

## Law of Cotton Aphid, *Aphis gossypii* Glover (Homoptera: Aphididae) in Spring in Shehezi

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**Abstract:** Law of fundatrix and fundatrigenia were preliminarily investigated in spring 1999 in Shihezi City, Xinjiang. Till a late migrant appeared, cotton aphid can produce 4~5 generations on primary host. Fundatrix could reproduce 38 individuals at average. The first generation of fundatrigenia could reproduce 49 individ-

uals and the second generation is 31 individuals. The fundatrix from the primary host *Cataipa spaciola* Ward were survivable on *Plantago asiatica* L. and *Malva sylvestris* L. but couldn't form population. The fundatrigenia were survivable on *Plantago asiatica* L., *Capsella bursa-pastoris* (L) Madis and *Asperugo procumbens* L. and formed population only in *Capsella bursa-pastoris* (L) Madis and *Asperugo procumbens* L. The result indicated that the host range was difference between fundatrix and fundatrigenia. The fundatrix survival rate has positive correlation with the quantity of total suger of solubility and negative correlation with the quantity of Vc, threonine and phenylalanine in host plants. Vc, threonine and phenylalanine were likely to be a mostly restricted factor at the host range.

**Key words:** cotton aphid; fundatrix; fundatrigenia; law