the authority conducting licensing of persons dealing with pesticides.
- (ee) "Store" shall mean to store pesticides for sale, distribution and use; and
- (ff) "Trade Name" shall mean the name under which a pesticide is labeled, registered, and advertised by the person granted registration of the pesticide under this Law and which can be used exclusively by that person to distinguish the product from other pesticides containing the same ingredient.
- (gg) "Banned pesticide" shall mean a chemical which have been prohibited by MAFRD's final decision upon proposal by the registration authority in order to protect human or animal health or the environment and includes a pesticide that has been refused approval for first-time use, withdrawn by industry from the market in Kosovo.
- (hh) "Severely restricted pesticide" shall mean a chemical virtually which have been prohibited by MAFRD's final decision upon proposal by the registration authority in order to

protect human or animal health or the environment although certain specific uses are still allowed;

(ii) "Severely hazardous pesticide" shall mean a chemical formulated for pesticide use with a potential to cause severe health or environmental effects which can be observed under conditions of scope use.

## **Section 2 REGISTRATION OF PESTICIDES**

2.1 No person shall manufacture, import, export, pack, repack, label, store, sell, distribute, apply, possess, use or otherwise place on the market in Kosovo any pesticide unless:

- (a) it has been registered in accordance with this Law;
- (b) it is intended for purposes of scientific research or evaluation, and the designated authority has granted a special permit for use under controlled conditions in limited quantities and for limited period and uses;
- (c) it is otherwise deemed to be registered or exempted under this Law.

2.2 Application for the registration or re-registration of a pesticide shall be made in the manner and form set out in an Administrative Instruction .

2.3 The registration authority shall base its pesticide registration decision on the procedure set out in the Law and to the extent practical, on harmonized regional and international standards for pesticide registration.

2.4 The registration or re-registration of a pesticide shall be valid for the specified use(s) for the period specified with Law.

## **Section 3 REQUIREMENT FOR LICENSES**

3.1 Any person who wishes to engage in one or more of the following activities shall first obtain a license from the competent authority responsible for plant protection hereinafter "the licensing authority " for:

- a. Manufacture of pesticides;
- b. Export of pesticides;
- c. Import of pesticides;
- d. pesticides wholesale;
- e. pesticides retail;
- f. professional pesticides applicator.

3.2 Licenses granted under section 3.1 shall be valid unless revoked, suspended or otherwise terminated by the designated licensing authority, or as otherwise provided under this Law.

3.3 Licenses issued under section 3.1 (a); (b) or (f) shall be shown to any authorized person who asks to see this authorization.

3.4 Licenses issued under section 3.1 (c-f) shall be visibly displayed on the relevant premises at all times.

3.5 Licenses under section 3.1 (a-d, f) shall be issued by Department of Plant Production and Protection, MAFRD.

3.6 Licenses under section 3.1(e) shall be issued by the competent municipal level licensing authority.

#### **Section 4 LICENSE FEES**

4.1 Levy fees for licenses issued under the present Law in amounts and under conditions shall be set out by the Ministry.

4.2 Revenue derived from license fees shall be deposited in the fund of Kosovo Budget.

#### **Section 5 LICENSE TO IMPORT PESTICIDES**

5.1 Person who wishes to import a registered pesticide shall apply to the designated licensing authority for a license in accordance with the requirements and procedures set out into Section 19 of the Law.

5.2 Person who wishes to import an unregistered pesticide under section 3.1(a) shall apply to the designated licensing authority for a license in accordance with the requirements and procedures set out into Section 19 of the Law.

5.3 The shelf life of any imported pesticide shall be at least one (1) year from the date of delivery into Kosovo. In special cases, as determined by the licensing authority, a shorter shelf life may be acceptable.

5.4 License issued under sections 5.1 and 5.2 shall include conditions to notify appropriate border control authorities of the time period for each import and to confirm delivery of each import to the final destination.

#### **Section 6 LICENSE TO EXPORT PESTICIDES**

6.1 Person who wishes to export a pesticide shall apply to the designated licensing authority for a license in accordance with the requirements and procedures set out into Section 19 of the Law.

6.2 License issued under section 6.1 shall include conditions to notify appropriate border control authorities of the time period for each export.

**Section 7**  
**LICENSE TO MANUFACTURE PESTICIDES**

7.1 Person who wishes to manufacture pesticides in Kosovo shall apply to the designated licensing authority for a license in accordance with requirements and procedures that shall be set out into Section 19 of the Law.

7.2 Any change or a relocation of the business to a different premises shall be brought to the notice of the designated licensing authority. In the event that the business is moved to a different location, a new license shall be applied for.

**Section 8**  
**LICENSE TO OPERATE AS A PESTICIDES WHOLESALER OR RETAILER**

8.1 Person who wishes to operate as a pesticides wholesaler or retailer shall possess a license issued by the licensing authority showing that the person has fulfilled the conditions set out into Section 19 of the Law.

8.2 Change in responsible agronomist or a relocation of the business to a different premises shall be brought to the notice of the licensing authority. In the event that the business is moved to a different location, a new license shall be applied for.

8.3 For the purpose of this law, a responsible wholesaler or retailer shall be a person who, possesses relevant education of an agronomist, training, knowledge and experience as set out into section 19 of the Law.

**Section 9**  
**LICENSE TO OPERATE AS A PROFESSIONAL PESTICIDES APPLICATOR**

9.1 Person who wishes to operate as a professional pesticides applicator shall possess a license issued by the designated licensing authority in accordance with requirements and procedures.

