



17th February 2021

Big Compost Experiment - 15 month report (07/11/19 – 07/02/21)

This report contains summary figures of 15 months' data (07/11/19-07/02/21) from the Big Compost Experiment UK-wide citizen science study (UCL Plastic Waste Innovation Hub). The study is ongoing, so far with over 9000+ survey responses and 1000+ home compost experiments underway or finished.

Website: www.bigcompostexperiment.org.uk

EXECUTIVE SUMMARY

Survey responses;

- 85% of participants responded they are more likely to buy products with packaging marked 'compostable' or biodegradable' (see Fig. 01)
- 91% of participants responded they separate food waste from general waste or recycling (see Fig. 02). Lack of council food waste collection most popular reason for not separating food waste (Fig. 03)
- 85% of participants who separate food waste use home composting, 49% use council organic waste collection (Fig. 04).
- 43% of participants who separate food waste use home composting to dispose of compostable plastics, 15% use council organic waste collection (Fig.05)
- 91% of participants who compost do so at home (Fig. 06)
- 64% of participants who compost use an 'outdoor closed-bin composter' i.e. 'Dalek' style composter (Fig. 07)
- 83% or of participants who compost use their compost to fertilise soil for edible plants, 78% use their compost for non-edible plants (Fig. 08)
- Participants report a wide range of organisms present in their composters, including worms (89%), slugs (69%) and woodlice (64%) (Fig. 09)

Home compost experiment results;

- 807 home compost experiment results reported so far
- Overall 68% of home compost experiment results report item remains still visible (Level 0-3) and 32% no longer visible / not found (Level 4) (Fig. 10) within participant home composting timeframes.
- Highest number of results reported for 'outdoor closed-bin composter' category ('Dalek' style bin). 72% of results report item remains still visible (Level 0-3), 28% of results report item no longer visible / not found within participant home composting timeframes. Similar % distribution of results over three other most frequently used composters 'outdoor open-slatted', 'multi-stage', and 'hot-bin' (Fig. 11).
- Highest number of results reported for 'newspaper and magazine wraps' category. 70% of results report item remains still visible (Level 0-3), 30% of results report item no longer visible / not found. Similar % distribution of results over frequently reported item categories 'caddy and bin bags', 'shopping bags', 'fruit and vegetable films' (Fig. 12)



- Nationally, England and Scotland show similar results despite their different climates (further breakdown per region does not show much difference either); Wales shows improved composting effectiveness overall; and there is very little data for Northern Ireland (Fig. 13)
- The composting time periods (3/6/9/12/12+ months) do not seem to greatly effect the results, indicating perhaps that it's the health and dynamics of an individual's composter that is more important. For instance, 70% of experiments using 3 month composting duration report item remains still visible (Level 0-3); 67% of experiment using 6 month composting duration report item remains still visible (Level 0-3); 70% of 9 month composting duration report item remains still visible (Level 0-3); 70% of 12 month composting duration report item remains still visible (Level 0-3); 59% of 12+ months composting duration report item remains still visible (Level 0-3) (Fig. 14)

FULL RESULTS

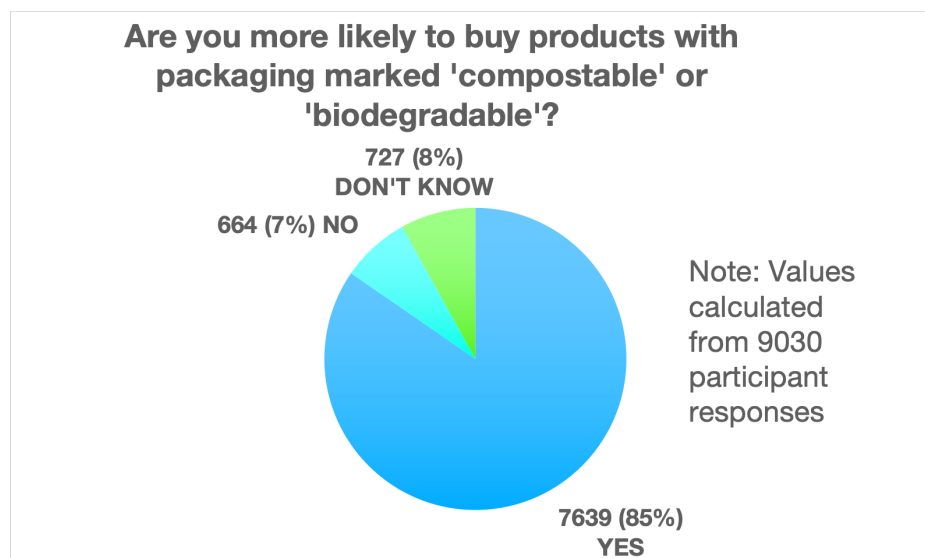


Figure 1. Responses to survey question 'Are you more likely to buy products with packaging marked 'compostable' or biodegradable?'



Figure 2. Responses to survey question 'Do you currently separate food waste from general waste or recycling?'

