

Controlled-Environment Greenhouse



Agriculture, Fisheries and
Conservation Department

Bumble Bee Pollination

Newsletter – June 2020



From the Editor

Natural pollination of greenhouse gourds and fruits is often inadequate to provide satisfactory yields in the absence of insect pollinators. Apart from artificial pollination, pollination with bumble bees is also prevalent in gourd and fruit cultivation in greenhouses nowadays. This issue of the newsletter features the Department's experience in bumble bee pollination.



Placement of hives

- Hives should be placed on frames approximately 90 cm above the ground with shades on top to lower the temperature
- The legs of the frame should be placed in water to prevent ants from entering the hives from the ground
- Allowing bumble bees to return to hives before applying pesticides in greenhouses to avoid harming the bees



A frame for placing hives

The front and interior of a hive



Results of bumble bee pollination

- Bumble bees work industriously in collecting pollen from flowers of crops. Bruising is left on the flowers after their visits
- Optimal temperature for bumble bees: Bumble bees are very active and potent pollinators when the temperature in greenhouses falls between 15°C and 25°C during daytime. However, they will become very inactive and keep staying in the hives when the temperature rises to 35°C or above
- They are helpful in improving the shape of strawberries and enhancing the yield of cherry tomatoes

Pleasant-looking strawberry fruits.
No abnormal fruits are found



Cherry tomatoes are well pollinated
with high fruit set percentage



The bruising left by bumble
bees after pollen collection



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For more information and visits to greenhouses, please contact:
Horticulture Section, AFCD (Tel: 2679 4294)