



# Avian Nutrition

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Many volumes could be filled with what has been written on bird nutrition. Unfortunately, these are rarely based on sound scientific research. The sad truth is that nobody knows exactly what constitutes a complete diet for many birds. This is compounded by the differences among species, both in behavior and their natural history. It is probably true to say that birds do not all have the same requirements. There are other factors which influence avian nutrition in captivity, including maintenance in a foreign climate, whether birds are being bred or kept as pets, and other environmental stresses.

Three facts are true about the nutrition of birds, particularly the parrots:

1. None of these birds would, in the wild, eat a diet of high oil seeds (sunflower, safflower, peanuts, etc.)
2. The use of oil seeds as the foundation of a bird's diet leads to nutritional deficiencies and eventually death.
3. The birds that live to old age eat a wide variety of foods, often eating from the table with their owners.

There is nothing particularly lethal about these seeds, nor is one type better or worse than another. They are simply inadequate in their nutrition to supply the birds' needs; they have a nutritional value similar to a chocolate bar. If you think about the last time you purchased cooking oil, your choices were sunflower, safflower, corn, canola (rape seed), peanut, etc. Now visualize the "deluxe parrot mix" you just purchased. They are the same types of seed! While it may be true that birds have access to and eat seed in the wild, the differences are enormous. Those seeds would be growing, and more importantly, would be available only at certain times of the year. Also, they are often the seeds of leguminous trees, palm fruits and nuts.

Supplements will not fix a bad diet and are probably not needed if you have a good diet. Vitamins can be used to fix a short-term problem, and there are times where high levels of a vitamin are beneficial. Remember, though, if you are eating nothing but chocolate bars every day, a vitamin tablet is not going to make your diet complete.

Since we can never hope to provide our birds with all the things that would be available to them in their natural habitats, the best solution is to offer a variety of healthy foods in reasonably balanced amounts. It is also important that whatever we choose be easy and convenient, because if it is too complicated or time-consuming, we might not continue to do it. After all, dishing up seeds is easy. Therefore, you must find a system that works for you.

### **PROVIDING A BALANCED DIET**

No single diet can provide total nutrition for a pet bird, and variety is the key to success. The following are examples of what can be fed from various food groups and a discussion of commercially-made bird diets.

#### **Commercial Bird Diets**

These diets are becoming more acceptable as the staple diet for many species, from canaries to macaws. There is a wide variety on the market from granules to colored pellets. Some diets claim to be complete, but this is rarely the case. Although these diets have proven to be useful in correcting nutritional problems in many birds, we do not recommend that this be the only diet that is fed. Not only is it important to provide variety to insure that all dietary requirements are met, but birds are extremely intelligent. In the wild they would spend a large part of their day searching for and obtaining their food. When we provide them with a dry diet that is exactly the same every day, they can become bored and develop such behaviors as overeating, feather picking and tearing up their surroundings (more than usual!) It is good to still provide them with “fun foods” to play with, such as corn on the cob, leafy greens, broccoli and apple, to name just a few. Let your bird buddy share your meals.

Some birds have starved to death when converted too quickly to a commercial diet. Follow the manufacturer’s instructions and change the cage papers daily to monitor the number of droppings being produced. If the number is decreased, or if there is only liquid (urine) being passed for more than 24 hours, return the bird to its former diet and consult your veterinarian.

In summary, we recommend the commercial bird diets as a replacement for seed and vitamin supplementation (vitamins are included in the pellets), but advise you to give a variety of fresh foods daily. Check with your veterinarian for suggestions as to which brand(s) to try.

The following food groups contain approximate percentages of a basic natural diet, for a generic parrot-type bird, without a significant amount of a commercial diet.

### **Fruits and Vegetables**

These foods should be given twice daily and constitute 20-25% of the bird's diet. They are an excellent source of carbohydrates and many essential vitamins and minerals. Examples of good vegetables are corn, carrots, potatoes, squash, dark leafy vegetables, broccoli, cooked sweet potato, etc. Good fruit choices are apples, melons, oranges, berries, bananas, pears, peaches, etc. Do not give seeds or pits. Of course, make sure foods are washed thoroughly. Juicier fruits often cause more voluminous soft stools with excess liquid (urine) when fed in large quantities. This is not a health problem. Fruit juices may also be offered.