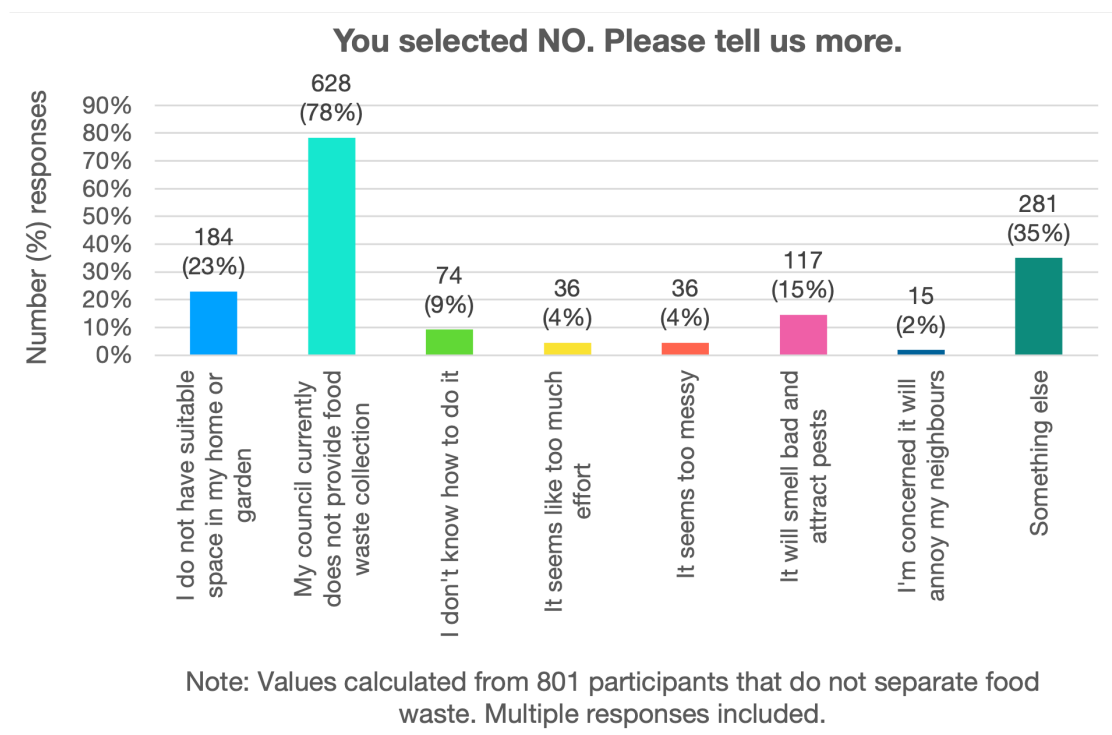


Figure 3. Reasons why participants do not separate food waste.

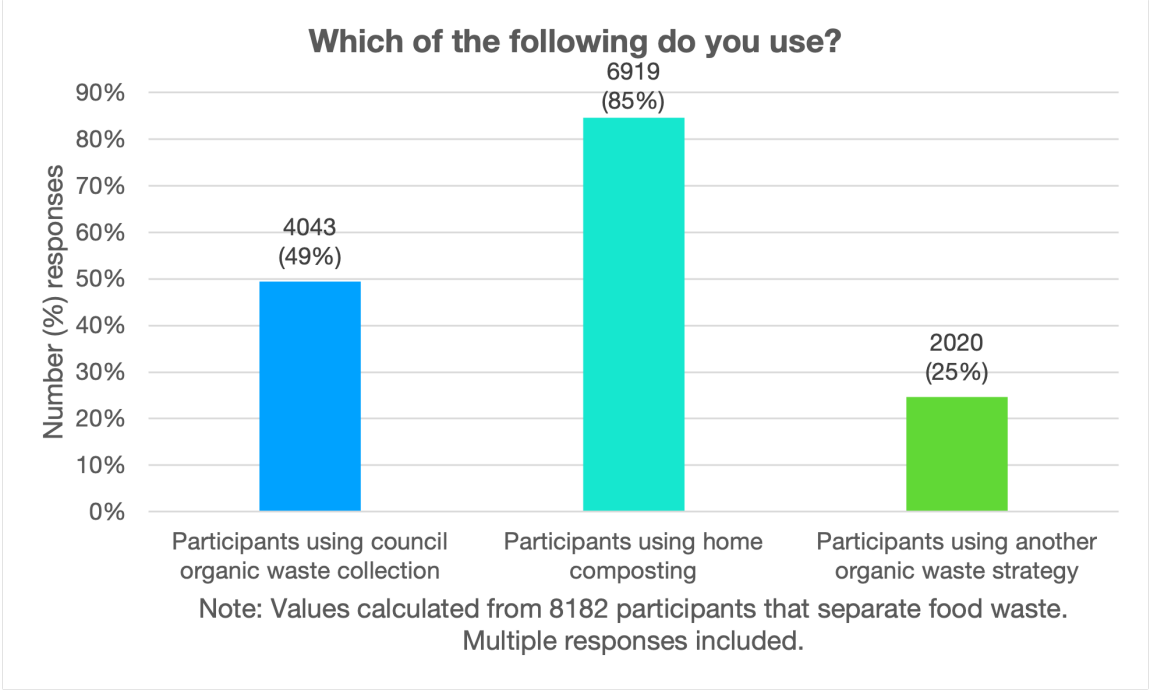


Figure 4. Responses by participants who do separate food waste to survey question ‘Which of the following do you use?’

