

Small packaging position paper

CropLife International Position

CropLife International member companies believe that small packs for pesticides provide benefits in terms of availability of inputs, safe use, accident prevention and appropriate costs, particularly for smallholder farmers. In addition, human exposure and environmental contamination caused by obsolete stocks is minimised by using small pack sizes.

1. Definition of small packs

The industry defines a small pack as a consumer unit pack which contains less than 100 ml or 100 grams of end-user pesticide. Size can, however, vary depending on local requirements.

2. Benefits of small packs

Small pack sizes of pesticides have been developed and introduced due to farmer needs based on the following main criteria:

- Easy preparation of spray solution at correct application rate. Container content is adjusted to knapsack sprayer volumes. Thus, over and under-dosing is avoided (ready to use packaging),
- Accuracy of application which satisfies requirements of Integrated Pest Management (IPM) programs,
- Smallholder farmers get access to modern pesticides at affordable costs,
- Convenience in terms of transportation, storage, and handling,
- Packs designed for single use: This reduces risks of human and environmental exposure due to improper storage of partially used products and reduces the risk of accumulating obsolete stocks,
- Reduces the potential for packaging misuse, such as in counterfeiting or illegal re-use,
- Empty properly rinsed containers can be disposed of via dedicated container management schemes.

As such, pesticides in small packages provide smallholder farmers with limited budgets access to technology for optimizing their farming outputs in an affordable manner according to their local conditions.

3. Design and quality standards

High quality small packs are required to follow the same design criteria and industry standards that apply to the entire life cycle of larger containers and must comply with national and international legal requirements. In addition, the following criteria must be met (minimum standard):

- Packaging must be sufficiently durable and stable for safe storage,
- Ensure adequate shelf life,
- Provide adequate protection from container damage in the channels of trade,
- Enable appropriate product labeling as per regulation,
- Be clearly distinguishable from food packs (e. g. by label design),
- Limit risk of personnel exposure to the user when preparing the spray solution and dispensing the product,
- Allow complete emptying of package content and rinsing of package by the end user into the spray container, leaving minimal product residues and waste behind,
- Compatible with container management systems for proper collection and disposal of pesticide containers.

Note: Non rinsed or difficult to rinse packs should be incinerated in an authorized plant, whereas triple-rinsed packs qualify for recycling, if feasible. The proper disposal of all empty pesticide containers is key to ensuring that the stewardship life cycle approach is achieved for all crop protection products.

4. Available small package options

The following technology solutions are currently used in the Agricultural Chemical Industry:

- Rigid plastic bottles
- Syringes
- Glass vials
- Blister packages
- Unit dose tubes
- Small pouches with and without caps
- Sachets
- Water soluble pouches

All these options can be designed to fulfill the minimum standard criteria. Additional innovations in small packaging are certainly welcome for consideration. The key driver for selection of the packaging is the chemical nature of the active ingredient and the mode of application.

5. Conclusions

Small packs are useful for smallholder farmers for the following reasons:

- Equivalent design criteria and industry safety standards as for any other pesticide container,
- Affordable access to new technology,
- Easy preparation of spray solution and adjustment of correct dosing,
- Reduction of obsolete pesticide waste,
- Reduced risks of accidents and misuse,
- Enabling safe use combined with convenient size.

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