9.2 Ministry shall designate the Referent Institution in order to carry out the education of interested persons on pesticides circulation.

**Section 10**  
**AGRICULTURAL PHARMACIES**

10.1 The designated authority in the municipality shall issue a pesticides retailer license in the form set out in the Law.

10.2 The designated authority in the municipality shall ensure that the

pesticides retailer's premises (agricultural pharmacy) are sited in areas of less human and animal density consistent with applicable land use law, including planning ordinances and this Law.

## **Section 11 Distribution of pesticides**

11.1 No person shall distribute pesticides which do not conform to designated conditions and quality of the pesticide. In case of suspicion that the pesticide do not meet the designated criteria, the inspector shall block sales, take and send the samples to the Competent Institution.

11.2 Pesticides can be solely distributed inside original package with the label attached.

11.3 Instruction of use written in the language of user should be attached to the pesticides for distribution.

11.4 Pesticide should not be distributed in case that usage term given in the label expired.

11.5 Persons younger than 18 are prohibited to sell, distribute or supply pesticides in any other form.

## **Section 12 ADVERTISING OF PESTICIDES**

12.1. Importers, manufacturers, wholesalers, retailers and applicators of pesticides, when advertising their products, shall comply with the law and, in the absence of the law, with relevant European Community legislation on the subject.

## **Section 13 BANNED AND SEVERELY RESTRICTED PESTICIDES**

13.1. Pesticides and active ingredients banned from import, export, or manufacture and placing on the market in Kosovo shall be set out in the Law.

13.2 Pesticide donations shall be distributed in compliance with all applicable laws in Kosovo and shall only be accepted after prior approval by the registration authority.

13.3 The registration authority shall exchange information with other countries on banned, severely restricted or severely hazardous pesticides subject to the Prior Informed Consent procedures under relevant international agreements such as the International Code of Conduct on the Distribution and Use of Pesticides and the provisions of the 1998 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

13.4 Stocks of banned, severely restricted or severely hazardous pesticides set out in the Law remaining in Kosovo after the entry into force of this Law shall be:

- (a) Notified to the MAFRD and collected within the time limits and in accordance with the procedures ;
- (b) If not notified and collected under subsection (a), confiscated, without compensation, and disposed of according to applicable laws on hazardous wastes and administrative instruction made under this Law. The costs of disposal under this section shall be borne by the owner or possessor of such pesticide stocks

13.5 The MAFRD upon proposal by the registration authority shall allow for phasing out of the stock of the banned or severely restricted or severely hazardous pesticides set in the Law a reasonable period, depending on the merits of each case, but not exceeding two (2) years after entry into force of the Law;

## **Section 14**

### **REGISTRATION AUTHORITY**

14.1. Registration authority is responsible for registering pesticides and canceling registrations of pesticides in Kosovo, for advising the Minister on the control and management of all pesticides in Kosovo, and for performing all other functions assigned to it under this Law.

14.2. The registration authority shall carry out its duties and functions independently.

14.3 The Ministry shall appoint members of the registration authority, based on their technical competence in pesticides or pesticides-related matters, including education and experience in psychopathology, entomology, biology, chemistry, agronomy, toxicology and other related areas of expertise. Registering authority, comprises:

- a) two members from the Ministry of Agriculture, Forestry, and Rural Development, one of which the Registrar who shall chair the registration authority ;
- b) two members from the Ministry of Health, and a member from the Ministry of Environment and Spatial Planning to be nominated by relevant authority;
- c) one member representing the Association of agricultural input traders nominated by the association. ; and
- d) two members from scientific or research institutions.

14.4 Appointed members of the registration authority, shall serve for terms of three years and all members shall serve at levels of compensation as specified in an Administrative Instruction.

14.5 The designated registration authority shall function in accordance with the rules of procedure that shall be developed and adopted by registration authority. These rules of procedure shall be fair, impartial, based on the law internationally accepted. The Ministers shall decide for appeals against the decisions made by the registration authority.

14.6 The registration authority shall establish procedures and rules, consistent with regional and international standards, relating to which information in the pesticide registration application shall be considered confidential, how confidential records shall be maintained and stored, and who shall have access to them.

14.7 The registration authority, as required, may request such qualified persons to take part, without voting, in its meetings, or to form Commissions on specific issues.

14.8 The registration authority:

(a) shall assess and evaluate application for registration of a pesticide, using the risk assessment procedures described in the Section 19 of the Law considering at least the following:

- (i) pesticide distribution side effects to environment and beneficial organisms;
- (ii) human and animal health hazards;
- (iii) efficacy;
- (iv) quality of declared specification of the technical material and composition of the formulated product;
- (v) the label and instructions, and, if required, a description, photograph, or exemplar of the proposed package(s);
- (vi) residues; and
- (vii) alternatives such as integrated control and clean technology of the pesticide;

(b) pursuant to the decision-making procedure set out in the Section 19 of the Law shall inform the applicant of its decision accordingly.

14.9 Upon the decision of the registration authority, the Registrar shall:

- (a) register pesticides and issue certificates
- (b) cancel or withdraw a registration
- (c) collect fees to be assessed.
- (d) apply or, in certain cases based on considerations of the public interest, waive, the conditions for granting, waive the conditions for granting a renewal, suspension, or revocation of any registration granted previously under this Law.