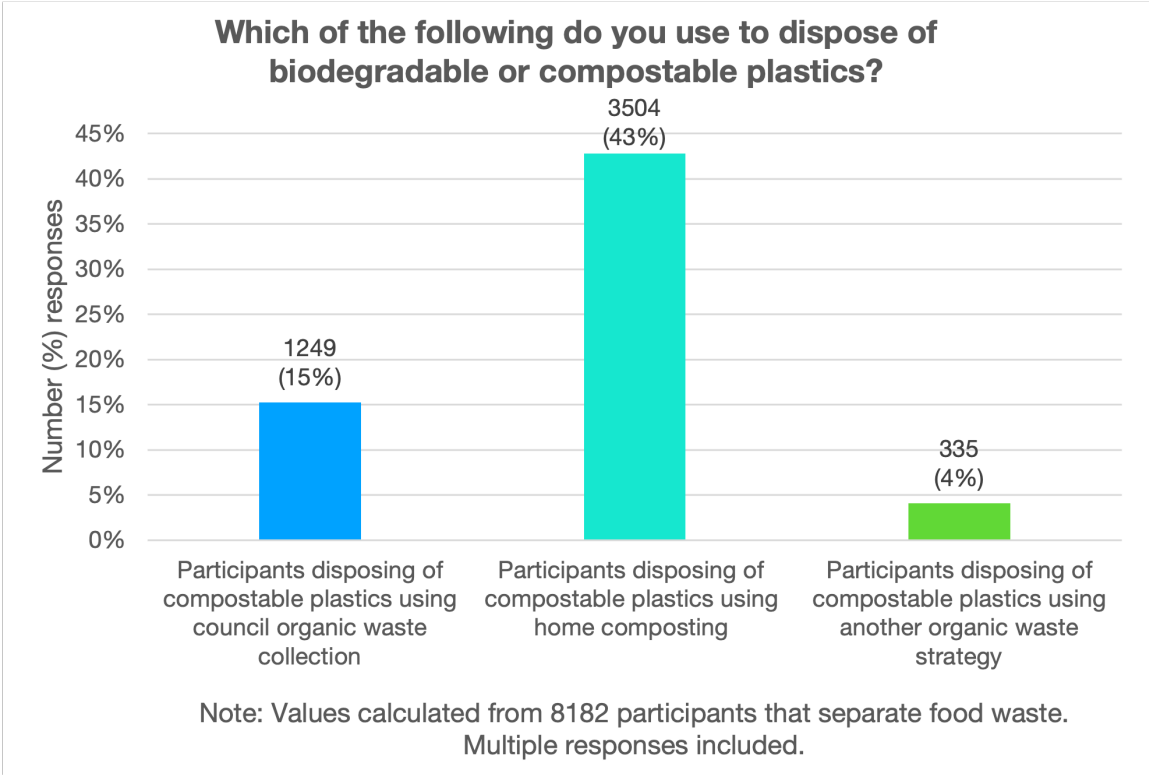


Figure 5. Responses by participants who do separate food waste to survey question ‘Which of the following do you use?’

