# National Pollinator Strategy consultation

## What we know and what we don't

Before covering the consultation proposals in detail, it is useful to review what we do and do not know around the issue of insect pollinators. Most of this is detailed in the status report accompanying the consultation and in the consultation itself (Annex 1).

| What we do know… | What we don't know… |
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| We know the key pollinators in Britain are bees (one honeybee species, 25 bumblebee species and around 240 solitary bee species) and hoverflies, although other insects like flies, beetles, moths and butterflies play some role in pollination. | We don't know which pollinating insects are doing the job of pollination for crop and wild plants. So we can't say what the impacts of changes in pollinator populations would be for the pollination of crops and wild plants. |
| There is some evidence that the majority of open crop pollination is done by wild pollinators, with managed pollinators (honeybees and commercially-reared bumblebees) topping-up this pollination service. | |
| We have some information on changes in occurrence (number of places a species is found) and diversity (number of species in a location) of many insect pollinator species. | We have little information on the abundance (population sizes) of pollinators (with the exception of moths and butterflies). Without abundance data, it is very difficult to say how any change in occurrence or diversity affects the pollination of crop or wild plants. |
| Occurrence and diversity of some wild pollinator groups have declined in Britain since 1950. However, a recent analysis suggests that since 1990 these declines have slowed, and in the case of the solitary bees (= around 90% of our bee species) there has been an increase in biodiversity in the last 20 years. The suggestion is that this change is linked to the increased conservation work and agri-environmental management done since 1990.<br><br>There is some evidence that pollinator-friendly options in agri-environment schemes are supporting greater diversity and abundance of wild pollinators. | When declines in pollinators are talked about it is usually in the context that the declines are dramatic and ongoing. The available evidence does not support this 'the bees are dying out fast' position.<br><br>The lack of comprehensive monitoring data leads the status report to conclude 'it is impossible to state unequivocally whether wild insect pollinators are in decline or not'. |
| A lack or pollinators, causing low levels of pollination (a pollination deficit) can result reduced yield or quality of a crop. | There is no evidence that low levels of pollination are currently causing economically significant impacts on crop production in the UK. |

| What we do know… | What we don't know… |
|---|---|
| We know pollinators face a wide range of environmental pressures, including intensification of land-use and habitat loss, pests and diseases, invasive species, use of pesticides and climate change. | We don't know what is causing any widespread pollinator losses. These losses certainly can't be pinned on any single factor. |
| A major driver of wild pollinator losses is thought to be the degradation, destruction and fragmentation of the habitats they rely on for food and shelter.<br><br>Agricultural intensification is held-up as the primary cause of this loss of habitat resources for pollinators in Britain. | |
| Honeybee hive numbers have fallen significantly in recent decades, although since 2007 there has been a resurgence in colony numbers.<br><br>Numbers of honeybee hives is affected mainly by socio-economic factors (cost vs benefits of bee-keeping), and pests and disease are recognised as the main challenge facing honeybees. | |
| We know neonicotinoid insecticides have harmful effects on the life cycles and behaviour of bees. But all such research is based on containing bees and feeding them a diet of pesticide treated food. It is recognised that some researchers are using 'field-realistic doses', with bees fed on pollen and nectar containing residues of neonicotinoids at levels similar to those found in the pollen and nectar of treated crops.<br><br>However, this artificial situation is very different to that experienced by bees freely foraging on a range of foods within fields and surrounding habitats. | We do not know how representative laboratory-dosing experiments are of the real-life situation facing bees.<br><br>We do not know whether bees foraging naturally in and around neonicotinoid-treated crops are picking-up doses of neonicotinoids, which are sufficient to cause unacceptable levels of harm as seen in laboratory-dosing experiments. |
| We know there are concerns about the use of commercially-reared bumblebees to pollinate crops and the risks they pose to wild bees in terms of spreading pests and disease, and in terms of hybridisation and competition with wild bees. | While this is some evidence of the risk, we do not know whether commercially-reared bumblebees are actually spreading pests or disease to wild bees.<br><br>Also, we do not know whether commercially-reared bumblebees are actually causing a problem for wild bees in terms of hybridisation or competition. |