



# Ag Container Recycling Council

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## **ACRC Calculation of Overall Recycling Rate of Plastic Used for Packaging Liquid Formulated Pesticide**

Liquid formulated pesticide is delivered in “containers” ranging in size from one pint to 4500 gallon bulk tankers. Since the ACRC program only includes containers up to and including 55 gallon drums, the ACRC has traditionally only calculated an estimate of the recycling rate for these “small” containers. A more accurate assessment of industry’s commitment to packaging stewardship must include all “sizes” of packaging used to deliver pesticide product; e.g. liquid formulated pesticide. To that end, in 2014 the ACRC committed to develop a credible estimate of the plastic packaging recycling rate for all liquid formulated pesticide sold and delivered in 2013. The analysis, completed in 2015, included attainment of information and data from the following sources:

- The Freedonia Group (market research firm)
- Reusable Industrial Packaging Association (RIPA)
- ACRC member company bulk sales
- Composite IBC manufacturers and recyclers
- USEPA
- Related industry experts

A onetime survey of ACRC member company bulk sales (for 2013) revealed direct sales (in 196,000 IBCs) of 32 mm gallons and 142 mm gallons in bulk tanker; a total of 174 mm gallons delivered in bulk. This is approximately 64 percent of all pesticide delivered/used in 2013 (see small container volume below). Industry consensus is that 40% of what is delivered in bulk tanker is repackaged in IBCs; 60% is custom applied thus using no packaging. Including the gallons repackaged (with an average of ten “turns” per IBC), a total of 303,000 IBCs were used, requiring 16 mm lbs. of HDPE plastic. Based on consensus of industry experts, it was assumed that 75% (12 mm lbs.) of the IBCs used are recycled annually.

Data from ACRC’s annual survey of member companies was used to estimate total annual (2013) sales of containers >55 gallons. An estimate of total recycling was calculated from actual ACRC program data and knowledge of “non-ACRC” recycling programs. This revealed total use of approximately 34 mm pounds of plastic in containers < 55 gallon to deliver 99 mm gallons of pesticide and recycling of approximately 10.5 mm lbs.; a recycling rate of 31%.

Addition of the IBC recycling rate of 75% with the “small container” recycling rate of 31% yields an overall recycling rate of approximately 45 percent for all plastic packaging used. However, since

pesticide delivered in bulk tanker and custom applied used no packaging, the fact is that 66.7 percent (two-thirds) of liquid formulated pesticide is delivered with no plastic packaging or packaging that is recycled. Stated in another way, only one-third of all liquid formulated packaging used in 2013 was delivered in packaging that was disposed.