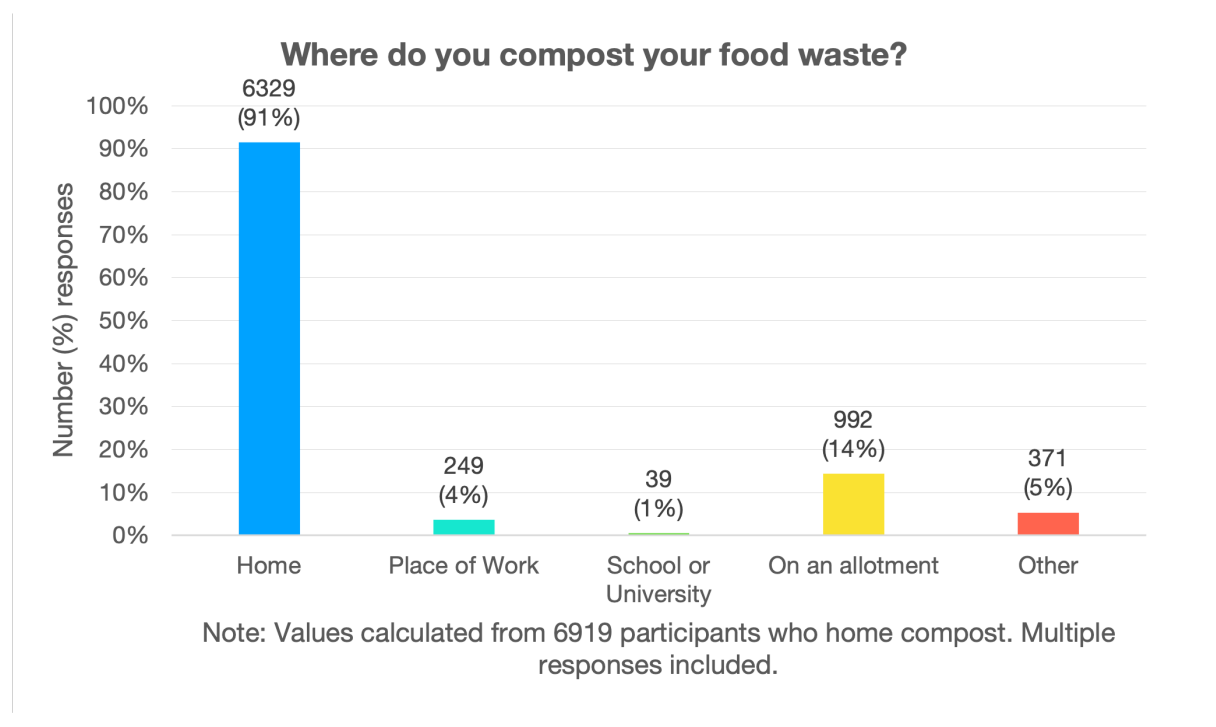


Figure 6. Survey responses to question ‘Where do you compost your food waste?’

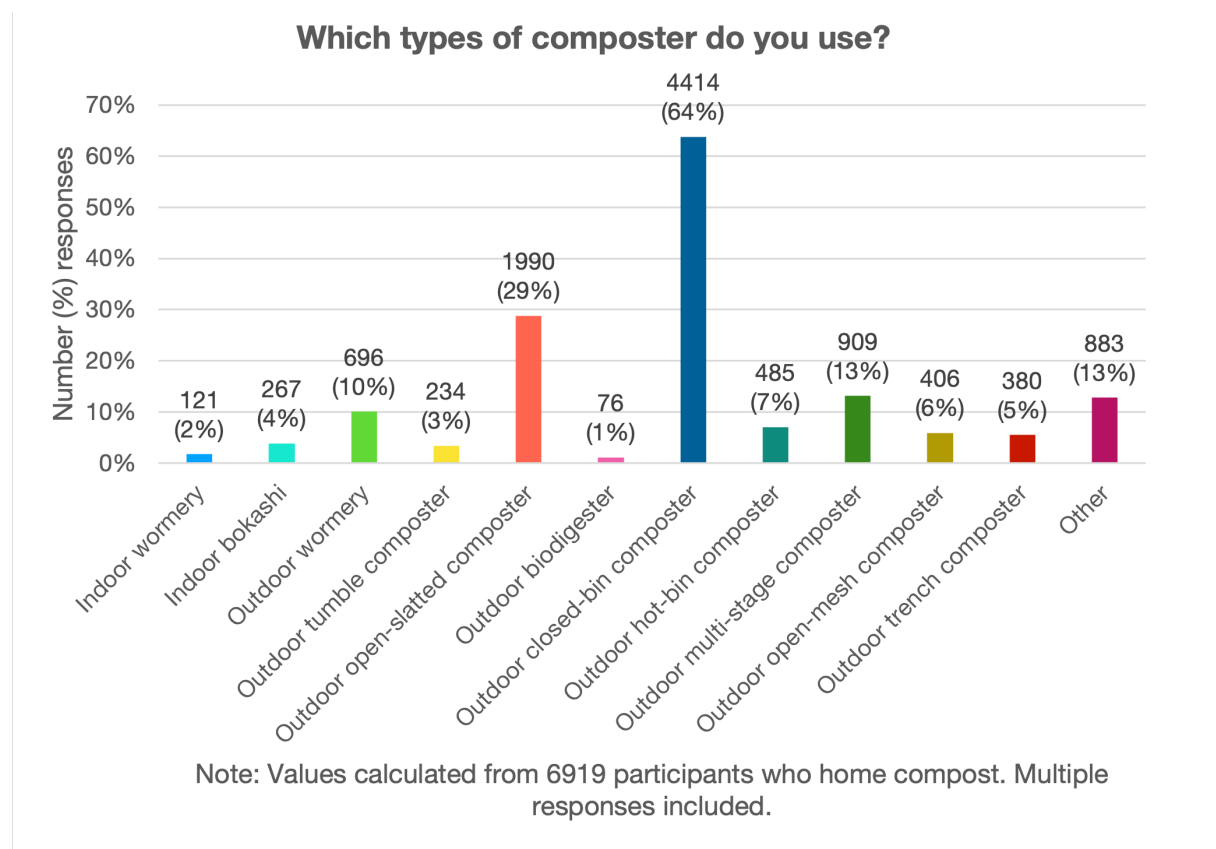


Figure 7. Survey responses to question ‘Which types of composter do you use?’

