

Pesticides linger longer in greenhouse crops

19 November 2014



- Crops grown under some form of protection had a significantly greater number of detectable pesticide residues than similar crops grown in the open field
- Average concentrations of those pesticides which typically degrade in sunlight were higher in the crops grown under cover compared to the open field crops
- Greater exceedances of acceptable [levels](#) (maximum residue levels) were evident in lettuce (grown under cover) compared to cabbage (open field)

Lancaster University's Dr Cris Halsall, lead author of the study, said: "Consumers are very interested in pesticide levels in their food so growers also take a very keen interest in keeping levels to a minimum – even when this is well below acceptable levels. At the same time we are developing techniques which are increasingly sensitive and good at detecting small changes in pesticide levels. This new research will help build up a clearer picture of how [pesticides](#) behave under glass and in poly-tunnels. Pesticide-use regimes in closed-cropping systems should be reviewed to help reduce post-harvest residues on salad and soft fruit."

Researchers writing in the journal *Chemosphere* this week found that crops typically grown under glasshouses and poly-tunnels had higher levels and numbers of different pesticides in them than those typically grown in the open.

They analysed pesticide data in food taken from various points in the food chain and 'paired up' produce – for example strawberries, which are typically grown undercover, were paired with berries such as gooseberries which are typically grown outside.

They then measured the number and level of pesticides found in each sample and compared the results.

Key findings included:

More information: [DOI: 10.1016/j.chemosphere.2014.10.066](#)

Provided by Lancaster University

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