

Good Eats Macaw Style

Nutritious foods equal healthy macaws parrots, so choose wisely

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Macaw parrots need specific foods to provide energy to get through the day. Courtesy Cathy Custiclero, Florida

Pet macaws need a variety of foods to meet their daily nutrient requirements, whereas wild macaws often eat specialized items. Feed your macaw some fresh veggies along with a base pellet or balanced food diet supplemented with nuts.

As the largest of the parrot species, macaws need specific foods to fuel them through their lives. The type of food consumed by a bird is a valuable classification tool. For example, most of the psittacine birds in their wild habitats predominantly eat the nutritious parts of plants such as fruits, seeds and nectars, often from palm trees.

The proportion of the foods chosen by macaws depends on their ecological niche. For example, the red-fronted macaw, regent's parrot and scarlet macaw predominantly eat fruit and seeds (frugivorous/granivorous) diets. In contrast, the green-winged macaw is a frugivore, eating largely palm nuts, seeds and fruits.

The seeds, nuts and fruits consumed by wild macaws are usually of the high-fat-and-protein and low-carbohydrate variety. The fruits they consume are typically low in sugars like sucrose. The individual items selected by a wild macaw varies over time depending on many factors, such as availability, which is dependent on the season and the area in which the bird resides; the sex of the bird; whether or not it is producing eggs and chicks; and age.

In addition to the natural foods that they consume, macaws might also eat non-native foods introduced into a region. Red-fronted macaws eat grain crops and plant materials from introduced ornamental and fruit trees.

Functional Anatomy

Macaws use taste and sight to determine whether or not to eat a particular food. However, their tasting ability might not be their biggest strength; they have far fewer taste receptors than humans (approximately 350 compared to 9,000 in humans). Still, these taste receptors play an important function. Studies suggest that birds are sensitive to "ecologically relevant" compounds important to survival. They have taste receptors that aid the recognition of toxic food components, which causes them to avoid that food.

In addition, macaws might be able to determine whether the food they are tasting is rich in essential nutrients like protein. Food preferences might also change depending on the nutritional status of the bird.

Birds possess much greater visual acuity than humans. This is due in part to the relationship of cells in the back of the retina. Each cone cell is directly hooked up to a ganglion cell that forms the optic nerve, which results in increased pixel power helping birds to see very clearly. Birds also see into the near ultra-violet spectrum while we humans cannot. This advantage might allow birds to determine whether an item is ripe without tasting it.

Companion Macaw Diets

Providing companion birds a healthy diet requires more thought than you might expect. If you were able to obtain wild foods fresh from the jungle ideally suited for macaws, you could still get it wrong.

Wild birds eat more than companion birds to satisfy their calorie requirements, but the need for amino acids, minerals and vitamins is constant. As a result, concentrations (g/kg) of amino acids, vitamins and minerals must be higher in home or aviary diets, and food items that might be adequate for a wild bird could be inadequate for the same species of bird in a home setting.

The nutritional characteristics of food items from domestically grown plants are often very different from those of native plants. In general, seeds from domestic plants have more carbohydrate and lower protein than wild seeds. Similarly, domestic fruits and vegetables have more sugar and water but are lower in other essential nutrients compared to their wild relatives. Both research and clinical experiences show that domestic seeds must be supplemented when used as the basis for diets of psittacine birds.

Another dietary approach is to provide nutrients at levels above the estimated requirements to ensure that the bird ingests enough of the nutrients. This is often accomplished by feeding a pelleted or extruded mixture in combination with

supplements of fresh food. These foods process dietary ingredients together in a way that the bird cannot pick and choose parts of the mixture. There is no “good” or “bad” part to a pellet, and the pellet mix contains all of the nutrients. The use of pelleted diets has been shown to optimize reproduction and health.

Our knowledge continues to improve as we build upon the existing base for poultry to better understand the specific requirements for parrot species such as macaws. Research results to date indicate that psittacines require less energy, protein and calcium than poultry, throughout all stages of the life cycle. Trace nutrient and vitamin requirements recommended by the National Research Council for poultry have not been demonstrated to be either deficient or toxic in psittacine birds. We do know that diets based on unsupplemented domestic food items are nutritionally incomplete.

Diets for companion macaws require higher concentrations (g/kg) of amino acids, vitamins and minerals than are found in wild foods. The use of pellets or balanced foods that are formulated to contain nutrient levels above the estimated requirements seem to be our best option at this time. That does not mean that we understand what every bird species needs, but it is a start in helping these wonderful birds lead healthy lives as companion birds.