FEED THE BIRD MEAT

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Even smaller species like this Musk Lorikeet can benefit from chewing over a cooked bone

Crimson Chats can be fed on commercial softfood

Rainbow Bee-eaters eat flying insects exclusively

Most people think of parrots and finches as being granivorous or 'seed-eaters'. But many birds also include meat in their diet. By 'meat' we don't necessarily mean rump steak, rather items such as insects, spiders and animal remains. Wild Red-tailed Black Cockatoos, for example, have been observed feeding on road-kill carcasses. Studies on wild finches show that for some species feed intake goes from being around 98% seed in winter (non-breeding) to over 80% insect component in summer (breeding season).

The main value of meat is to boost the quantity and quality of ***protein*** in the diet.

WHAT IS PROTEIN?

Proteins are organic compounds that are the building blocks of body tissue including muscle, skin, feathers and beak. All birds require a maintenance level of protein in the diet to sustain normal body condition. Increased levels of protein are required for breeding, growing chicks and during moult.

Protein is made up of chemical units called ***amino acids.*** There are 20 different amino acids which combine to make up the multitude of proteins that occur in the body. Due to a lack of specific enzymes, birds' bodies are unable to make nine of these amino acids. These are called ***essential amino acids*** and can only be sourced from the diet. Of these essential amino acids, several are frequently limited in a typical grain diet, particularly ***Lysine*** and ***Methionine***.

SOURCES OF PROTEIN

Protein is found in varying levels in most foods but the highest amount is from animal sources (meat, insects, cheese, whey protein, eggs) and some plant legumes (eg soy beans). Seeds, fruit and vegetables in general contain low protein levels. In addition, the quality of protein in plants is poor as they do not contain all of the essential amino acids. Animal protein by comparison contains the full range of essential amino acids and is therefore a better quality protein source.

The table below outlines the nutrient composition of various foods (per 100 gram dry basis).

It is useful to compare foods based on their ***Protein to Energy ratio*** (last column). This is the grams of protein divided by the ***Food Energy*** in megajoules (MJ). Items high in fat have a higher Food Energy content as can be seen with sunflower seed, beef mince and immature insects. Birds eat to satisfy their energy requirements so need to consume less of these high energy foods. This is particularly important in captivity because energy expenditure is much less than that of free-flying wild birds—so foods high in fat should be limited. From the table it can be seen that adult insects have a high protein and low fat content. This means that they have an excellent protein to energy ratio which makes them an ideal supplement for captive birds. Similarly, for commercial diets, a higher protein to energy ratio provides a more concentrated protein source.

TIPS FOR FEEDING

Supplying protein in the diet can stimulate birds to breed. This typically happens in the wild after good rainfall when abundant insects become available. In captivity it is best to gradually increase the protein content of the diet before the breeding season and then reduce it again after the post-breeding moult.

Captive birds are often fed exclusively on immature insects such as mealworms and maggots. These contain high levels of fat which can lead to an unbalanced diet. It is therefore preferable to include adult insects (eg termites, flying insects) as these provide a better protein to energy ratio. However it can be difficult to maintain a regular supply of adult insects to captive birds. Fly or moth traps can be used to good effect, and planted aviaries (for non-chewing species) will also attract insects. Alternatively it may be more convenient to use a commercial product with a high protein to energy ratio such as Wombaroo Insectivore Rearing Mix™.

The supply of protein also needs to cater for the dietary preferences of different species. Passwell Parrot Soft Food™, for example, contains crushed nuts and grain which are highly palatable to parrots. Such foods can also be mixed with readily accepted items like soaked or sprouted seed, fruits and vegetables. Other species can be enticed to take a commercial diet by chopping up a few insects and mixing them in with the preparation. The movement of livefood stimulates natural foraging behaviour and encourages intake of the diet. Many birds will pick over cooked bones (with some meat left on) and these could also be added into a regular feeding regimen.

Gang Gang Cockatoo enjoys a mouse

J MCGRATH

Nutrient Composition of Various Foods (per 100 gram dry basis)

Food Item	Protein in Grams	Fat in Grams	Food Energy in Megajoules	Protein/Energy Ratio of Grams to Megajoules
Millet	11	4	1.5	7
Sunflower Seed	21	50	2.3	9
Soy Bean	36	20	1.9	19
Beef (mince)	57	41	2.6	22
Immature Insect (eg mealworms)	55	32	2.2	25
Adult Insect (eg termites)	60	12	1.7	36
Commercial Diets				
Egg and Biscuit	15	6	1.4	11
Passwell Parrot Soft Food™	27	12	1.6	17
Passwell Finch Soft Food™	30	12	1.6	19
Wombaroo Insectivore Rearing Mix™	52	12	1.6	33