

# Supplemental Feeding Strategies



Both photos by James R. Hill, III

Patrick Kramer

**Casey Evans-Cable**  
**Purple Martin Conservation Association**  
Purple Martin Conservation Association  
Purple Martin Conservation Association

Ten years ago, supplemental feeding was a little-known practice used by a handful of martin landlords. Today, it has become an effective management tool at a growing number of martin colonies across North America. Several articles in the *Update* have addressed the subject of supplemental feeding during inclement weather, when flying insects—the martin’s natural food—are unavailable. Supplemental feeding involves training martins to accept alternative food when they would otherwise starve, and can help save entire colonies.

As can be expected, the subject of supplemental feeding is not without controversy. Those in favor of feeding suggest that humans have a special responsibility to do what we can to ensure the Purple Martin’s survival at our colony sites and beyond. Some would say feeding martins is no different than feeding other backyard birds. Those opposed to feeding martins argue that we may be strengthening the Purple Martin’s dependence on humans, and that we’ll alter natural migration schedules, causing the birds to return earlier each year. While the *PMCA* has not detected a trend linking supplemental feeding with earlier arrivals, the decision of whether

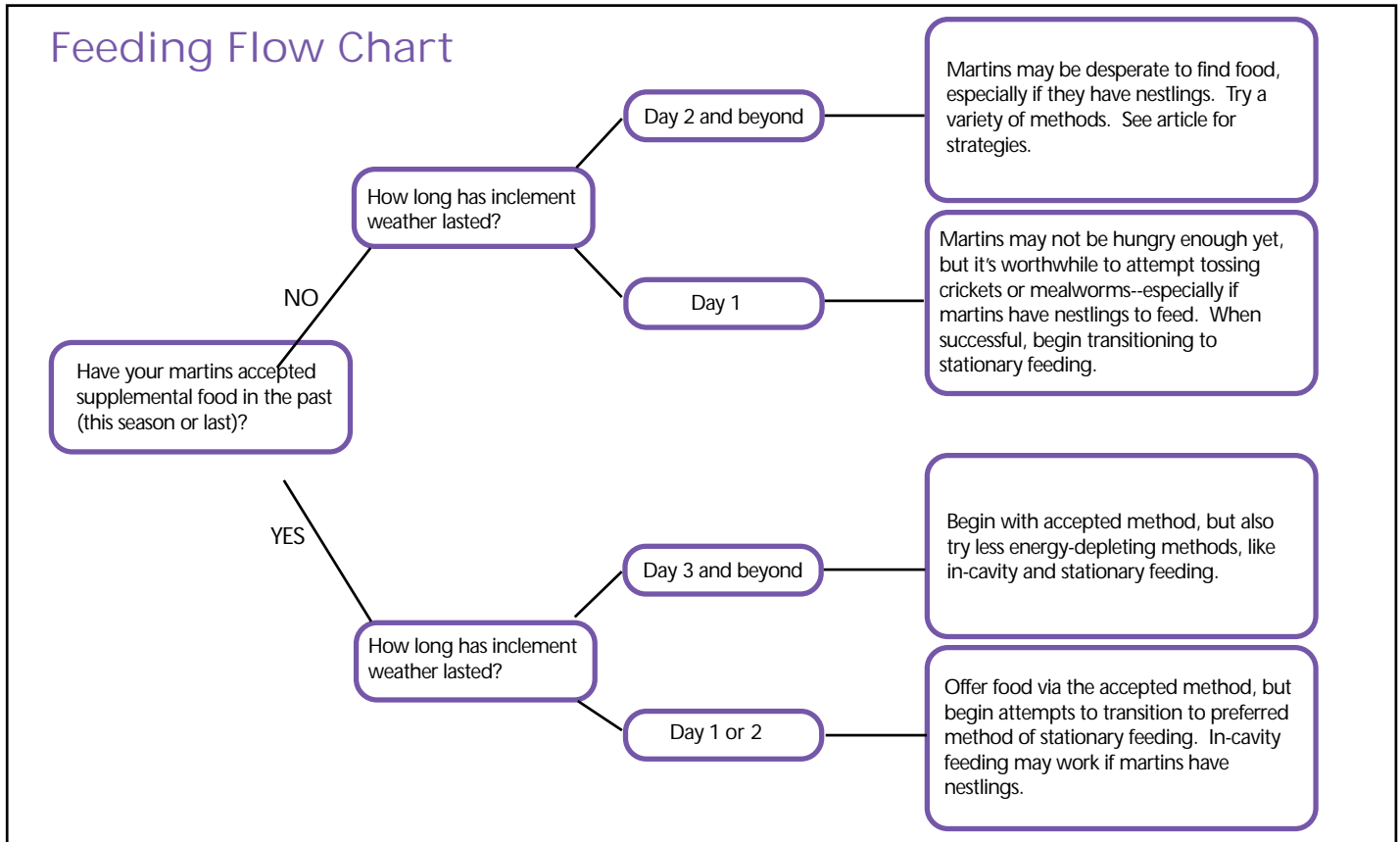
or not to intervene is the landlord’s, based on his or her own beliefs and circumstances. For those that choose to feed, some guidance may be helpful.

