The demand for amino acids by adult male cricket (*Gryllus bimaculatus*).

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Amino acid are one of the most important substances constituting the bodies of creatures. We examine the hypothesis that insects have active feeding of amino acids.

We tested various kinds of amino acids mixed with trehalose in adult male cricket's feeding in contrast with trehalose only as the control. The cricket having fasted two days fed them for four hours. The used eight kinds of amino acids were proline, glutamic acid, alanine, glycine, serine, threonine, arginine and lysine. The concentration of trehalose was 1.0M, and those of amino acids were 0.005M, 0.01M, 0.05M, 0.1M and 0.5M. One of the results is that the feeding rate was high in case of the proline of 0.05M concentration by 18.9 ± 8.9% (n=15). In contrast, the cricket did not actively feed the amino acids in the other samples.

We can understand that the adult male cricket did not take in amino acid actively. We left it open whether the feeding rate of the amino acids are high in the larva period when the demand for amino acids are great for ecdysis or growth.