

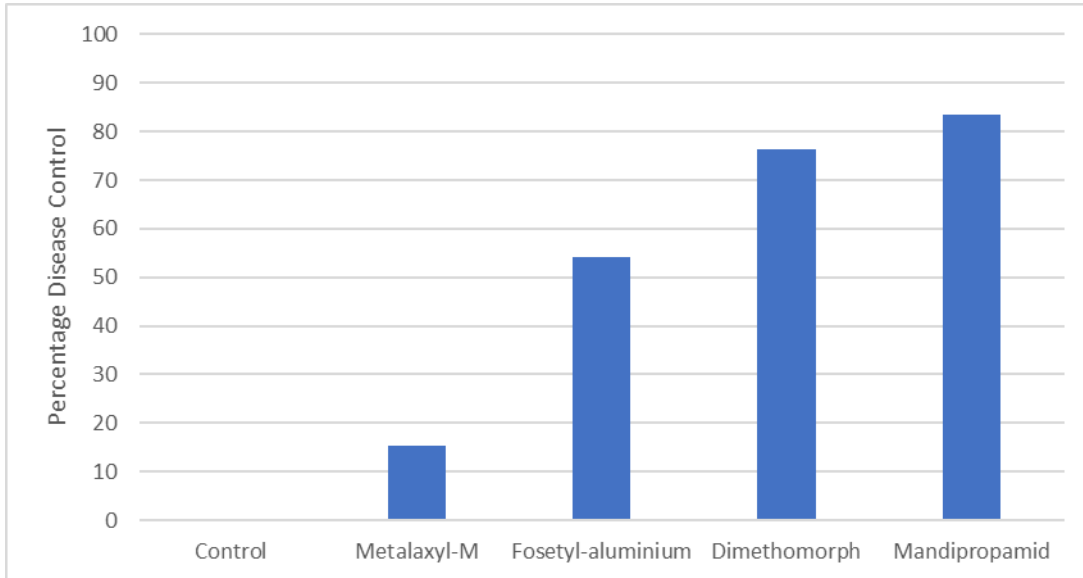
## Monitoring downy mildew sensitivity to fungicides in column stocks production



During the 2018 column stock season, UK and Dutch growers experienced serious problems controlling downy mildew (*Peronospora parasitica*), leading to substantial crop losses. The standard spray programmes used by industry, based on products containing metalaxyl-M, were ineffective at controlling the disease. In response, the Cut Flower Centre in conjunction with the AHDB instigated a disease sensitivity trial using a number of fungicide active ingredients. The key points generated by this work included:

- The downy mildew disease isolates provided could not be fully controlled by most of the fungicides regularly used against downy mildew diseases.
- The disease isolates appeared to be insensitive to metalaxyl-M.
- Products based on dimethomorph, such as Paraat and Percos, gave the best levels of control.
- To attain the best levels of disease control, a range of cultural and nursery hygiene measures needed to be adopted alongside a more intensive spray programme.

The conclusions from the work were summarised in the information sheet entitled '[Maintaining successful control of downy mildew in protected crops of cut flower column stocks](#)'. The information sheet also contained an example revised spray programme which was implemented by growers in 2019 with great success, minimising disease incidence and crop losses. However, there was a desire by industry to continue an independent assessment of fungicide performance so that future spray programmes could be adjusted accordingly. As a result, plants infected with downy mildew were collected throughout the 2019 growing season and these were tested as part of the larger AHDB funded project [CP 184 'Control strategies for downy mildews and late blight'](#). These various disease isolates were tested against a number of fungicides including: dimethomorph (Paarat), fosetyl-aluminium and propamocarb hydrochloride (Previcur Energy) mandipropamid (Revus) and metalaxyl-M at the James Hutton Institute, Scotland. The results of the trial are shown in the following graph.



*Downy mildew disease control attained by a range of fungicide active ingredients*

The results show a similar level of activity against the disease by each active ingredient as was originally found, indicating that the example spray programme provided in the information sheet is still valid, and can be used in the 2020 growing season, without any significant revisions. Continued monitoring of the disease is planned for future years.