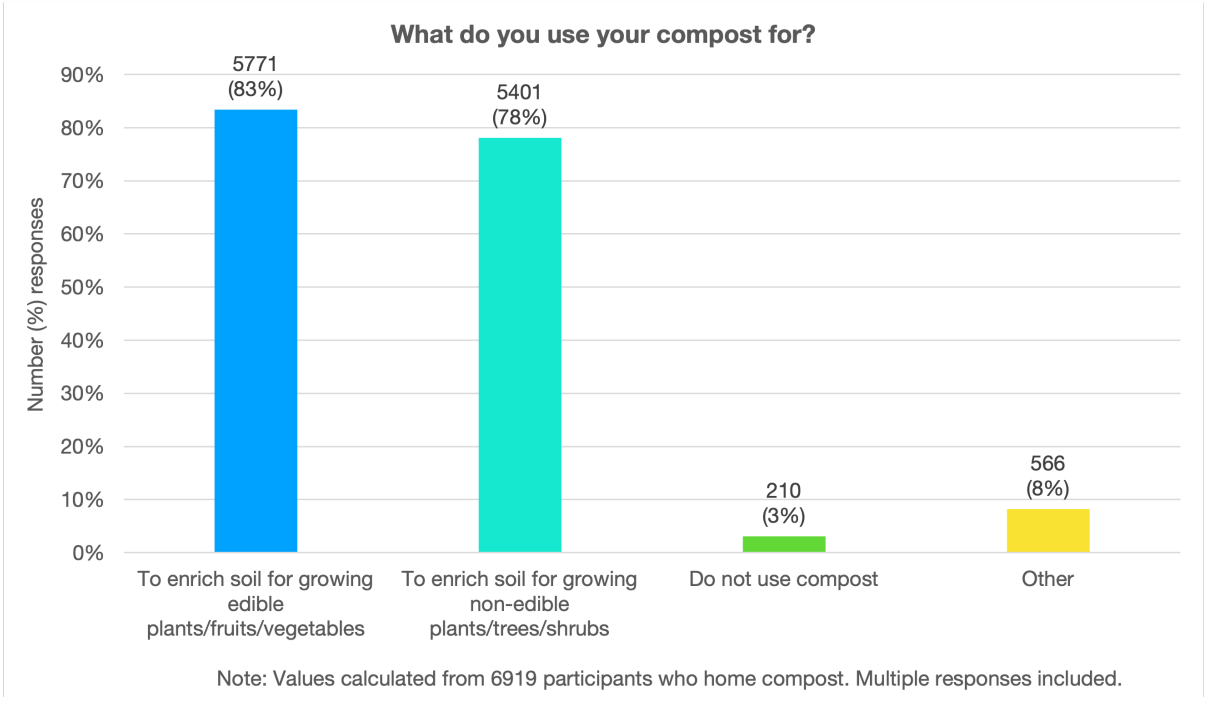


Figure 8. Survey responses to question ‘What do you use your compost for?’

