WING TIPS.....

Feeding the Flock

by Carolyn Swicegood Hollywood Beach, FL

Among aviculturists, the proper diet for parrots is a topic as controversial as politics! There are as many opinions on diet and nutrition as there are parrot owners, and with good reason. Nutrition is the single most important factor in determining the health, vitality and longevity of parrots.

Since no one really knows what foods are consumed by parrots "in the wild," our feeding regimens are based on a combination of what we have read, heard, and observed in our birds' daily food preferences. There are some foods that are almost universally accepted as parrot food and others that are relatively new but beneficial in our quest to provide complete parrot nutrition. I would like to explore the nutritional and sometimes medicinal value of some of these foods.

One very good reason to feed a variety of foods is that they can be used as a natural preventive to health problems.

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For the Record

Sebastian Lousada wishes to acknowledge the fine work done by Sophie Webb in her plate illustrating the distribution of the various races of Yellow-headed Parrots. The plate is found on page 15 of Lousada's article in the July/August 1998 Watchbird.



Aloe — In Florida, there is an aviary of 200 rescued parrots where slices of fresh aloe are served on a regular basis. Although these birds have come from a variety of circumstances with a large assortment of ailments, the owner attributes their current lack of health problems in large part to the healing effects of aloe. Parrots sometimes suffer digestive and intestinal disorders, and aloe is the most healing of all herbs for these problems. Add to that its beneficial effects on the immune system, and you may want to add pure aloe juice to their water every two or three days as a preventive medicine if you do not grow your own

I feed thin slices of the largest stalks from my aloe plants several times a week. When a bird appears to be feeling unwell, a slice or two of fresh aloe or one part pure aloe juice to three parts drinking water can swiftly make a positive difference in the demeanor and activity level of the bird.

Aloe vera has been determined to contain substantial amounts of over 39 essential minerals and vitamins, and all of the amino acids.

Out of over 150,000 botanicals, *Aloe vera* is the only one that contains so many nutrients essential to man's existence. *Aloe vera* is a nutritionally complete food and has been approved by the FDA as a food substance.

Apples — Apples contain generous amounts of pectin, a soluble fiber important in the diet of parrots. Additionally, the anti-bacterial, anti-viral, and anti-inflammatory properties of apples make them more than just a delicious crunchy food that parrots will happily consume. Apples are one of

the foods that many aviculturists offer daily. However, they are one of the most pesticide-contaminated fruits, so choose organically grown apples whenever possible. Nearly all apples, even those grown organically, are routinely sprayed with wax, so it is a good idea to peel apples even though it would be preferable to leave the peel intact if the apples were untreated. It is thought that Granny Smith apples contain the least pesticide residue of all conventionally-grown apples.

Beans — High in fiber, beans are beneficial to the health of parrots. Beans combined with brown rice create a complete protein because the amino acids, building blocks of protein, that are missing in beans are supplied by the amino acids in brown rice. It is thought that this type of protein is more readily assimilated by parrots than is the protein of dairy products and meat. Parrots are unable to digest the lactose in dairy products because they do not produce the lactase enzyme.

Beans should be soaked overnight and thoroughly cooked before offering to parrots. Many species of parrots prefer garbanzo beans (also known as chick peas) over other kinds of beans.



Berries — Berries are thought to be a natural component of the diet of most parrots. It is doubtful that we can offer them the same berries that would be available in their natural environments, but they seem to enjoy many of those that are available to us. Blueberries are a favorite of many birds and they contain lutein, a substance highly beneficial to their eyes. Only organically grown strawberries should be fed to parrots. Nearly all growers of strawberries use large amounts of pesticides, particularly fungicides. The FDA detected 30 dif-

ferent pesticides on strawberries. If organically-grown berries cannot be obtained, it is best to substitute other berries or fruits.

Brown Rice — Of all the grains and cereals, brown rice is the most digestible. Add to that the fact that parrots will eat it in any form - raw, cooked, or even sprouted - and it is understandable that many aviculturists make it a part of the daily diet. Combined in a cooked soft food mix with rolled or whole corn and beans, it is a food that can nourish parrots on a daily basis. Parent birds relish this food for their nestlings.