### **Breads and Cereals**

This component should constitute 10-15% of the bird's diet and should be given two times a day. They are an excellent source of certain amino acids, carbohydrates and B vitamins. Good sources include whole grain breads, unsweetened breakfast cereals, granola, tortillas and pasta.

### **Protein**

High protein foods should make up about 10-20% of the bird's diet and should be given two times daily. These items spoil quickly, so they should not be left in the cage too long, especially on warm days. Examples of protein-rich foods are cooked lean meats, tofu, beans, light-colored cheese and cooked eggs. If your bird has a problem with obesity, then eggs and cheese should be omitted.

### **Seed Mixes**

No more than 20% of the bird's diet should be in the form of seeds. Try to severely limit oil seeds, such as sunflower, safflower and peanuts. It might be best to use these as hand-fed special treat foods. (For example, a medium-sized parrot like an Amazon might get only 10 to 15 of these seeds a day). Grain seeds such as millet, canary seed, corn, wheat, brown rice and oats can be left in small amounts in the cage. Seeds provide carbohydrates and some B vitamins.

## **Vitamin and Mineral Supplementation**

If you are feeding a formulated commercial diet, it is generally not necessary to use much vitamin supplementation. Use a powdered supplement and lightly “season” the soft food once a day. If you are using a commercially prepared diet as more than 50% of the bird’s diet, DO NOT add any vitamins unless recommended by your veterinarian.

Liquid vitamins added to the water are not recommended for many reasons. Many species of birds drink very little water so would get very little of the vitamins. Some birds may refuse to drink the water altogether. Liquid vitamins quickly lose their potency in water. Finally, they lead to fouling of the water and establish a bacterial breeding ground if the water is not changed frequently.

Calcium is a very important mineral, especially for the African Grey and egg-laying cockatiel. For this reason, additional calcium must be provided in the form of a cuttlebone (soft side toward the bird), white oyster shell, or mineral blocks. Other, more potent products are available through your veterinarian, should your pet require extra supplementation.

## **Water**

Fresh water must always be available and changed at least once a day. Water cups should be thoroughly cleaned each day. Depending on the water quality in your area, you may consider using bottled water for your bird.

After reading all of this, you may be thinking, “Hey, my bird can eat many of the same foods that I do!” This is true as long as what you eat is considered healthy for you. Allowing your bird to share regular meals with you is an excellent way to strengthen the human/animal bond and makes your bird a real part of the family. But in doing so, please keep the following rules in mind:

1. Nothing greasy, salty or sugary
2. No caffeine or alcohol
3. Stick with a “health food” type diet
4. Give a wide variety of foods
5. Introduce new foods gradually
6. Do not leave fresh food in the cage for more than 4 hours (especially high protein foods)
7. Remove table food from the cage in the evening
8. Wash all food and water dishes daily

## HOME-MADE PREPARED DIETS

### Corn Bread Mix

This is a method of sneaking new food into your bird's diet. Start with a standard boxed corn bread mix. When adding the egg, also crush and add the shell for calcium. Add a few tablespoons of grated or chopped vegetables, sprouts, dried fruits, etc. Your imagination is the limit! Bake the bread, cool, cut pieces into the size the bird can handle and refrigerate (it will keep 4-5 days).

### Bird Bread

Stir together 4 cups of one of the following: whole wheat flour, graham flour, or muffin mix + 2/3 cup brown sugar + 4 eggs (with crushed shells) + 1 cup ripe banana + 1/2 cup chunky peanut butter + 1/2 cup total of raisins, currants, coconut, shredded carrots, apples or zucchini + 2 tablespoons baking powder + 1 teaspoon nutmeg + 1 teaspoon cinnamon + 1 cup milk. Stir together, adding enough milk to make a thick batter, depending on whether you make a loaf or muffins. Place into greased pans (1 loaf pan, 1 – 9" cake pan) or paper-lined muffin cups. Bake at 350 until bread springs back when touched lightly and browned on top.