Training martins to accept supplemental food may require considerable time, effort, and persistence. Timing also seems to play a critical role in the success of first-time feeding efforts; initial feeding attempts often fail if martins are not hungry enough to accept what we are offering, or are too weak to eat. With such challenges in place, how can we make this process easier for ourselves and for our martins?

## When to Feed

A good place to start is knowing when martins are not feeding on flying insects. Weather conditions that limit insect availability include temperatures below 40, steady precipitation, and dense fog. Sometimes they will have trouble feeding in warmer weather if it is also windy or raining. Prolonged droughts can also be a problem. Landlords often assume that when martins are feeding in these conditions, they are finding enough food for themselves and their nestlings. But when

## Feeding Flow Chart



Far Left: Adam & Marcus Troyer toss mealworms to hungry martins at their family's colony site in NW PA. Upper Left: Martins dining on mealworms in a Bed & Breakfast feeder. Lower Left: If martins are resting on a roof to get warm, the roof makes a great platform feeder; here martins at the PMCA's site eat eggs.

insect availability is limited, energy spent foraging unsuccessfully can hasten starvation. In addition to knowing what weather conditions place a strain on martins, landlords can look at the birds themselves for cues on when to feed. Listless martins that spend the entire day at the colony site are obviously not feeding. Watch perched birds for signs of drooping wings—a sign that the martin's system is beginning to break down and digest its primary flight muscles. In extremely cold temperatures, martins will begin communal roosting, where a dozen or more birds will crowd into one compartment or gourd. Clustering together conserves body heat, allowing martins to save energy. While this is a beneficial adaptation, it is a sign that martins are in "survival mode."

### What to Feed

Three types of foods can be used in supplemental feeding:

**Crickets**— Because they closely resemble grasshoppers, a natural food item, crickets make a good choice for first-time supplemental feeding efforts. But of the three options, they are the most costly, at around \$13.00 for 1,000.

**Mealworms**— Like crickets, they must be ordered in advance, but are less expensive at around \$5 for 1,000.

**Cooked egg**— Perhaps best accepted after martins have learned to accept crickets or mealworms; eggs require preparation time, but are the least expensive of the three foods and can be obtained quickly in emergencies. For nest sanitation reasons, a diet of 100% eggs may not be best for older nestlings. A mixed diet of insect and egg may be a better alternative. [See resource list on pg. 17 for more information.]

### Feeding Methods

Physical condition of the birds, severity and duration of poor weather, site specifics and individual limitations will all play a role in what feeding technique works best for you and your birds. Three techniques, each with its own advantages and disadvantages, can work:

**Tossing**— Tossing crickets or mealworms skyward with a plastic spoon or slingshot may be the most effective method for first-time feeding attempts, as it is closest to the martin's natural feeding habits. Propelling food into the air requires time and effort from both the landlord and martins, and can be wasteful unless someone retrieves missed or dropped food. Landlords report the greatest success with tossing food after 2-3 days of non-feeding weather, when martins are hungry enough to pursue the food, but not too weak to go after it.

**Platform (or Stationary) feeding**—Offering food on a platform is ideal. This self-serve method requires minimal energy (for you and your birds) and allows martins to eat several food items at one sitting. Since most landlords report that non-traditional food items are more quickly recognized as food when tossed, many make the transition to platform feeding after their martins have eaten tossed food. Tossing food right above the feeder helps martins build the association between the feeder and the food. Once martins have learned to seek food from a platform, a feeding tray is a very efficient way to provide food for martins during poor weather.

**In-cavity feeding**—Mealworms and crickets can be placed inside a gourd or house compartment, where they can easily be seen and eaten by roosting martins. This method can be

particularly helpful during very cold temperatures or advanced stages of weakness, when conservation of energy is critical. While live crickets or mealworms often stimulate a feeding response, they tend to escape or bury themselves in nest material. Landlords can freeze crickets and thaw before serving. Another method to try is to put food in shallow dishes (try seed containers for cage birds) and fasten them to porch or cavity floors, or to interior walls. Lowering the house to stock food will flush the martins, but the energy expense is worthwhile if they return and eat. This method can also be used if a pair of martins or a single parent is having difficulty finding enough food for their nestlings.