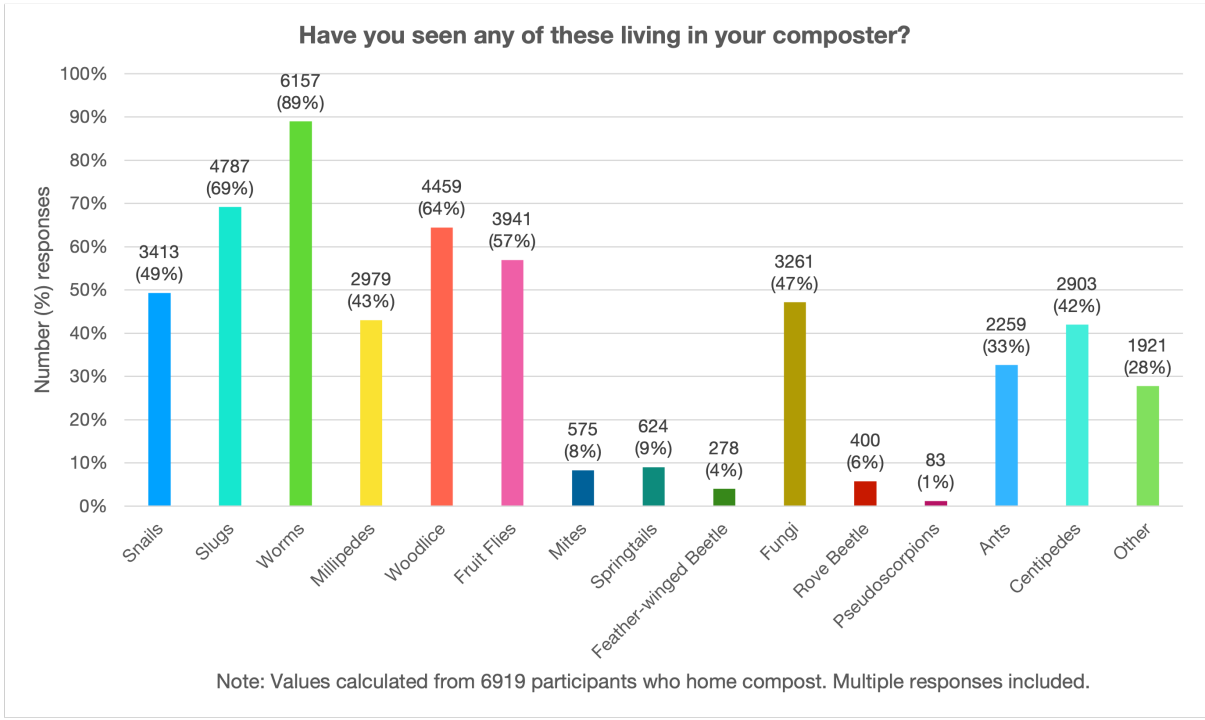
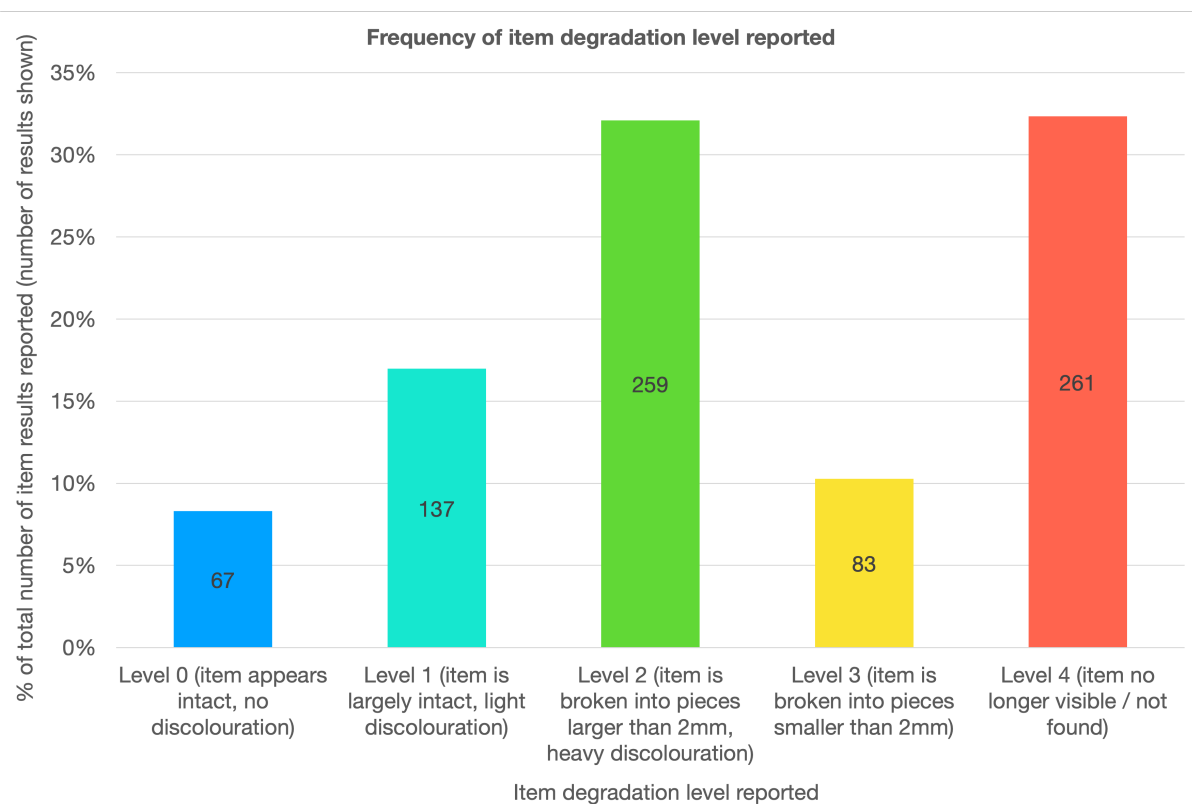
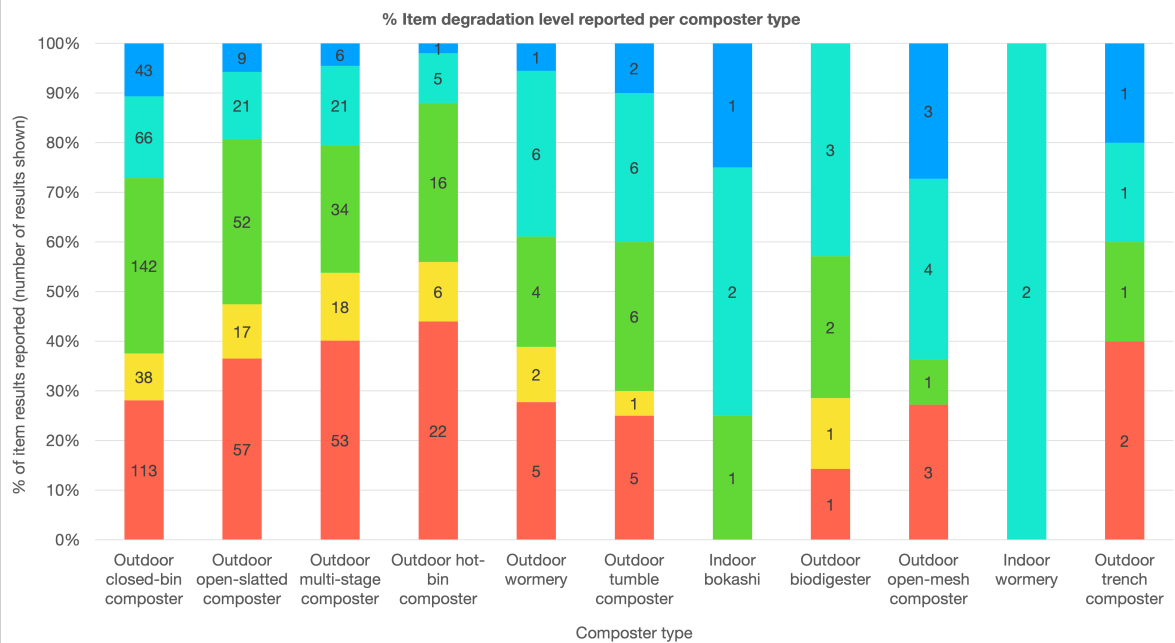


Figure 9. Survey responses to question ‘Have you seen any of these living in your composter?’



