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低温和光周期对不同地理种群大豆蚜蚜型的影响

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摘要: 通过设置3个温度(18,16,14℃)和2个光周期(8:16、10:14)处理,对采自黑龙江、河北、山东和广东4个地理种群的大豆蚜进行了蚜型的诱导。结果表明:在各处理条件下,大豆蚜的各蚜型均可被成功诱导。在所设3个温度中,16℃为诱导性雌蚜和性母蚜的最佳温度,诱导量及所占比例相对较高。在同等光周期条件下,温度越低,有翅蚜的诱导比例越高,但对性雄蚜和性母蚜的诱导并未随温度降低而增加。此外,发现诱导大豆蚜各种蚜型所需日龄有随着地理纬度升高而缩短的趋势。

Abstract: Effects of temperature and photoperiod on soybean aphid form, collected from Heilongjiang, Hebei, Shandong and Guangdong province, were studied by setting three temperatures (14, 16, 18°C) and two photoperiods (L : D=10 : 14 and L : D=8 : 16) in laboratory. The results revealed that the various morphs of soybean aphids which belonged to different geographical populations could be induced successfully at different temperatures and photoperiods. The optimal temperature for inducing the androparae male and gynoparae female was 16°C with a higher amount and percentage. The more virginoparae could be reproduced in lower temperature at the same photoperiod, but the induction of the androparae male and gynoparae female was not only decided by low temperature. Otherwise, there was a decreasing trend of the reproductive period with the increasing latitude of location.

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