## MODIFIED CORN/BEAN/RICE/AVIAN PELLET DIET

The following are instructions on how to prepare a good basic diet for most hardbill birds ranging from finches to macaws. The diet was originally formulated by Dr. Raymond Kray, an avian veterinarian in Burbank, California. This will provide your bird with a high-protein, high-carbohydrate, low-fat diet that is much healthier than the low-protein, high-fat seed diets traditionally fed to these birds. This diet is particularly useful in the treatment of birds with fatty liver disease, dull or poor feathering and obesity.

In addition to this basic formula, we recommend you supplement you bird's diet with fresh fruits, vegetables, greens and protein foods (cooked egg, cooked meat, and dairy products). You should also provide a source of calcium for healthy bone maintenance, such as cuttlebone, mineral block, oyster shell, dried crushed egg shell, or powdered calcium supplement mixed with the food. A powdered vitamin supplement should also be sprinkled over the soft food.

The diet consists of four prime ingredients:

1. Rice (Brown or White) – Cook according to package directions. Brown rice is more nutritious than white, therefore it is recommended. DO NOT use Minute or converted rice, since they have the least nutritive value.
2. Beans – Canned or frozen (thawed, not cooked) kidney, pinto, lima, butter, navy, lentil, garbanzo, or any other “seed type” bean is acceptable. Raw beans may be used, but must be cooked first. Drain liquid prior to mixing with other ingredients. For smaller birds (cockatiels and smaller), chop beans into small chunks.
3. Mixed Vegetables – Use one portion of mixed vegetables with one portion of corn. Frozen vegetables which are thawed, not cooked, are preferred.

Combine the rice, beans and vegetables. Divide this mixture into daily feeding amounts and package in individual freezer bags. This way, up to a four-week supply can be made at one time.

4. Avian Pellets – Well-balanced pelleted diets make an excellent addition to this diet. The pellets should be added to the thawed mixture at the time of feeding.

The pellets should make up  $\frac{1}{2}$  to  $\frac{2}{3}$  of the daily ration, while the pre-made mixture makes up  $\frac{1}{3}$  to  $\frac{1}{2}$ .

Each day, remove a bag from the freezer and thaw. Mix an equal amount of seed in with the diet and place it into the bird's regular food dish. Determine an appropriate amount to feed, according to your bird's size. Over the next few weeks, increase or decrease the portion to an amount which will be completely eaten during the day. Divide this portion in half, changing the food twice a day. All food should be removed each evening, because this mixture may spoil if left out for more than 12 hours.

During the first few days, your bird may eat very little of the new diet. In fact, he may demand that his former seed diet be provided, but do not easily give in to these temper tantrums. Make sure, however, that he is eating enough of the new diet by monitoring the amount of droppings produced daily. If he is not eating enough to maintain himself, the size and number of droppings will be much less, and you may have to supplement with some of his former diet. If the bird is given his old food just because he prefers it to this diet, converting him to a healthy diet may be delayed.

To make the transition easier, place the mixture near a favorite sitting area or toy to encourage him to investigate and eat. Seasoning the mixture with a small amount of his favorite treats, mixed into the diet, may also help him accept it.

Changes in birds' droppings are normal with any dietary change. With this diet, droppings appear lighter in color, larger and moister. In some cases, if the change is too rapid or dramatic, diarrhea, excess fluid or vomiting may result. Contact your veterinarian for further instructions. Regular weigh-ins may give owners peace of mind that their bird is not "starving".

Be patient and persistent. Keep reminding yourself that this is for your bird's own good, even though he will try to convince you otherwise. Eventually, your bird will eat the full portion of the diet, and actually enjoy it! In the long run, it will help keep your pet bird alive and healthy for many years to come.