

PESTICIDE POLICIES AND STRATEGIES

There are no policies on pesticides and their uses so far. First of all, the Ministry of Agriculture, HMG/Nepal, has still to decide who should be responsible for pesticide management. However, some policies and programmes are being undertaken in an arbitrary manner. They are more in the nature of personnel approaches and consultations rather than a comprehensive approach based on the actual use of pesticides in Nepal. 'Ad hocism' is the greatest drawback.

A basic fact about pesticides is that they are hazardous. Hazards can be minimised by risk management. Safe pesticide management practices should be followed during production, transportation, storage, and utilisation. Pesticides are used by farmers in rural areas where there is a lack of both knowledge and skills for effective and safe use. Farmers are unable to use costly pesticides and, consequently, they use broad spectrum chlorinated hydrocarbon compounds as well as highly hazardous organo-phosphates such as Methyl parathion. Inappropriate, needless, and indiscriminate use of pesticides often results in adverse effects on human health and the environment. Pesticide-related hazards are not so much related to the volume used as to the lack of knowledge regarding judicious use. New policies and strategies, therefore, should be directed towards these aspects, and this can only be achieved by generating mass awareness about the potential dangers of pesticides and ways to use them prudently and raise productivity. Generating mass awareness among farmers, retailers, dealers, workers in factories, and control through licensing schemes, can go a long way to improving pesticide use. The new Pesticide Act 1991, in addition to having regulatory mandates regarding various commercial and industrial channels, is also concerned about the quality of pesticides and the hazards of pesticide residues in food, fields, and the natural environment. It is expected that appropriate agencies will soon be established to monitor pesticide use as intended in the Act. However, the following important factors cannot be overlooked.

1. Production targets should be taken into consideration. Every risk management effort should be linked to the production target.
2. Nepal signed the International Code of Conduct declaration regarding the safe use of pesticides in 1982 and is committed to it.
3. The safe use of pesticides involves registration of safer pesticides, regulations for their safe use, and training to all involved in pesticide usage.

Judicious use of pesticides can be achieved through a set of activities, including training courses for retailers and dealers; monitoring of usage by workers in factories; setting of product standards; training courses for farmers; and generating public awareness of the benefits as well as of the hazards during different stages of manufacture, storage, transport, dilution, and actual use.

Nepal Pesticide Act 1991

The Nepal Pesticide Act 1991 was passed by the Interim Government and the royal seal was given to this act.

The Act addresses all aspects of pesticide regulation including registration, legislation, and safe use of pesticides. A National Pesticide Board (NPB) has been established according to the Act

under the chairmanship of the Secretary, Ministry of Agriculture. Members include chiefs of the Divisions of Entomology and Plant Pathology, the Deputy Director General of the Department of Agriculture, the Chief of the National Malaria Control Programme, representatives from the Ministry of Health and Nepal Standard Bureau, three members from the environmental sciences' sector, one from the pesticide industry (private sector), and one farmers' representative. The member secretary of this board is the Registrar of Pesticides and his office is the executive centre for legal control of pesticides. Based on the Act, regulations regarding pesticides are being developed including the ones outlined below.

1. Power to declare certain substances pesticides
2. Exemption
3. Applications for registration
4. Registration
5. Restricted use permits
6. Return of imports
7. Register of imports
8. Approval of labels and containers
9. Pesticides for scientific purposes
10. Licensing of pesticide resellers
11. Licensing of chemical applicators
12. Licensing of production plants
13. Transitional
14. Appointment of inspectors and demarcation of authority
15. Fees
16. Issuing guidelines

The Act is expected to provide for the establishment of a Pesticide Registration Body whose functions, duties, and powers will be to:

- i) consider applications for registration of pesticides and, if deemed proper, to register that pesticide and
- ii) to ascertain the criteria for rational and appropriate use of pesticides.

The pesticide registration body is the executive body of the National Pesticide Committee and will carry out its work in accordance with the policy set by the committee. It will be headed by a Registrar of Pesticides who will be the "ex officio" secretary of the National Committee. The Registrar's office will also approve labels, containers, and the language used in pesticide advertisements, including checking the quality of pesticides available in the market. Management, supervision, and control of the approved list of pesticides will also constitute its special duties.

The general aim of the Pesticide Bill is to manage the use of pesticides in Nepal in a scientific way. This is to be achieved by establishing a Pesticide Committee, the main functions of which are as follows.

1. To advise HMG regarding the formulation of national policies regarding pesticides
2. To maintain coordination between the private and government sectors in the production and distribution of pesticides

3. To encourage the private sector to invest in the pesticide industry
4. To regularise and control the quality of pesticides produced by the pesticide industry
5. To ascertain the quality of pesticides

The Bill states that the other duties and powers of the Pesticide Registration Body and its registration procedures shall be prescribed in the Rules and Regulations. The Bill has further provisions for the committee to advise HMG on the use, importance, export, production, distribution, and quality of pesticides, and this information will be published in the gazette. It is further stated in the Bill that no pesticide other than those which are gazetted may be exported, imported, produced, used, and distributed. Provisions have been made for the appointment of inspectors and for penalties.

