

植物保护

## 4种植物对大灰食蚜蝇生长发育及行为的影响<sup>\*</sup>

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**摘要** 通过以甘蓝、茼蒿、青花、油菜植物上的甘蓝蚜喂食大灰食蚜蝇幼虫,研究了这4种十字花科植物次生物质对大灰食蚜蝇生物学习性的影响,结果表明产生的差异是明显的。幼虫历期最短的和最长的是青花与油菜,为9.5d和11.06d。蛹期最短和最长的是甘蓝和油菜,为8.81d和9.68d。蛹重以茼蒿的处理最轻,为26.46mg。产卵期以甘蓝和油菜最短,分别为10d和10.5d。产卵量以青花的处理为少,为214.6粒,甘蓝最多,达364.4粒。而成虫寿命、产卵前期、卵孵化率差异都不显著。大灰食蚜蝇幼虫可以取食死亡的甘蓝蚜。对高温致死的取食量是8.3~10.5头,低温致死的是8.3~12.7头,机械致死的为19.7~22.7头。带蚜植物与涂抹蚜虫体液植物均能使其产卵,而无蚜植物则不会产卵。

**关键词** [十字花科植物](#) [次生物质](#) [大灰食蚜蝇](#) [甘蓝蚜](#) [生长发育](#) [行为](#)

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## Effects of Four Kinds of Crucifer on Growth and Behavior of *Metasyrphus corollae*

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### Abstract

This experiment was carried out creature character of the *Metasyrphus corollae* was influenced by allelopathic substance. We feed *Metasyrphus corollae* larvae with *Brevicoryne brassicae* which was on cabbage, kohlrabi, qinhua and rape. The results showed that the difference was obvious. The shortest larvae period treated by qinhua was 9.5d, and the longest larvae period treated by cabbage was 11.06d. The shortest pupa period treated by cabbage was 8.81d, and the longest period treated by rape was 9.68d. The pupa, 26.46mg, was most light. It was treated by kohlrabi. Laying eggs periods treated by cabbage was 10d, and the period treated by rape was 10.5d. The number of eggs treated by qinhua was 214.6. The number treated by cabbage was 364.4. Those differences of adult lifespan, period before laying eggs and the rate of hatching eggs were not obvious. *Metasyrphus corollae* larvae could feed on the dead *Brevicoryne brassicae*. It ate 8.3~10.5 *Brevicoryne brassicae* caused death by high temperature, 8.3~12.7 by low temperature, 19.7~22.7 by mechanical strength. By this study, we found plant with *Brevicoryne brassicae* or its' body liquid all could make *Metasyrphus corollae* lay eggs. The plant without *Brevicoryne brassicae* could not make it lay eggs.

**Key words** [crucifer](#) [allelopathic substance](#) [Metasyrphus corollae](#) [Brevicoryne brassicae](#) [growth](#) [behavior](#)

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