Note: Values calculated from 807 item results reported (07/11/2019 - 07/02/2021)

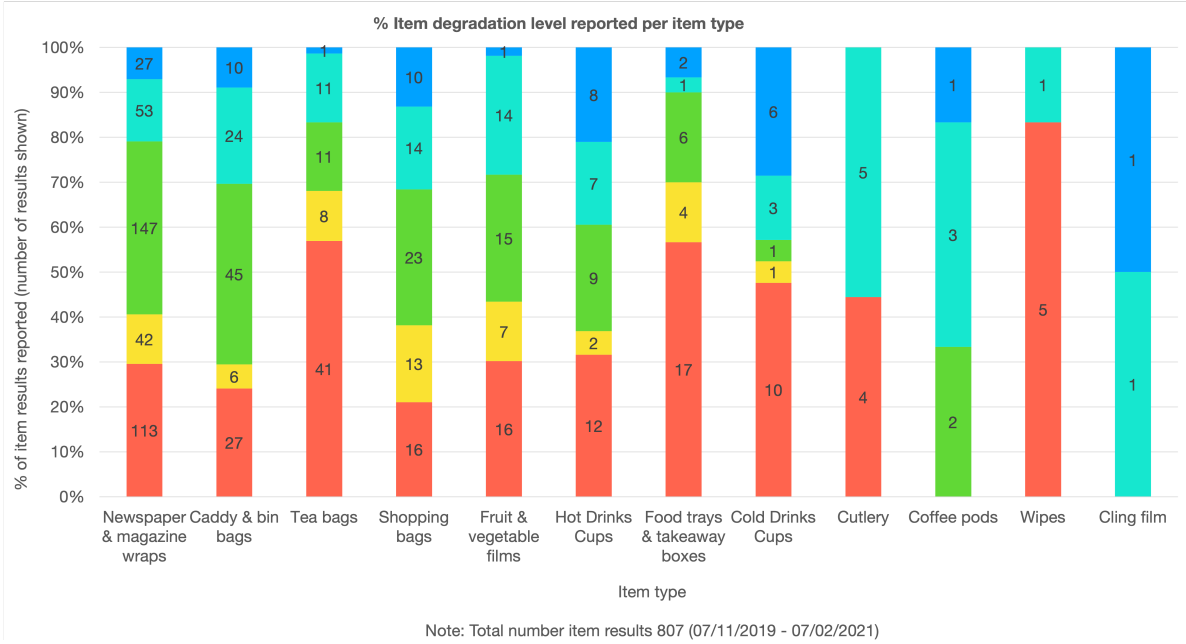
Figure 10. % item degradation level reported



Note: Total number of item results 807 (07/11/2019 - 07/02/2021)

- Level 0 (item appears intact, no discolouration)
- Level 1 (item is largely intact, light discolouration)
- Level 2 (item is broken into pieces larger than 2mm, heavy discolouration)
- Level 3 (item is broken into pieces smaller than 2mm)
- Level 4 (item no longer visible / not found)

Figure 11. Home compost experiment % item degradation level reported per composter type



- Level 0 (item appears intact, no discolouration)
- Level 1 (item is largely intact, light discolouration)
- Level 2 (item is broken into pieces larger than 2mm, heavy discolouration)
- Level 3 (item is broken into pieces smaller than 2mm)
- Level 4 (item no longer visible / not found)

Figure 12. Home compost experiment % item degradation level reported according to item type