The Bill and the draft regulations both demarcate special areas of responsibility for both the Pesticide Committee and the Registration Body. In the case of the Pesticide Committee, responsibilities include the following.

1. Appointment of subcommittees
2. Notification in the gazette
3. Recommendations to HMG regarding exemption and declaration
4. Licensing of pesticide dealers and retailers
5. Licensing of commercial applicators
6. Licensing of production plants
7. Setting fees
8. Issuing guidelines

In the case of the Pesticide Registration Body, the responsibilities are as follows:

1. registration of pesticides,
2. maintenance of requirement/import records, and
3. approval of labels and containers.

Close liaison between the two bodies is essential. The Pesticide Committee should be considered to be the policy-making group, while the Pesticide Registration Body is the executive body carrying out its work in accordance with the policy set by the committee. It is because of this that the Registrar of Pesticides should also be the Secretary of the Pesticide Committee. If this is not possible, the Registrar of Pesticides should be at least an "ex officio" member of the Pesticide Committee.

Pesticide Registration

The purposes of pesticide registration is

1. to control the use of pesticides in Nepal;
2. to control the import and manufacture of pesticides in order to avoid the use of toxic pesticides and contaminants;
3. to minimise risks to humans;
4. to provide efficient pesticides which are safe to handle;

5. to avoid introduction where it is not presently needed as a result of the existing balance between pest and bio-control agents; and
6. to ensure that pesticides are available where and when needed and are used scientifically by the farmers.

Registration of pesticides in Nepal was voluntary for a long time. The need for mandatory control was felt. The International Code of Conduct on the safe use of pesticides also envisages regulations regarding the safe use of pesticides.

Licensing of Production Plants

There is a provision in the Bill for the Pesticide Committee to ensure that all production plants are licensed. So far there is only one production plant in the country, and it is located in Bahadurgunj. The plant produces BHC dust and, to a lesser extent, Malathion dust. It operates on a part-time basis as its capacity far exceeds the demand for pesticides. The operating conditions of this factory have been the subject of a number of reports. A production plant specialist has recommended that it should not be allowed to operate in its present form.

General Principles Regarding Pesticide Registration

In deciding whether to restrict or ban a particular pesticide, the following principles are suggested for guidance.

1. By refusal of new and cancellation of old registrations, the Pesticide Board can ensure prohibition of those pesticides that pose an unacceptable level of threat to public health, livestock, beneficial insects, wild life, and the environment.
2. Class 1A pesticides of the WHO Recommended Classification of Pesticides by Hazard should be banned completely. Those in Class IB should only be permitted if their use is essential and if there are no effective alternatives available. Some form of restriction on their availability should be considered.
3. By strict implementation of the FAO/UNEP Prior Informed Consent (PIC) procedures under the International Code of Conduct on the distribution and use of pesticides, those with adverse environmental effects should be completely banned.
4. Wherever possible, alternatives to pesticide use for management of pests should be promoted.

Approval of Labels and Containers

No pesticide is to be sold unless it is in a container that is approved by the Pesticide Registration Body and no person is to sell pesticides in a container or choose a label not approved by the Pesticide Registration Body.

Any pesticide imported for scientific trial or evaluation purposes and not intended for sale is to be registered for research use only.

Retailers of pesticides require licenses issued on the basis of successful completion of training.

Chemical applicators are to be licensed.

The committee may require production plants to be licensed by the committee according to its terms and conditions.

Inspectors, for the purpose of enforcing the Pesticide Act and accompanying regulations, are to be appointed from time to time by the Department of Agriculture. They shall be empowered to inspect any land, vehicle, commercial premise, dwelling, store, or shed and inspect related documents. They shall have the power to seize pesticides that are being marketed illegally.

Dealers and Resellers' Licensing Scheme

There are more than forty dealers and retailers of pesticides in the Bagmati subregion (see Figure 4). They include corporate bodies like the AIC (Agriculture Inputs' Corporation) branch offices, dealers of multinationals such as those of Beyer, Ceiba-Geigy, etc, and other retailers who are either directly importing pesticides from India or are agents and subagents of the factories and dealers. In addition, Sajha also acts as a retailer of pesticides. They have an important role to play in the safe use of pesticides as they may be the only persons whom farmers see and from whom they seek advice before they use the pesticides.

Dealers and retailers are often ignorant of proper transportation, safe storage, and other standard practices. Poisoning has been known to occur as a result of food contamination on account of unsafe transport and storage practices in other countries. It is, therefore, necessary that the dealers are trained in safe and sound procedures. Before a dealer receives a license to open shop, he must be trained in the following practices.