14.10 The registration authority shall be funded from the budget of the Ministry of Agriculture, Forestry and Rural Development. The revenues derived under this Law shall be deposited in the Kosovo Consolidated Budget.

## **Section 15**

### **REGISTRAR OF PESTICIDES**

15.1 The Ministry shall appoint a Registrar of Pesticides who shall be a staff member of the Ministry of Agriculture, Forestry, and Rural Development which is a member of registration authority

15.2. The Registrar shall keep a Register of Pesticides in which shall be registered the trade name, common name, chemical name, and concentration of each registered pesticide, and the name and address of the applicant which, if a legal person, shall be the name and address registered by the competent authority for the registration of businesses in Kosovo.

## **Section 16 APPEALS**

16.1. The Minister or the Ministry's authorized body shall hear and decide on appeals by any applicant against a refusal of the registration or licensing authority to grant a registration or to issue a license or a decision to cancel a registration or to suspend, revoke or terminate a license. The Minister or the Ministry's authorized body may uphold, modify or rescind any decision of the authority concerned.

16.2. Appeal against a decision of the registration authority could be made within fifteen (15) days of the issuance of such decision. The appeal shall be made in writing and may be accompanied by relevant documents.

16.3 The Minister or the Ministry's authorized body shall decide upon the appeal within 30 days of the day of receiving the appeal and notify the responsible person in writing

16.4 Nothing in this section shall preclude an applicant from seeking redress against the decision of the Minister from a competent court in Kosovo.

## **Section 17 INSPECTORS**

17.1 The inspectors designated by the Ministry shall oversee enforcement of the present law and Administrative Instructions and Decisions issued under the present law.

17.2 An inspector may, at all reasonable times and upon production of his or her identification card:

- (a) enter any land, premises, aircraft, vessel, or vehicle, at or in which he or she reasonably suspects that any provision of this Law is being violated, except for any premises used exclusively as a dwelling;
- (b) require the production of, inspect, examine, and copy certificates, licenses, records, or other documents kept under this Law;
- (c) take samples of any substances to which this Law relates and, as may be set out by the Law, submit such samples for analysis;
- (d) carry out periodic inspections of all establishments which import, manufacture, pack, label, store, sell, distribute, use, advertise or otherwise place a pesticide on the market in Kosovo.

- (e) confiscate any equipment, pesticide, document, record, or other thing which the inspector believes has been used in violation of this Law, so long as:-
- (i) the inspector gives a receipt in the prescribed form to the person from whose custody the thing was taken; and
  - (ii) the thing is promptly returned to that person once the necessary inquiry and/or prosecution has been completed, except for unregistered pesticides, which, if so ordered by the designated licensing authority, shall be destroyed in the manner set out by the Law.
- (f) request the assistance of Customs, Police Officers or the Kosovo Protection Corps in the exercise of his or her duties under this Law.
- (g) Denunciate violation of this Law to competent Courts.

17.3 The decision of any court instituted under this Law shall prevail over that of any inspector, in regard to the disposition of any item confiscated under Section 17.2 (e).

## **Section 18**

### **VIOLATIONS AND PENALTIES**

18.1. For civil violation with a fine of 5.000 to 50.000 € shall be punished the person who:

- (a) manufacture, pack, label, sell, store, distribute, possess or use a pesticide in Kosovo which has not been registered in accordance with this Law;
- (b) engage or be involved in any of the activities specified in section 3.1 above without first obtaining a license from the designated licensing authority, or to continue to so engage or be involved, pending the suspension, revocation, or termination of any such license;
- (c) alter, tamper with or break the seal on the original package or container of a pesticide if the person is not the user of the pesticide in the package or container;
- (d) use or require an employee to use a pesticide in any manner in violation of this Law or in violation of any conditions imposed on a registration or license;
- (e) dispose of any pesticide or pesticide waste in a manner that may harm human or animal health or the environment, or is in violation with the Law .
- (f) Distribute pesticides which do not meet the conditions and qualities from registration license.
- (g) Distribute pesticides in non-original package, without label and without instructions.
- (h) Distribute expired dated pesticides.
- (i) Sell to, grand or supply a persons younger than 18 years old.
- (j) In unauthorized manner repackage pesticides.

**Section 19**  
**IMPLEMENTATION**  
**ADMINISTRATIVE INSTRUCTIONS**

19.1 The Ministry may issue administrative instructions for the implementation of the present Law on:

- (a) the restriction of the import, manufacture, export, sale, distribution, handling, use, or placing on the market of any active ingredient or pesticide;
- (b) pesticide register;
- (c) the establishment of conditions and requirements for the licenses for import, manufacture, export, sale, distribution, handling, use or placing on the market of any pesticide, including those used in integrated control management;
- (d) the establishment of conditions and requirements for the packaging, labeling, instructions of use and advertising of any pesticide.
- (e) the establishment of requirements for, and duties of, employers, workers and retailers and wholesaler in connection with the sale and use of pesticides, including those used in integrated pest management;
  - (i) Shall designate the Referent Institution in order to carry out the education of interested persons on pesticides circulation.
- (f) the establishment of the conditions for the disposal and liquidation of pesticides' waste and pesticides' containers;
- (g) the imposition of conditions to control or prohibit the import, manufacture, export, sale, distribution, handling, use, advertising or placing on the market of the active ingredient found in any pesticide;.
- (h) the establishment of maximum residue levels for pesticide residues, consistent with international specifications
- (i) the establishment of methods of sampling and analysis and methods for the carrying out of any scientific tests on any seeds, seedlings, plant produce or plant products;
- (j) the designation of licensing authorities, authorized laboratories and analysts under this Law as well as authorized sampling methods and analytical procedures; and
- (k) for other matters which this Law regulates.