Cayenne Pepper — Parrots love the fiery taste of cayenne pepper in powder or flakes, and will try new and unfamiliar foods, such as sprouts, when you sprinkle on this healthful herb. It is an overall digestive aid containing liberal amounts of vitamins A, C, B-complex, calcium, phosphorous, and iron.

It also is anti-inflammatory and helps arthritic conditions which are not uncommon in our senior psittacines. Look for the darkest red-orange color when choosing cayenne.

Cherries - Gout in birds is associated with the kidneys' inability to remove nitrogen waste products from the bloodstream. As a result, uric acid accumulates and begins to abnormally collect in different sites within the body. There are two forms of this disease in parrots.

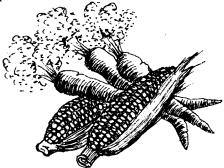
Articular gout usually affects the joints of the lower legs. It is most common in budgies where it appears as multiple cream-colored shiny swellings bulging up through the skin. It is very painful and the bird becomes progressively crippled.



Visceral gout affects the internal organs and is very difficult to diagnose. The first course of action is to correct the diet, thereby eliminating the cause. Meanwhile, try this simple but effective remedy which most parrots find enjoyable. Cherries, fresh, frozen, or even canned, may eliminate the gout problem without further treatment. Most health food stores sell small bottles of black cherry juice concentrate which can be added to the drinking water. Otherwise, if the parrot has a favorite dry food, simply soak it in the concentrate before feeding.

Although fresh cherries are ideal when they are in season, it seems that any form of cherries will help to clear up the painful problem of gout.

Cruciferous Vegetables — These vegetables make up a group that according to research provides protection against certain cancers in humans. Cruciferous vegetables contain antioxidants, (beta carotene and the compound sulforaphane). These vegetables, which are high in fiber, vitamins, and minerals, are broccoli, brussels sprouts, cabbage, cauliflower, chard, kale, mustard greens, rutabagas, and turnips. If introduced to a variety of foods early in life, most parrots will enjoy these health-giving vegetables which may offer protection against the various forms of cancer that can afflict parrots.



Carrots — Whether birds are attracted to the bright orange color, the sweet taste, the crunchy texture, or all of these characteristics, carrots are a favorite food of most larger parrots. They can be offered in a myriad of shapes from rounds to sticks, raw or steamed. Younger parrots enjoy grated carrots which they can manage more easily before they have the skill to hold food with their feet. Many parrots will drink fresh pressed carrot juice which is a power house of beta carotene, the precursor to vitamin A needed by all parrots.

Corn - Corn has a high fiber content and appreciable amounts of vitamin A as well as phosphorus, potassium, and magnesium. "Plumped" corn is the absolute favorite food of nearly every parrot that I know. It is the most sought-after food of my Eclectus Parents when they are feeding babies in the nest. I offer it as part of a soft-food mix which also contains beans, brown rice, and chopped sweet potato. It is inexpensive and is similar to the popular but more expensive pre-cooked mixes available in pet supply stores. Rolled corn is very similar to plumped corn but rolled corn is not available everywhere. I usually buy clean shelled whole corn from feed or pet stores, but shelled popcorn which requires no washing works just as well. After the first time you prepare it, I believe you will agree that it is an easy food to prepare, and it can be

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frozen in individual portions. Simply soak a bag or two of popcorn or a couple pounds of clean feed corn overnight in a large stockpot. In the morning, cook for two or three hours or until the kernels have swollen to triple their original size. You will need to add water as it is absorbed. It can be frozen for later use.



Dandelion — We spend millions on herbicides to kill the dandelions in our lawns, while we spend more money to buy the vitamins and minerals contained in them!

Dandelion leaves are full of vitamin A, B1, and C, plus blood-purifying substances. Parrots love the taste of this bitter green plant which is a wonderful tonic for them. If you have older parrots in your care, be sure to include clean unsprayed dandelion leaves in their diet. It is one of the most effective foods to prevent arthritic conditions.