1. Recommended methods of controlling pests and diseases
2. General properties of pesticides, their type and use
3. Knowledge of the chemicals that pose lesser operational hazards to farmers
4. General knowledge about pesticide toxicity and the physiology of pesticide action in the body system
5. Knowledge of the potential environmental risks involved and ways to minimise risks
6. Knowledge of safe mixing and preparation of sprays or dusts based on recommended rates
7. Working knowledge of the contents and proper use of labels
8. Knowledge of poisoning symptoms and first-aid treatment
9. Knowledge of the cardinal safety rules in transportation and the problems caused by breakage, spills, and transport accidents
10. Knowledge of pesticide storage

Commercial Users' Training and Licensing

Two conditions have to be met before licensing persons as commercial operators. The first is training and the other is the assessment of their activities and health standards.

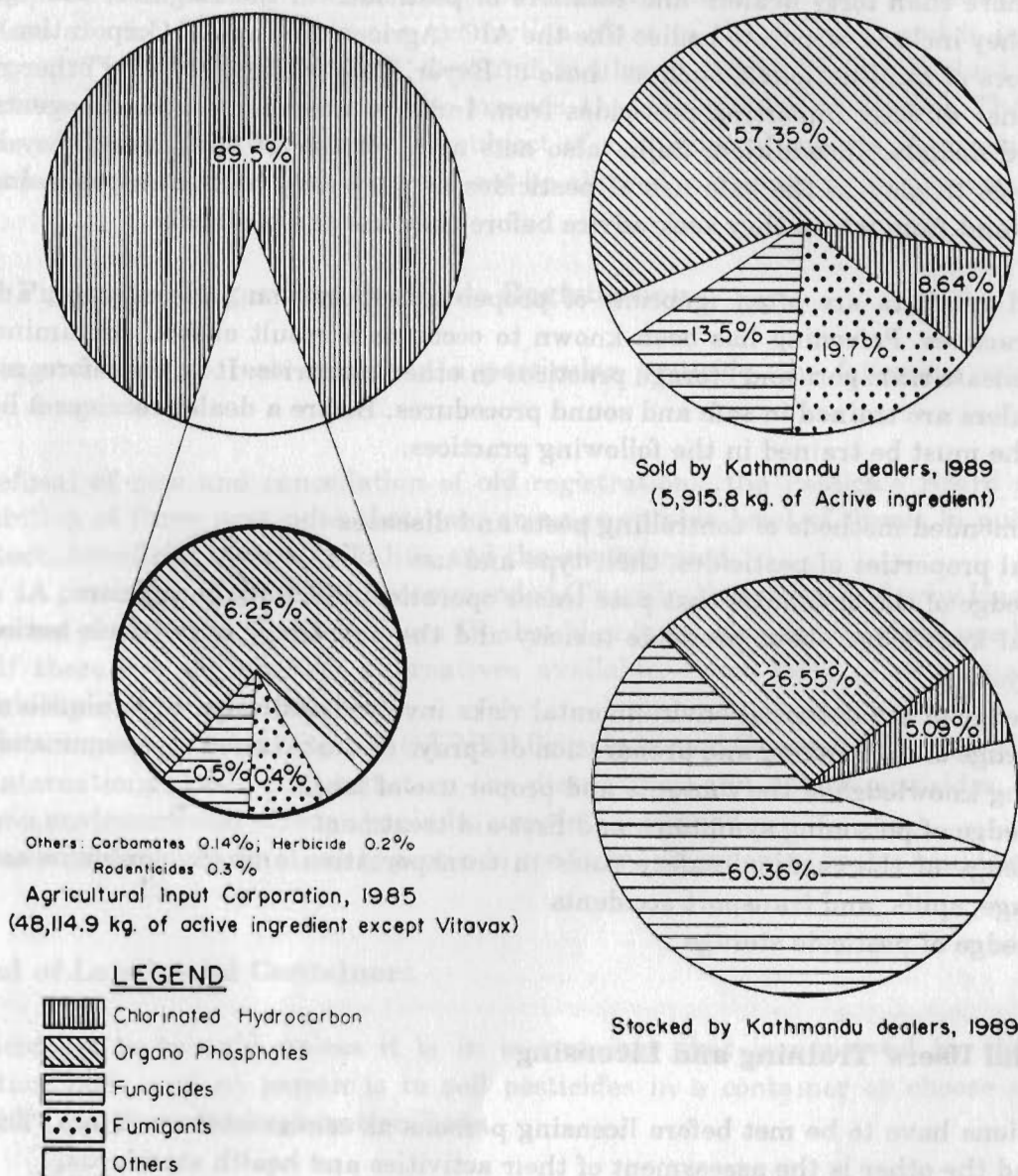
The training module for commercial spray operators should include the following aspects.

1. Pest management, pesticide groups, active ingredients, formulation, risks, and benefits.
2. Pesticide toxicity, exposure, and hazards.

3. Pesticide legislation, pesticide labels, and their importance.
4. Symptoms of poisoning and first-aid treatment.
5. Storage and disposal practices.
6. Recommended pesticides, how to dilute them for safe application, and maintenance of application equipment.
7. General knowledge of the major pests that require control measures.

Figure 4

Pesticide Market – Bagmati Subregion



Source: Adopted from data availed by Agricultural Input Corporation and major pesticide dealers