19.2. Any administrative instruction made under this Law shall specify the common name and the Chemical Abstract Service (C.A.S.) Number as used by International Standard Authorities, of the pesticide concerned.

**Section 20**  
**TRANSITIONAL PROVISIONS**

20.1. The present Law after entry into force shall supersede any provision in the pesticide related applicable law.

**Section 21**

21.1. Any person who is currently importing, exporting, manufacturing, wholesaling, retailing and otherwise placing any pesticide on the market in Kosovo shall apply for the licenses provided for in section 3.1 not later than thirty (30) days after the entry into force of the present Law.

**Section 22**  
**ENTRY INTO FORCE**

The present Law shall enter into force after approval by Kosovo Assembly and promulgation by Special Representative of Secretary General of United Nations.

**Law No. 2003/20**  
**16 October 2003**



**USAID** | **KOSOVO**

NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

# **CONTROL OF PESTICIDE USE IN KOSOVO AGRICULTURE**

John Weatherwax  
KCBS Consultant for Food  
Quality and Safety

20 June 2008



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## ISSUES FOR DISCUSSION

- Registration procedures
- Licensing
- Import controls
- Formulation analysis
- Monitoring sale and use of pesticides
- Disposal of pesticides and wastes
- Extension services
  - Training farmers and applicators on safe use and application
  - Advice for farmers on crops and pests



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## DISCUSSION FORMAT

- I will outline what the Assembly of Kosovo Law No. 2003/20 – “Law of Pesticides” – provisions are and what I understand the current situation in Kosovo is, for each topic
- I will next indicate what the long-term goal(s) might be – usually what is done in the USA, EU, etc.
- Lastly, I will propose both immediate and/or short- to medium-term actions to consider

At that point I will open the topic for discussion and would appreciate your frank comments on what should and can be done



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## REGISTRATION PROCEDURES

- Provisions of Law 2003/20
  - There are provisions for registration of pesticides (Section 2) and for a Registration Authority (Section 14). The Authority consists of 8 persons appointed by the Ministry of Agriculture, Forestry and Rural Development (MAFRD), to serve a period of 3 years.
  - The review of pesticide registration applications to be done by the Authority, is complex and is detailed in Section 14.8.
  - There is also provision for a Registrar of Pesticides within the MAFRD (Section 15).



## REGISTRATION PROCEDURES -2

- The current situation
  - A Pesticide Registration Authority has been appointed with representatives from three ministries (MAFRD, Health and Environment), the University of Pristina, Peja Agricultural Institute and the Pesticide Importers Association
  - I understand that the review presently done by the Authority consists only of some data provided by a government which has approved the pesticide for use, and of the labeling (to ensure its in Albanian)
  - I further understand that the Authority has only met twice in the past two years



## REGISTRATION PROCEDURES - 3

- Long-term goal(s)
  - Establish a comprehensive pesticide registration system similar to that administered by the US Environmental Protection Agency (EPA)
  - This would include a detailed application for registration having a comprehensive data requirement as well as mandatory labeling and packaging requirements

See: [www.epa.gov/pesticides/registrationkit/](http://www.epa.gov/pesticides/registrationkit/) and  
[www.access.gpo.gov/nara/cfr/waisdx\\_01/40cfrv20\\_01.html](http://www.access.gpo.gov/nara/cfr/waisdx_01/40cfrv20_01.html)



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## REGISTRATION PROCEDURES - 4

- Proposed actions
  - The Pesticide Registration Authority should meet more frequently – suggest at least 6 times a year
  - The Authority review should be detailed, as required by Section 14.8. This will require more data be provided
  - A request for pesticide registration should be based on need in Kosovo agriculture with supporting data accompanying the request



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## LICENSING

- Provisions of Law 2003/20
  - Section 3 requires licensing by MAFRD for the manufacture, the import or export, the wholesale or retail sale, and the professional application of pesticides
  - Sections 5 to 9 detail how such licenses will be granted
  - Section 10 refers to Agricultural Pharmacies who retail pesticides. These are licensed by the local municipality



## LICENSING - 2

- The current situation
  - Currently there are no manufacturers, professional pesticide applicators, or pesticide exporters in Kosovo, so no such licenses have been issued
  - Licenses have been granted to importers, wholesalers and retailers in accordance with Law 2003/20. They are valid until revoked
  - Part of the license requirement for the import of pesticides is that the shelf life of any imported pesticide must be at least one year from the date of import – there is no provision, however, for shelf lives to be recorded or reported to the Registrar



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## LICENSING -3

- Long term goal(s)
  - The licensing process should be dynamic with the license subject to review and reissue on a periodic basis
  - If a license has a performance requirement, then there must be a system in place to report and review that requirement to maintain the validity of the license



## LICENSING - 4

- Proposed actions
  - Consider a license review and reissue every 3 years
  - Establish a reporting system to the Pesticide Registrar of all imported lots of pesticides, to include shelf life
  - For wholesale and retail sales licenses, establish a formal periodic report (suggest once per year) to the Pesticide Licensing Authority in MAFRD that there is no change in business location or agronomist status of the salesperson