Eggs — Considered by many to be the perfect food, eggs are a powerhouse of nutrients. Eggs have one of the highest biological values of all protein sources. Offering all nine essential amino acids, they are an excellent source of high quality protein and they are a natural source of calcium when offered with the shell. Although capable of creating a new living being, one large egg contains only 75 calories and an incredible amount of nutrition. Scientists frequently use eggs as a standard for measuring the protein quality of other foods. Protein quality is expressed as biological value which measures the rate of efficiency that protein is used for growth. At 93.7% eggs score higher than any other food. Eggs are an affordable protein source for parrots and can be stored in the refrigerator for up to three weeks without affecting their quality. When my

adult Eclectus Parrots are feeding babies, hard boiled eggs are a soughtafter food.

Flowers — Pansies, nasturtiums, roses, hibiscus, and marigolds are relished by many parrots. If you are lucky enough to grow them or to have access to them, be sure that they are unsprayed and that systemic poisons have not been applied to the soil in which they are grown. Many parrots will choose a flower over other favorite foods if given the choice. After all, this is surely a part of the natural diet of many parrot species. A tea made from chamomile flowers can be substituted for the drinking water of parrots when they need a calming influence. It is a wonderful natural tranquilizer which soothes the nerves and the digestive tract. As an added bonus, it contains calcium in an easily assimilated form. This is an excellent natural alternative to tranquilizers for a parrot that is upset by traveling. Night thrashing in Cockatiels can be treated with chamomile tea.

Garlic — Garlic has been shown to contain 18 anti-viral, anti-fungal, and anti-bacterial substances. It is a wonderful natural antibiotic that is safe for



parrots as long as it is used in moderation. If small animals are fed an excessive amount of garlic over a long period of time, they sometimes develop anemia. My parrots relish a garlic clove (not an entire bulb of many cloves) a couple times per week. They especially enjoy peeling it themselves. It stimulates the immune system and kills parasites. It can help to eliminate lead, zinc, and other toxins from body tissues.

Louis Pasteur first documented its broad-spectrum anti-bacterial activity in 1858, which gave it the often-quoted title of "nature's penicillin."

Today, research has proven that

garlic can slow the growth of harmful bacteria, yeasts, and fungi. (It has yet to be proven that garlic can keep vampires at bay.) Studies have shown activity similar to a more modern antibiotic, chloramphenicol, which is sometimes useful in treating parrot illness. Garlic unleashes at least one hundred sulfur-containing pounds, the main one being allicin, which blocks the ability of chemical carcinogens to transform normal cells into cancer cells, and protects cells against damage by oxidizing agents and heavy metals

Ginger — Ginger is a wonderful remedy to use for baby parrots that occasionally suffer digestive discomfort or throwing up of their formula. A mild ginger tea instead of water in the formula offers instant relief in many cases. You can make the tea by steeping two or three slices of fresh ginger root in hot water for 10 or 15 minutes.

If your parrot must travel and is prone to motion sickness, add fresh ginger to the food and drinking water several hours before the trip and place a few slices in the carrier to be nibbled during the ride. Parrots often seem to have an innate sense of what they need and will munch on the ginger to quell their queasiness during the trip.

After all, ginger has been used for two thousand years by the Chinese to treat nausea and upset stomach. It is no coincidence that the Japanese serve fresh or pickled ginger slices with sushi as insurance against the parasites sometimes found in raw fish.

Grains — Any of the following whole grains, amaranth, barley, brown rice, buckwheat (kasha), bulgur, kamut (a large wheat berry), millet, oatmeal, oat groats, quinoa, rye berries, triticale, wild rice, wheat berries, cous cous, and millet can be used as a healthful addition to the diet of parrots.

As a group, grains are low in fat and high in protein. They contain good amounts of complex carbohydrates, vitamins and minerals. They can be served "as is," soaked and sprouted, cooked in a variety of ways, and with a variety of flavors to tempt a parrot's taste buds.

Greens — One of our most nutritious foods is also one of the most natural in the diet of parrots. They eat all sorts of fresh green foods in their natural habitats. We would do well to substitute with the best of our greens. Some of these are collard, mustard, turnip, and dandelion greens, kale, (a "super food"), Swiss chard, and rapini (broccoli greens). They are best served raw but can be lightly steamed for a change of texture.

