

Comparisons of pupae ail fatty acids composition in invertebrates

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Abstract: Some Lepidoptera insects contain a lot of linoleic acid (LA) and α - linolenic acid (ALA), which are two essential fatty acids with high nutritional value. In the study, we determined the composition and content of palmitic acid, oleic acid, linoleic acid and α -linolenic acid by gas chromatography. Four fatty acids, palmitic acid, oleic acid, linoleic acid and α -linolenic acid, were found in the pupae of *Glyphodes pyloalis*, *Spodoptera litura* and *Phthonandria atrilineata*. The relative contents of palmitic acid and α -linolenic acid were the dominant fatty acids, and the content of linoleic acid was the lowest among the three pests. In conclusion, mulberry pests are rich in fatty acids, in which the content of unsaturated fatty acid, α -linolenic acid, is the highest. In addition, the content of linoleic acid is relatively high. Therefore, Mulberry pests can be a source of unsaturated fatty acids. Our research helps to broaden the sources of fatty acids, especially unsaturated fatty acids.

Keywords: α -linolenic acid; linoleic acid; *Glyphodes pyloalis*, *Spodoptera litura*, *Phthonandria atrilineata*