## IMPORT CONTROLS

- Provisions of Law 2003/20
  - Imports fall under the jurisdiction of the Customs Authority
  - There is no direct reference to imports in the Law, except that the license to import pesticides includes a requirement that the importer notify the Customs border control authority that a shipment of pesticides is to arrive on a given date, and to confirm delivery to the final destination



## IMPORT CONTROLS - 2

- The current situation
  - Licensed importers notify Customs of incoming shipments as the Law requires



## IMPORT CONTROLS - 3

- Long term goal(s)
  - Establish an official working relationship with the Customs Authority, whereby Customs notifies the MAFRD of the arrival of a pesticide shipment. The MAFRD would then advise Customs if a sample is desired for testing.
  - If no sample is desired, then the shipment is released for entry into Kosovo
  - If a sample is to be taken, it would be done by an inspector and the lot would be held in quarantine until the analysis is completed
  - See <http://www.epa.gov/compliance/resources/publications/monitoring/fi/ra/noaform.pdf> for an example import arrival form



## IMPORT CONTROLS - 4

- Proposed actions
  - Once a formulation testing facility is established, arrange for review and sampling (when necessary) of imported pesticides
  - Negotiate an official relationship between the MAFRD and the Kosovo Customs Authority concerning review and possible sampling of pesticide imports



## FORMULATION ANALYSIS

- Provisions of Law 2003/20
  - The only provision that even remotely speaks to formulation analysis, is in Section 11.1. That states where it is suspected that a pesticide does not meet designated criteria (e.g. low potency), then the Inspector shall block sales and take and send a sample to the Competent Institution.
  - There is, however, no mention in the Law of who or what the ‘Competent Institution’ is



## FORMULATION ANALYSIS - 2

- The current situation
  - I am not aware of any institution or laboratory in Kosovo that is presently engaged in formulation analysis or is competent to do so.
  - However, a review of the Peja Agricultural Institute Central Laboratory has indicated that they do have the capability and have the instrumentation to do formulation analysis and need only training



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## FORMULATION ANALYSIS - 3

- Long term goal(s)
  - The capability to analyze formulations for potency, contamination or related problems is an absolute requirement for any pesticide control program
  - Both the EPA and the EU have established formulation testing programs using standard analytical procedures

See: <http://www.epa.gov/pesticides/regulating/laws.htm#fifra>

and

[http://pesticideinfo.org/Detail\\_Country.jsp?Country=European%20Union](http://pesticideinfo.org/Detail_Country.jsp?Country=European%20Union)



## FORMULATION ANALYSIS - 4

- Proposed actions
  - Establish a formulation testing laboratory to check imported formulations for correct potency
  - As stated, the Peja Agricultural Institute is a definite possibility. However, there is also a need for a national pesticide residue laboratory. With additional glassware, supplies and training, the Peja laboratory could fulfill that function also. However, formulation and residue testing must not be in the same building – to prevent very possible cross-contamination.



## **MONITORING SALE AND USE OF PESTICIDES**

- Provisions of Law 2003/20
  - There are no provisions to monitor the sale or use of pesticides
  - Licensing provisions do not include reporting or other actions to monitor what is imported or what is sold
  - There is also no requirement at the farmer level to report use of specific pesticides



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## **MONITORING SALE AND USE OF PESTICIDES - 2**

- The current situation
  - There is no monitoring of sale and use of pesticides in Kosovo
  - Private professional applicators in other countries (the US for example) are required to keep records



## **MONITORING SALE AND USE OF PESTICIDES - 3**

- Long term goal(s)
  - Identify pesticides which are particularly hazardous or whose use should be restricted
  - Establish a reporting and record-keeping requirement for the sale and use of those specific pesticides



## **MONITORING SALE AND USE OF PESTICIDES - 4**

- Proposed actions
  - I understand that at present there is considerable illegal sale and use of pesticides
  - For the short term, suggest that all sales of pesticides for commercial application be reported to MAFRD, to include the names of the buyer (and presumed applicator)



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## **DISPOSAL OF PESTICIDES AND WASTES**

- Provision of Law 2003/20
  - Stocks of banned, severely restricted or severely hazardous pesticides shall be “disposed of according to applicable laws on hazardous wastes and administrative instruction made under this Law” (Section 13.4)
  - Section 19 is the Implementation of the Administrative Instructions under the Law. Part 19.1(f) is the only provision for disposal and only refers to disposal of pesticide waste and containers, not to stocks of pesticides



## **DISPOSAL OF PESTICIDES AND WASTE - 2**

- The current situation
  - Pesticide waste from clean-up after minor spillage, and empty pesticide containers can usually be safely disposed of at the site
  - Stocks of substandard, outdated or illegal pesticides will become more prevalent as enforcement activities to control pesticide use are increased
  - To my knowledge, there are no facilities or official instructions for the disposal of such stocks



## DISPOSAL OF PESTICIDES AND WASTE - 3

- Long term goal(s)
  - Establish official procedures for the decontamination and disposal of stocks of pesticides and large amounts of pesticide waste
  - Also establish official procedures to be followed by farmers and applicators for disposal of empty containers and for pesticide waste from minor spillage
  - See [http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/A\\_GPP/Pesticid/Disposal/en/index.html](http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/A_GPP/Pesticid/Disposal/en/index.html) for some international guidelines