Juices - Dr. Dave McCluggage, DVM, of Colorado, juices different combinations of health-giving fruits and vegetables for his human family, as well as for his parrot family every morning. He recommends selecting a parrot's favorite fruit or vegetable for juicing. He says that apples are always a good choice for juicing, and he also recommends carrots, kale, spinach, and others. He said that although fiber is important too, juice concentrates many nutrients in a tasty liquid that parrots can easily consume. He suggested offering the remaining pulp or fibrous leftovers from the juicing process in a separate dish or baked into birdie bread.

Nuts - Nuts are a natural source of fats for parrots. Fats are the most concentrated energy source, providing more than twice as much energy per unit as either proteins or carbohydrates. They help to insulate and store food for the body and are necessary for the normal utilization of the fat-soluble vitamins (A, D, E, and K). The



more sedentary a life your parrots live, the less fats are needed, so one must feed nuts sparingly to avoid obesity if there is limited opportunity for adequate exercise.

Nuts are an excellent food for birds that live outside when extra energy is needed to maintain their body temperature on cold days. As an anti-cancer and heart protective food, nuts are a valuable part of a parrot's diet.

Papaya — Valued for its high content of papain, a powerful digestive enzyme, papaya is a juicy and colorful fruit relished by parrots. The peppery tasting seeds are enjoyed by many parrots even more than the flesh of the fruit. Papaya seeds are used in some cultures as an anti-parasitic agent. Papaya can be fed daily for the digestive aid of its beneficial enzymes, its high content of fiber, and for its ability to stimulate the appetite. Parrots in tropical climates have been observed feeding on all parts of this tropical fruit.

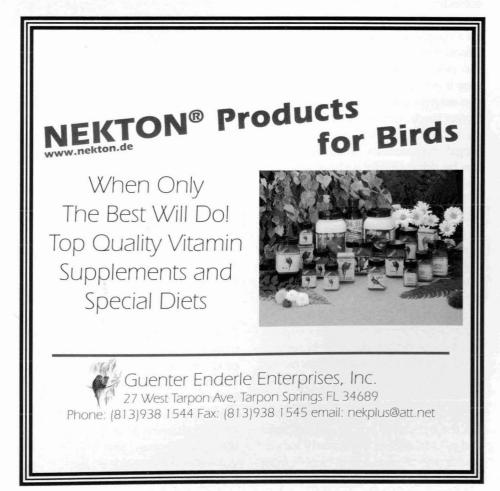
Pellets — Although many aviculturists swear by a pellet-only diet, I wonder if time will tell a different story. No matter how often it is repeated that pellets are a complete diet, the question of missing nutrients remains. Feeding any single food item seems less than ideal when we consider that parrots are thought to have the intelligence level of young human children. Can you imagine trying to feed a fouryear-old child only one brand of cereal day after day, year after year?

The larger issue is the question of

whether one combination of foods can supply all of the nutrients essential to the health and well being of a creature designed to forage in a vast area with a huge array of foods from which to choose. It does not seem reasonable to believe that we could easily duplicate the rich nutritional content of the smorgasbord prepared by Mother Nature herself.

Parrots evolved to eat whole, untreated, unprocessed foods. We do not yet know the long-term effects of processed foods and artificial additives on them. Whole foods contain many different components, and some are thought to be dependent on others for proper assimilation.

Before making a decision to feed our parrots a pellet-only diet, perhaps we should consider how we would feel about having all of our favorite foods blended into a mash, extruded and dried. I believe that most of us would sorely miss the individual tastes. aromas, textures, and even the natural colors of our favorite foods. If one should decide to make pellets the mainstay of their parrot's diet, I believe



that a few nutrient-dense fresh foods, especially sprouts, should be added.

Sprouts - The diet of parrots in the wild consists mainly of whole living foods. They eat foods in varying stages of growth, and we can easily simulate that aspect of their diet by offering sprouted grains, seeds and legumes. According to Fred Bauer, CEO of China Prairie and author, "Nutrient potential is activated into food forms that the bird can fully utilize - proteins into amino acids, fats into essential fatty acids, starches to sugars, compounds that are toxic or undesirable are converted into useful compounds, minerals are combined into forms that relate to metabolic processes, and many types of enzymes are abundant. Vitamin content multiplies many fold."