Be flexible—try several methods until you find one that works. Don't be discouraged if you are not successful the first time.

### Strategies to Try

#### **Waiting it Out—A Window of Opportunity:**

Mary Dawson, a seasoned veteran of supplemental feeding in northern Michigan, points out that waiting until the 2-3rd day to introduce supplemental food may be timing it just right. She is familiar with landlords' stories of failed feeding attempts when martins are not hungry enough to eat. *"Many landlords make a long drive to buy crickets or mealworms, and toss 1,000 of them in 20-30 mph wind and snow for hours without success. They may spend \$10 on 100 crickets at a pet store and basically throw them all away the first day. It is wasted time and money if landlords do not wait until the birds are hungry."* Wasting time and money may be perfectly fine for some landlords, but others become discouraged and give up trying on subsequent days, when feeding may have worked. Martins weaken significantly after three days without food, so it's important—especially when tossing food—not to wait too long, or they may be too weak to fly.

**The "Day One" Strategy:** Most landlords report that supplemental feeding is most successful when martins have been without food for at least two days. However, there are some compelling reasons to attempt feeding on the first day of non-foraging conditions. John Barrow of Corpus Christi, Texas advocates this strategy. *"Feeding at the onset of poor weather gives martins a boost, and allows them to be martins—seeking companions, defending nest sites, feeding nestlings, etc. A well-fed, energized martin is safer from predators, and more likely to recruit new arrivals than those birds that went hungry. And the successful feeding operation makes subsequent feedings easier and more rapidly accepted."*

Certain circumstances make supplemental feeding on Day One worth a try. For example, martins that have hungry nestlings will be eager to keep their young fed. Nestlings are not

as hardy as their parents, and can starve in just one or two days. When scout arrivals correspond with suboptimal feeding conditions, martins are also more likely to accept nontraditional food. Migration puts a considerable strain on martins, and new arrivals may be in worse shape than we think.

On timing first-time feeding attempts, John says, *"Don't wait until the critical point when the bubble is about to burst to begin the attempt. It may or may not work. Try it as soon as you can, so that it is not a novelty to them when a critical need arises. That might be in times of weather stress, or it might be during periods of feeding of nestlings, when weather really offers no explanation as to why the martins can't find enough food for their young."*

**In-Cavity Feeding:** Jim Ray of Texas fed his first martin pair live mealworms inside gourds during weather that he described as *"two good days of foraging, followed by two days of non-foraging."*



Mary Dawson

**The success of In-Cavity feeding is demonstrated by this nestcam view of a Tree Swallow eating crickets placed inside a gourd during cold weather.**

### Landlord Experiences

#### **Pay Attention & Be Prepared:**

Dennis Belleview, of Illinois, posted on the PMCA's online Forum, *"I learned a valuable lesson this last week. My martins were starving this last week and weekend. It had been cold and rainy here (daytime temperatures in the 40-50's) near St. Louis for over a week with high winds. On Saturday morning the martins were sitting with wings drooped and not moving at all. I went to the bait*

*shop and bought ten dollars worth of crickets. I loaded up all the gourds with the crickets and raised the house and all the crickets were eaten. I believe this sustained the martins until it warmed up and they could go out and hunt. I will not make this mistake again. I will be ready the next time and not assume just because the temperatures are borderline that the martins are getting enough to eat. If not for being able to read the signs that they were in trouble, I probably would not have any martins today. My colony is new and I had been taking bets on how many would nest this year. I almost ended up with none."*

**Eggs & Platform Feeding:** Mary Wilson of Leamington, Ontario advises: *"The investment of some crickets in the freezer is peace of mind that is priceless, and getting martins switched to egg is even better! I am still feeding our backyard colony, as our weather is definitely "marginal," and I am amazed how a few birds have taught the rest. When our cold snap started, about 4-5 birds came to the feeder trays; I believe these probably were the same ones that took advantage of the crickets I put out last summer during "iffy" weather conditions. Now I believe all 18-20 birds are going there for eggs. In fact, they seem to prefer the egg to crickets or mealworms! I think that it's difficult to get martins to go to the feeder initially, especially if you're using one for the first time during bad weather. They*

## In Summary

have no association with food and a feeder platform. Make the food association for them during the nesting season, when they're feeding young and need the extra help."