## **DISPOSAL OF PESTICIDES AND WASTE - 4**

- Proposed actions
  - Provide training and guidelines for farmers and applicators on container decontamination and disposal as well as spillage containment and clean-up and the disposal of the resulting pesticide waste
  - Identify landfill or other sites where hazardous materials such as pesticides can be disposed of without affecting the ground water



## **EXTENSION SERVICES**

- Provisions of Law 2003/20
  - There are no provisions for Extension Service activities under the Law



## **EXTENSION SERVICES - 2**

- The current situation
  - Persons licensed to sell pesticides are required to have training in agronomy or agricultural sciences. They provide the buyers (usually farmers) with advice on pesticides to use
  - To my knowledge, there are no training programs either by the MAFRD, the Peja Institute, or the University for farmers and pesticide applicators, on the safe and responsible use of pesticides
  - There is also no advisory service for farmers on pests and their control by the University or the MAFRD



## EXTENSION SERVICES - 3

- Long term goal(s)
  - Agricultural extension organizations provide important services to farmers, including both training and advice and should be established
  - Some countries have an extension service within their food control agencies (e.g. the US Department of Agriculture), while others rely on University extension groups
  - See <http://www.oneglobe.com/agriculture/extnsion.html> for a international listing of extension services



**USAID**  
NGA POPULLI AMERIKAN  
OD AMERIČKOG NARODA

**KOSOVO**

## **EXTENSION SERVICES - 4**

- Proposed actions
  - Suggest that Agricultural Institutes such as Peja be funded to expand their advice and services to local farmers
  - The University of Pristina Faculty of Agriculture provides courses in agricultural sciences and agronomy. Suggest they be encouraged and possibly funded, to expand their program in this area so as to provide graduates who could form the nucleus of an official extension service

**INFORMATION FOR BROCHURE**  
**“MIXING PESTICIDE SPRAY SOLUTIONS AND CALIBRATION OF THE**  
**LOW PRESSURE SPRAYER”**

**Mixing Pesticide Spray Solutions**

Often, a pesticide formulation label will tell you to make a spray solution with a specific percentage of the pesticide (P). The following formulas can be used to calculate the amount of formulation to use (in kilograms – KG) in the total volume of water desired (in liters – L):

- For **wettable powders and other dry formulations**, the calculation formula is:

$$\frac{\text{L wanted} \times \% \text{ P wanted} \times 1 \text{ KG/L}}{\% \text{ P in the formulation}}$$

As an example, how many KG of an 80% wettable powder would be needed to make 200 L of a 3.5% P spray? Using the above formula, we would have:

$$\frac{200 \text{ L} \times 3.5\% \text{ P} \times 1 \text{ KG/L}}{80\% \text{ P}} = \frac{700}{80} = 8.75 \text{ KG}$$

So, you would mix 8.75 KG of an 80% wettable powder in 200 L of water to have a final spray solution containing 3.5% of the pesticide.

- For **emulsifiable concentrates**, the calculation formula is:

$$\frac{\text{L wanted} \times \% \text{ P wanted} \times 1 \text{ KG/L}}{\text{KG P/L in the concentrate} \times 100}$$

Notice that this formula uses KG of the pesticide per liter of concentrate, rather than percent of the pesticide in the concentrate. The reason is that the specific gravity of the various concentrates is not the same as water. The 1 KG/L used in both calculations is the specific gravity of water.

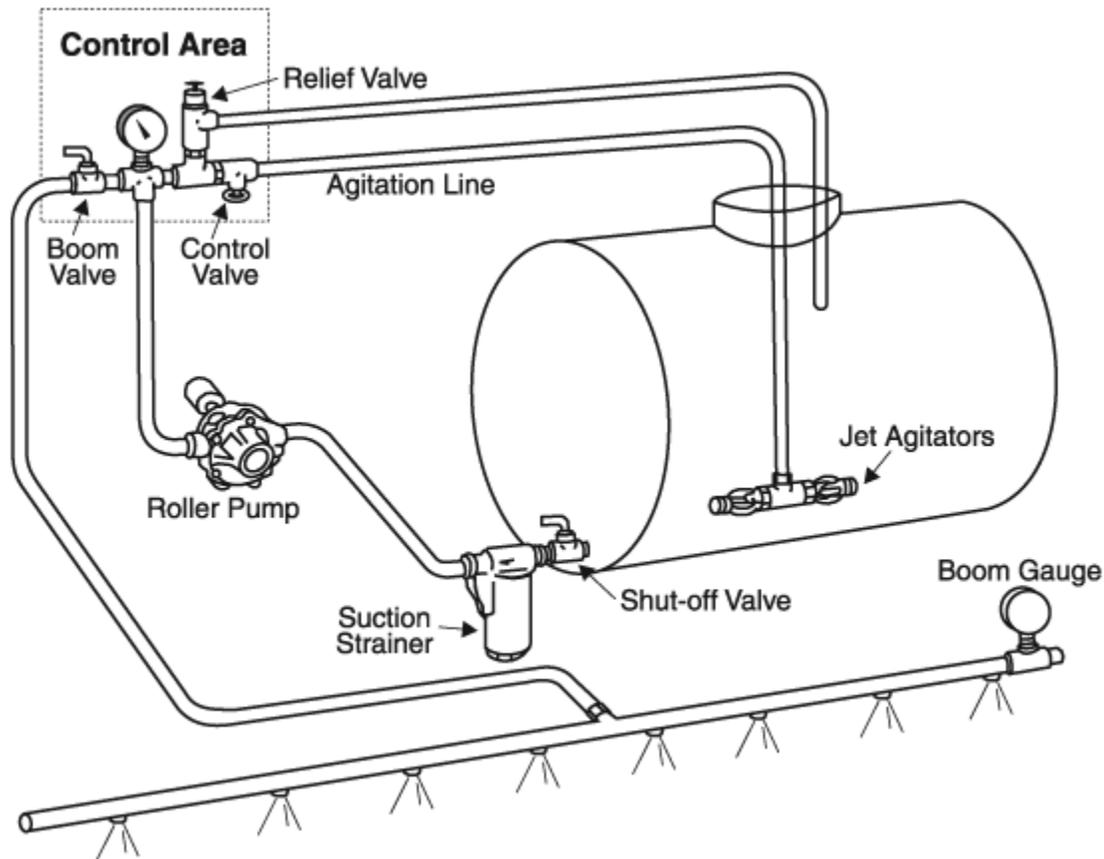
As an example, how many L of a 25% emulsifiable concentrate (0.25 KG pesticide per L of concentrate) are needed to make 200 L of a 1% spray? Using the concentrate formula, we would have:

$$\frac{200 \text{ L} \times 1\% \times 1 \text{ KG/L}}{0.25 \text{ KG P/L} \times 100} = \frac{200}{25} = 8 \text{ L}$$

You would therefore mix 8 L of the emulsifiable concentrate in 200 L of water to have a final spray solution containing 1% of the pesticide.

## Calibration of the Low Pressure Sprayer

A typical low pressure sprayer



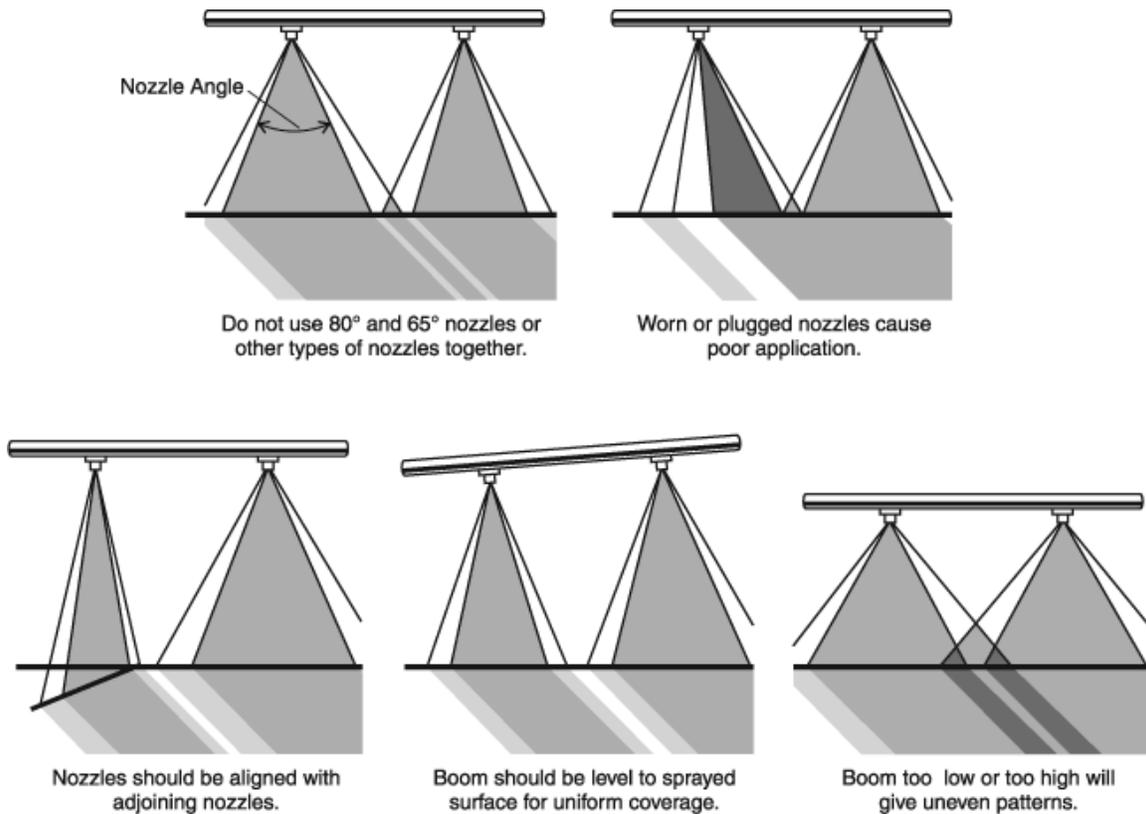
The low pressure sprayer is the most common and useful pesticide applicator for the small farmer. It must be, however, properly calibrated to deliver the correct amount of pesticide. Pesticide chemicals are expensive. When too much pesticide is applied, there is not only a loss of money, but possible damage to the crop. When not enough is applied, the pesticide is ineffective and money is lost again.