When we grow our own sprouts, we can be sure that they are not contaminated with pesticides. Getting started at sprouting can be as easy as buying a package of mung beans from your health food store, soaking a cupful overnight, spreading them in a colander, covering them with a paper towel, and rinsing several times a day for a couple days. As a result, you have a food that is as fresh and alive as you can possibly get. Once you see how easy it is to make mung bean sprouts, you may want to try lentils, alfalfa, sunflower seeds, and wheat berries. There are sprouting jars and mixes and antifungal preparations available, but it can be done simply without any special equipment.

If you fear that fungus will grow on the sprouts, you can purchase Nutribiotic Citricidal (extract of grapefruit and grapefruit seeds) at your health food store and add it to the soak water of the sprouting medium. Some aviculturists feed large flocks of breeding parrots a diet of predominantly sprouts with only a few other supplemental foods to prevent boredom. They claim to have high production rates due to this diet of mostly sprouts.

Sea Vegetables — Sea vegetables are the richest source of organic mineral salts in nature, particularly iodine. The health of parrots will benefit from the full range of minerals and trace ele-

ments such as selenium, calcium, boron, potassium, manganese, chromium, iron, and zinc. They also contain organic protein, chlorophyll, vitamins B-12, K, and E. In terms of amino acid composition, sea vegetation protein is similar to that of egg whites and legumes. Nori contains 25 percent more protein than milk, and wakame and hijiki are both exceptionally high in calcium in a form that is easily assimilated. Kelp is one of the most popular seaweed supplements for parrots. Seaweed meal is available from several bird supply companies and is a most nutritious plant supplement.



Some other sea vegetables are kombu, dulse, nori, wakame, arame, and hiziki. Stored in airtight containers, they will keep for up to two years. Always rinse sea vegetables well (with the exception of sheet nori), and then soak until they are supple. Most parrots accept sea vegetables the first time that they are offered. They may be mixed in soft foods or cooked in bird bread.

Because of the high mineral content, sea vegetables should be offered in moderation to prevent the oversupplementation of minerals.

Seeds — Many aviculturists who became concerned when pellet manufacturers warned against feeding seeds to parrots discovered that when seeds were removed from the diet of their breeder birds, production plummeted. As long as seeds do not comprise over 25 percent of the diet, they contribute valuable nutrients and satisfy the need of parrots to work for their food. Besides protein, many seeds contain vitamins A, B, D, and E, calcium, phosphorus, and the desirable unsaturated fatty acids so necessary to the health of feathers, beak and skin.

Sweet Potato - Low in calories and high in fiber and complex carbohydrates, sweet potatoes are one of nature's most perfect foods. One half cup contains 23,000 IUs of the antioxidant beta carotene, linked to the prevention of heart disease, numerous types of cancer, and cataracts, a condition to which parrots' eyes are vulnerable. They are rich in vitamins B-6, C, and potassium. Parrots of all ages love the taste, color, and fibrous texture of this versatile vegetable that can be prepared in numerous ways. This is another food that can be offered daily to boost the nutrition in our birds' diets.

Tofu — Tofu is a compressed soybean curd food. It is an excellent vegetarian source of protein, B vitamins, and it contains anti-cancer phytochemicals called isoflavones. Most parrots enjoy the texture of tofu. It has very little taste and will take on the flavor of whatever food you choose to soak it in, such as fruit juice. If soaked in hot water with melted organic nut butter, it takes on an entirely different flavor with additional calcium and other nutrients. It can be crumbled into a soak and cook dish or a mash of fruits. vegetables, and other foods. In our supermarkets and in Asian specialty markets, much of the tofu is organic, and yet inexpensive, at about two dollars per pound. Because of its soft texture and bland taste, tofu is an excellent weaning food for baby parrots.

Aviculture is enjoying reproduction rates that in the past were thought to be impossible. This is due largely to the improvement in diet. As we learn more about the nutritional requirements of parrots, we are beginning to successfully breed more species at increasingly younger ages, and we are producing more chicks that are stronger and healthier than ever before.

The quest for new information about the dietary requirements of parrots is of utmost importance to the continued success of captive breeding. Every breeder can contribute by supporting nutritional research and by sharing the invaluable knowledge gained by trial and error in the feeding of our individual flocks.