**Heat Can Help:** Jeff Wilcut, in southern Iowa, reported that prevailing winds resulted in mass starvation at many colonies this spring. In one day, Jeff found 45 of 60 birds dead. He reported that another martin landlord in IA lost only 10 of 50 birds, possibly because he installed a 60-watt light bulb in a spare compartment of his martin house. While most martins die of starvation rather than the cold, providing warmth could extend a martin's life by a day or so, by allowing it to conserve its limited energy. Landlords are also reporting that handwarmers (available from sport or hunting supply stores) are a good alternative to lightbulb heat. The nontoxic, odorless warmers hold their heat for up to 24 hours.

**Don't Give Up:** Mary Dawson of Michigan shares an inspiring story of a martin defeating the odds with a little help: "The day after my first martin of the 2003 season, an ASY male, arrived at my site, winter returned with a vengeance. This martin spent a week in his SuperGourd, rarely venturing out into the 1-1/2 inches of freezing rain and five inches of snow that accumulated over the first five days. His gourd was covered with ice and hung with long icicles. The temperatures stayed around or below freezing most of the week, dropping to below 20 degrees on three nights. But that martin never gave up. All alone in a gourd that looked more like an igloo and with no supplemental heat (a crust of ice made lowering the rack impossible), he survived by eating lots of crickets. Getting the crickets to him in the wind, rain, and snow was a challenge. I taped a cup to the end of a 12-foot long pole and used this device to dump crickets onto his gourd porch. He ate in his gourd, reaching his head out to pull cricket after cricket inside.

As wind direction shifted, he moved among three different gourds. He always selected a gourd with an entry hole facing 180 degrees from the wind direction. So, his porch was always protected from the wind and the crickets stayed on reasonably well. (Incidentally, my exterior gourd porches are homemade from a plastic basket material. Because they are not a solid surface, the ice and snow did not accumulate on them.) When the temperatures finally rose into the low 40's, he left his housing for the first time in a week and went hunting. He returned strong and exuberant, but spent the hour before sunset leisurely eating crickets from the platform feeder.

I learned two lessons from this experience: First, supplemental heat is not necessary. With sufficient food, a lone bird can easily survive constant, extreme cold. Without food, it will die. Secondly, martins don't give up if you don't give up. Keep feeding them and they will survive."



Louise Chambers

**A slingshot or plastic spoon make tossing food to martins easy. Live mealworms and live or thawed crickets are good choices for first feeding attempts.**

A strong case can be made for supplemental feeding, especially at sites located in areas with a low-density martin population. In regions of low martin density, where it is difficult to start a colony, it could take many years to reestablish an active site if lost to weather-related starvation. Supplemental feeding can prevent a landlord from "going back to square one" if all his or her birds die. A colony that survives owing to supplemental feeding, when most others around it die off, can help repopulate an area. In 1972, steady rains—the effect of Hurricane Agnes—resulted in the death of nearly all Purple Martin nestlings in Pennsylvania, and most of the adults. Having experienced nesting failure, any adults that survived abandoned these sites, never to return. It has taken decades

for Pennsylvania's martin population to recover. It is possible that just a few surviving (and well-managed) sites could have helped to speed the recovery of the martin population during the years that followed.

While not all landlords support supplemental feeding, those who do claim there is no greater feeling than to have martins accept their help. Supplemental feeding is not an exact science; landlords who choose to feed should try many methods, and persist in their efforts. No one method will work for all sites or all conditions. While supplemental feeding is not intended to save

every single martin, it can be very effective at preventing the starvation of entire colonies of martins. We thank the many landlords who have shared their ideas and experiences along the way. It seems we are constantly being presented with new ways to build upon and improve supplemental feeding techniques.

**For more information, see *Purple Martin Update* articles:**

"Emergency Foul-weather Feeding or Martins: Crickets Could Save Your Colony Site!" Vol. 9(1) pgs. 27-28

"Cricket Tossing: A New Emergency Feeding Technique for Purple Martins" Vol. 9(4) pgs. 26-28

"Supplemental Feeding Reduces May 2002 Weather Deaths of Purple Martins" Vol. 11(3) pgs. 1, 24-27

"Saving a New Jersey Purple Martin Colony Using Supplemental Feeding" Vol. 12(3) pgs. 2-7

"A Basic Guide to Feeding Martins" Vol. 13(2) pgs. 22-23

**2005 Martin Market Place** (pg. 5) for *Emergency Feeding Video/DVD*

**Bed & Breakfast** on pg. 7 of this issue

**Resources:** Crickets & Mealworms

Reptile Foods <[www.reptilefood.com](http://www.reptilefood.com)>

Grubco 800-222-3563, <[www.grubco.com](http://www.grubco.com)>

Fluker Farms 800-735-8537 <[www.flukerfarms.com](http://www.flukerfarms.com)>

