PESTICIDES FORUM: 22 OCTOBER 2013

DISPOSAL OF USED HOME AND GARDEN PESTICIDE CONTAINERS

**Issue**

1. CRD proposes to change the advice on the disposal of empty home and garden pesticide containers to encourage the recycling of ready-to-use containers in the light of the findings from a recent study. Advice on the disposal of empty concentrated product containers would not be changed.

Forum members are invited to comment on CRD’s proposals.

**Background**

2. Current government advice for the disposal of empty home and garden pesticide containers recommends:

   for concentrated products: ‘triple rinsing’ and disposal via the dustbin;

   for ready-to-use (RTU) products: disposal via the dustbin.

3. The advice is precautionary and has been in place for many years. However, two more recent developments have led to the need for a review. First, there is a continuing trend towards the use of RTU products which now represent the larger portion of the market. Since RTU products are invariably more dilute the containers pose a lower risk. Additionally more and larger containers are required to market the same quantity of pesticide as RTU products and the volume of plastic (and hence the value of recycling which the government is keen to encourage) will be greater.

4. The recycling project, undertaken by Fera, is described in detail in the attached report. Its aim was to assess the risks to humans and the environment of disposing of used amateur pesticide containers via recycling and to compare those risks with those arising from disposal via the dustbin.

5. The project has involved:

   - a detailed analysis of the fate of pesticide containers disposed of in recycling bins or the dustbin; the pathways in each case vary and can be quite complex;
   - the selection of a suite of 5 pesticide active ingredients with a range of characteristics to represent ‘reasonable worst case’ situations in terms of potential risk;
   - a detailed analysis of the many routes of potential exposure by which householders, workers and the various environmental compartments could be contaminated as containers move through the recycling/disposal process;
6. This information has been used to construct and populate a model to assess the acceptability of exposures under various scenarios. The output has also been subject to some sensitivity analysis.

7. The Fera study was informed through contacts with a range of stakeholders with expertise in pesticides, recycling or other areas relevant to the project. These included two workshops hosted by Fera to decide on the parameters to underpin the risk assessment and to discuss the construction of the model. Several Forum Members were invited to both workshops.

Discussion

8. A crucial factor in considering the output from the model has been the treatment of part-filled containers in the assessment. Advice on the disposal of part-filled containers clearly indicates that these should be disposed of via a Local Authority Household Waste Recovery Centre (HWRC). However, it is clear from the evidence of CRD’s User Habits Survey (described in the Fera study) that some people dispose of part-filled containers inappropriately. In some cases this is the inappropriate disposal of the contents (e.g. down the drain) which would still result in an empty container. But in others the evidence suggests that the part-filled container itself is disposed of which raises the possibility of much higher exposure through spillage.

9. The study has concluded that:

- for all compounds considered in this study the environmental risk was consistently low when containers were disposed of via the dustbin or recycling bin;
- exposure associated with RTUs was consistently below the Acceptable Operator Exposure Level (AOEL), regardless of whether or not spillage occurred;
- If spillage is discounted, the calculated exposure is below the AOEL, for all compounds for concentrates too. However, if spillage is included, the exposure exceeded the AOEL for some compounds.

10. The study clearly demonstrates that the advice on the disposal of empty RTU products should be changed to encourage recycling. The position for concentrates is less clear. Exposure above the AOEL resulting from spillage depended in part on the quantity of pesticide assumed to be spilled which is difficult to predict with any precision. It is also the case that the parameters used were protective. In terms of communication there would also be advantage in providing a consistent message across both types of container. However, on balance CRD favours retaining the current advice on the disposal of concentrates to avoid the small risk that recycling would pose.
11. The Fera study also noted that there is a case for avoiding the use of white HDPE containers for pesticides to avoid them mingling with the milk ‘bottles’ which are selected and recycled into new milk bottles. CRD will consult the Crop Protection Association on this issue. These discussions will also consider the scope for selecting materials for pesticide containers which are more suitable for recycling now that this opportunity will be available.

12. The Fera study illustrates that waste recycling is a rapidly developing industry with different processes coming on stream or under consideration. There is thus a good case for revisiting the conclusions of this study in some years time to check that its conclusions remain valid. This would also provide the opportunity to reconsider the advice on the disposal of concentrate containers.

Conclusion

13. The study undertaken by Fera indicates that government advice on the disposal of empty RTU pesticide products should be changed to encourage recycling. The position on empty concentrate containers is less clear cut and CRD proposes it should remain unchanged.

14. CRD will discuss with the CPA the scope for avoiding white HDPE containers and the opportunities to support the recycling of RTU containers through the choice of container materials.

Chemicals Regulation Directorate
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