

Appendix 2: Insects & Invertebrates

Insectivorous birds should be offered a variety of live invertebrate prey. This is essential to provide nutritional variety and enrichment. Prior to release, birds should be eating up to 50% of their diet as insects or invertebrates to ensure they are able to recognise and hunt food in the wild. Farmed insects include mealworms, crickets, woodies (wood roaches), fly pupae and invertebrates such as earthworms. Wild insects can be harvested opportunistically, caught in traps or encouraged to enter aviaries with pieces of hanging fruit or lights.

Where possible, provide live foods that form part of the bird's natural diet.

For example, magpies eat significant amounts of earthworms, whereas aerial hunters like dollarbirds and swallows mostly take flying insects. In the wild many species remove the less digestible exoskeleton, wings and legs from insects before feeding them to their young, and this may need to be replicated when hand-rearing young chicks in captivity.

It is important to note that different insects have different nutrient values²⁵. It is therefore necessary to feed a range of insects & invertebrates to achieve a balanced diet.

Insect Type	Protein %	Fat %	Calcium (mg/kg)	Ca:P ratio	Energy (kJ/kg)	Ave. Weight (g)	Ave. Qty per gram
Mealworm	19	12	300	0.10	8200	0.13	8
Cricket (adult)	19	6	500	0.19	5400	0.33	3
Woodie	21	11	800	0.42	7900	0.50	2
Earthworm	11	3	2300	1.2	3000	0.50	2

Boosting Insect Nutritional Value

Insects have no skeletal structure and are generally a poor source of calcium (however some invertebrates like earthworms, slaters and millipedes have good calcium levels). Farmed insects such as crickets & mealworms are often maintained on nutrient-poor substrates (e.g. bran), which also reduces their nutritional value.

The nutritional quality of insects can be greatly improved by fortifying their diet before being fed to birds²⁵. This can be achieved by maintaining the feeder insects on **Passwell Insect Booster** prior to feeding out. This increases the calcium, mineral and vitamin content, as these nutrients are incorporated into the insects' body tissue.



For best results, supply **Insect Booster** to the feeder insects for 7-14 days prior to feeding out to birds. This maximises the uptake of nutrients in the insect. However, supplying **Insect Booster** for as little as 2-3 days before feeding out will still have some nutritional benefit. Moisture should always be available to insects and can be supplied as a piece of wet sponge, fruit or vegetable.