Before calibrating your sprayer, be sure to check that:

- All nozzles are the correct make and model and all are the same type
- The hoses are of the correct size
- The boom is set at the right height and is level

Next, clean all of the nozzles, screens and filters, and (using water only) make sure the nozzles all have the same spray pattern. Some common problems with nozzles, booms and nozzle placement are:

## Common nozzle and boom problems



Finally, again using only water, check to make sure that each nozzle on the boom has the same volume of delivery. This can be easily done by catching the spray from each nozzle in a container for a measured amount of time, say one minute. The volumes delivered by each nozzle should be approximately the same. If they are not, clean, adjust or replace the problem nozzle.

### **The calibration**

In calibrating your sprayer, you are essentially determining how much spray (in liters) your sprayer will deliver over a measured area. Knowing this, you can adjust the pesticide concentration in the spray to give you the best result at the least cost. Calibrating your sprayer is done in steps:

**Step 1** – Measure a straight-line distance in meters, and then drive the sprayer that distance at the speed you plan to use. Note the time it takes to drive the distance, using a stop-watch or a watch with a sweep second hand.

**Step 2** – Park the sprayer and turn it on. Determine a pressure to use. Once the nozzles are spraying at their full rate (using water of course), collect the spray from one nozzle for the length of time it took you to drive the measured distance. (Only one nozzle need be checked if you have previously confirmed that all nozzles are spraying equally – if

you have not made that confirmation, then check the output of several nozzles and average the volume).

**Step 3** – Multiply the output volume of the one nozzle times the number of nozzles on the boom. The answer is ‘Output’ expressed in liters (L).

**Step 4** – Determine the width of the spray pattern. The nozzles should be equally spaced, so measure the spacing between two nozzles. Multiply this times the number of nozzles and express the answer in meters (M). (Note that if you simply add up the number of spaces, you would have the length of the boom, but that the spray extends out from both ends of the boom. This is the reason for using the number of nozzles rather than number of spaces).

**Step 5** – Now you have the width of the spray pattern and the distance traveled, both in meters (M). Multiply those two numbers together. The answer is ‘Area’ and is expressed in M<sup>2</sup>.

**Step 6** – Finally, set up a simple ratio using ‘Output’ and ‘Area’, as follows:

$$\frac{\text{Output L}}{\text{Area M}^2} = \frac{X}{10000 \text{ M}^2/\text{hectare}}$$

Therefore:

$$X \text{ (in L/hectare)} = \frac{\text{Output L} \times 10000 \text{ M}^2/\text{hectare}}{\text{Area M}^2}$$

You now have a sprayer calibrated to deliver X liters of spray per hectare. Knowing your tank size and the amount of chemical you wish to apply per hectare, you can mix the pesticide spray accordingly, as follows:

$$\frac{\text{Tank size in L}}{X \text{ in L/hectare}} = \text{Number of hectares per tank}$$

You would multiply that times the KG/hectare that you wish to apply to get the KG of chemical you need to mix per tank.

Remember to recalibrate your sprayer any time you change nozzles or hoses, or change either the speed of application or the pressure used. All of these have a profound effect on the delivery rate of your sprayer.

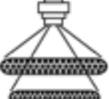
### **Addendum**

The following two tables should be useful to help you decide which nozzles to use for either broadcast, band or directed spraying:

**Table 2. Nozzle guide for broadcast spraying.**

	 Extended Range Flat Fan	 Standard Flat Fan	 Drift Guard Flat Fan	 Twin Flat Fan	 Turbo Flood Wide Angle	 Wide Angle Full Core	 Flood Nozzle Wide Angle	 Raindrop Hollow Cone
<b>Herbicides</b>								
Soil-incorporated Pre-emerge	<b>Good</b> <b>Very Good</b> <small>(at low pressure)</small>	<b>Good</b>	<b>Very Good</b> <b>Very Good</b>		<b>Very Good</b> <b>Very Good</b>	<b>Very Good</b> <b>Very Good</b>	<b>Good</b>	<b>Good</b> <b>Good</b>
Post-emerge Contact Post-emerge Systemic	<b>Good</b> <b>Very Good</b> <small>(at low pressure)</small>	<b>Good</b> <b>Good</b>	<b>Very Good</b>	<b>Very Good</b>	<b>Very Good</b>			<b>Good</b>
<b>Fungicides</b>								
Contact Systemic	<b>Very Good</b> <b>Very Good</b> <small>(at low pressure)</small>	<b>Good</b>	<b>Very Good</b>		<b>Very Good</b>			
<b>Insecticides</b>								
Contact Systemic	<b>Good</b> <b>Very Good</b> <small>(at low pressure)</small>	<b>Good</b>	<b>Very Good</b>	<b>Very Good</b>	<b>Very Good</b>			

**Table 3. Nozzle guide for band and directed spraying.**

	 Even Flat Fan	 Twin Even Flat Fan	 Hollow Cone	 Full Cone	 Disc and Core Cone
<b>Herbicides</b>					
Pre-emerge	<b>Very Good</b>	<b>Good</b>		<b>Good</b>	
Post-emerge Contact	<b>Good</b>	<b>Very Good</b>	<b>Very Good</b>		
Post-emerge Systemic	<b>Very Good</b>	<b>Good</b>			
<b>Fungicides</b>					
Contact	<b>Good</b>		<b>Good</b>		<b>Very Good</b>
Systemic	<b>Very Good</b>				<b>Good</b>
<b>Insecticides</b>					
Contact		<b>Very Good</b>	<b>Very Good</b>		<b>Very Good</b>
Systemic	<b>Very Good</b>				<b>Good</b>
<b>Growth Regulators</b>	<b>Good</b>			<b>Very Good</b>	