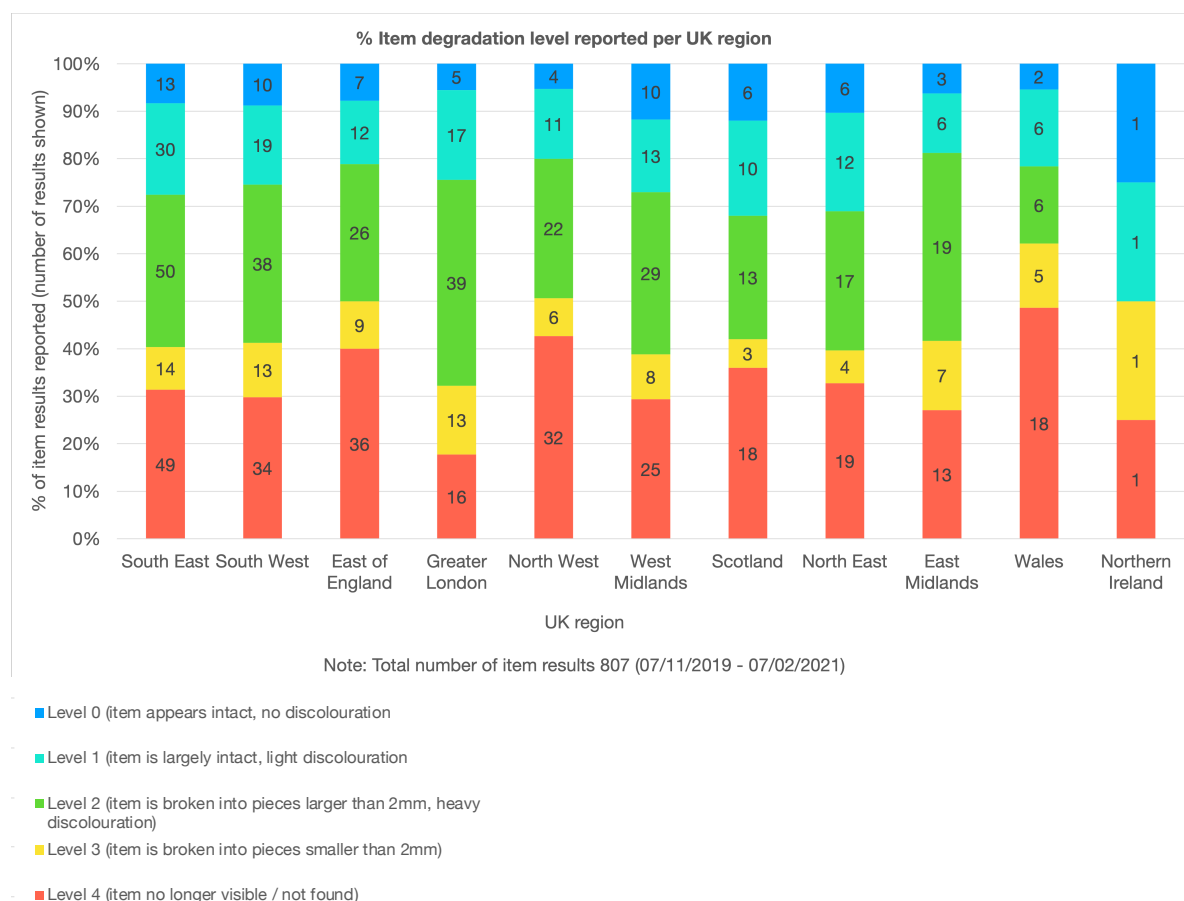


Figure 13. Home compost experiment % item degradation level reported according to UK region

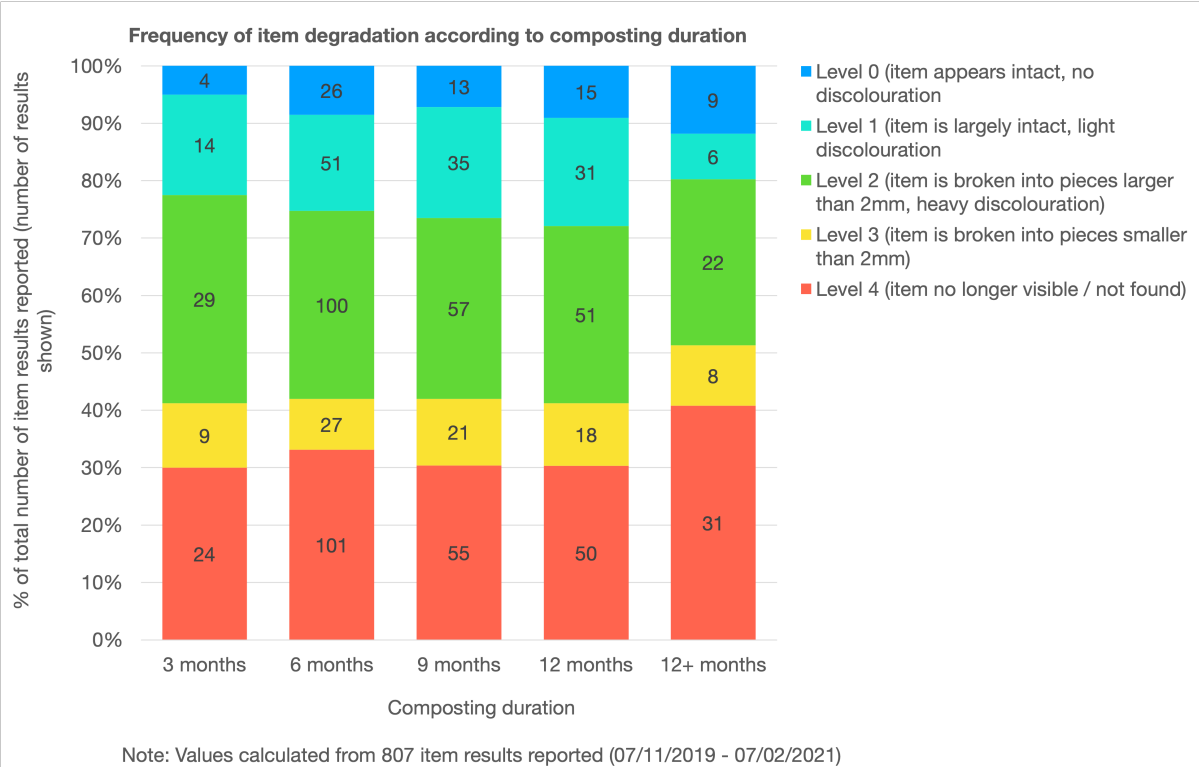


Figure 14. Home compost experiment % item degradation level reported according to composting duration.