

## Poultry 101 Dust Bathing Course 1

### Why do Chickens Dust Bathe?

- It is a Natural Instinct to Engage in this Behavior
  - Chickens, other birds and some mammals naturally engage in this behavior. Birds will cower down close to the ground, then vigorously wriggle their bodies and flapping their wings. This disperses loose dirt particles up into the air. The chicken vertically spreads one wing allowing the falling dirt particles to fall between their feathers to reach the skin. After they are done convulsing, they begin to preen their feathers to disburse oils down the feather shaft.
- Important Ritual
  - Chickens will dust bathe most every day if they have dirt to bathe in. This behavior has a consistent pattern and they usually spend 15 to 20 minutes rolling around in the dirt. They will develop their favorite locations, preferring a safe, sunny spot to lounge around in. After their bath, they will stand up and shake out their feathers and begin preening.
- Why Do Chickens Bathe in the Dirt?
  - Chickens aren't the only birds that dust bathe. Many bird species are known to dust bathe. Sparrows, game birds – quail, pheasants, turkeys, and birds that live in dry areas are usual suspects for dusting. Ostriches and emus dust bathe. Knowing this, you may find ways to build natural areas in your yard to encourage more birds in to dust bathe! There are even some birds that bathe in water and then in the dust!
  - Dust bathing helps absorb excess oils that can build up on feathers. Dirt is absorbent in nature and also helps the chicken naturally fend off mites and lice. We also learned from working with poultry producers that came to us for a dust bath option for their poultry houses, their chickens preferred a gritty granulation to the dust bath product. A dusty granulation did not seem to satisfy the chickens desire to scratch their itchy skin.
  - Dust baths also are quite important to help chickens moderate their body temperature during hot weather spells.
- It's a Social Activity!

Dust bathing holds another important aspect and that is the social one. Chickens lead complex social lives and social hierarchies are formed, commonly referred to as "rank" or "pecking order." Having a dust bath area sufficient in size to accommodate several chickens, encourages this social behavior. Chickens will bathe together and once situated and settled down, they can be heard cooing - a sign of happy and content chickens. Dust Bathing is a chicken's favorite past-time! It is so relaxing that many times, you will find one or more chicken's fast asleep in the dust bowl. Consider dust bathing as a massage – yoga – spa day, every day, for your flock!

## Poultry 101 Dust Bathing, Course 2

### Even Babies and Roosters Dust Bathe

- Baby chicks begin to dust bathe at just a few days of age! Some new flock owners don't know how important a dust bath is for their flocks. Many don't know that baby chicks should be given access to "mini" dust bathing areas. Baby chicks as young as three days old have been known to begin "mock" dust bathing. They will begin while in their brooder area!
- Provide a dust bath from day one. Chicks will try to use the pine shavings or bedding that's provided. So, it's never too early to begin supporting their natural instinct. Consider giving them a small tray containing sandy material. Ensure the chicks can easily climb in and out of the container. As they grow, you will need to increase the size of the container and add more dust bath material! It is so cute to watch these little chicks doing their thing!
- If your chicks are hatched in the coop with their mother, let mother nature take its course. Mother hens will teach their chicks what to do.
- What if your chicks don't take to the dust bath after several weeks of life? – consider providing some encouragement. Some general ideas are moving their food closer to the dust bath, gently putting them into the dust bath area, some people have sprinkled the dust bath material onto the chicks.

### Roosters need the freedom to dust bathe

- If you have roosters - they enjoy a dust bath too for all the same reasons as the hens. Again, the social hierarchy of the flock comes into play. Often, the roosters will wait and watch the hens dust bathe and then will take their turn. The alpha rooster will usually go first with other roosters following. Some roosters have stage fright and won't dust bathe if the hens are around.

### Some chickens are ineffective dust bathers

- What then? What if you have grown chickens that won't use the dust bath? Well, some intervention may be necessary. A couple of suggestions:
  - Catch their interest by enticing them with chicken scratch, meal worms, or frozen watermelon.
  - Snipping fresh herbs, while they're watching you, into their dust container.
  - You may have to manually apply a dusting product to their bodies, especially if there are mites or lice already present on the chicken or if your flock has recently been discovered to have parasites.
  - There are good videos online showing how to dust your chicken(s). Watch several to get a feel for the process. I recommend that you have a second person help with this manual dusting adventure.
  - Gather your materials – old clothes, dust mask, gloves, dusting powder, a second person and your chicken or chickens.

- Begin by picking up your chicken and calming it down by holding it between your arm and your body.
- Have the second person ready with the dust. The dust can be in a puffer bottle, a shaker jug or using your hands.
- Hold your chicken's legs with one hand, with the other hand supporting their back/wings and gently flip them so their tail feathers and vent is pointing skyward.
- Apply the dust around the vent area making sure to get it down to the skin, then around their legs where it meets their body. Bring their head up and begin to apply the dust under their wings, on their back and up towards their head – avoid getting dust in their eyes.
- There are some posts online where folks express concern that by tipping your chicken upside down, you might suffocate them. This is unlikely as you will not keep them in this position for long nor will you be holding them just by their legs leaving them to dangle. Treat them gently and quickly. Ultimately, your end goal is to eliminate the parasites ensuring a healthy flock.

#### What If There Isn't A Dust Bath Available for Chickens?

- Perhaps You have Heard of Sham or Phantom dust bathing?
  - One example of where this may occur is in commercial layer production operations. Layers are typically kept in cages with no access to litter. These chickens, without the presence of any dust bath material, will still engage in the four phases of dust bathing. Once they have laid down in their cage, they begin the vertical wing shaking, head rubbing, bill-raking, and scratching with one leg. While this does not apply to the majority of backyard flock owners, it does demonstrate the necessity of having an area for chickens to engage in this essential and natural behavior.
- Another Outcome of Not Having A Dust Bath is it Can Damage Their Feathers.
  - A quick primer on chickens and preening. Grooming in the world of birds/chickens is called preening. Chickens preen for two main reasons – one to keep the barbs on the feathers aligned (aids in waterproofing and insulation) and to keep their feathers well-oiled. If the oil is not distributed throughout the feathers, the feathers can become brittle, and lose their waterproofing and insulation capabilities. There is an oil or preen gland located at the base of their tail feathers. Chickens will pinch this gland with their beaks and a waxy type of oil comes out. As they pass their feathers thru their beak, the oil is applied. Chickens do preen alone but prefer to preen as a group. This again demonstrates the social aspect of the flock.
- So Why is Dust Bathing Critical to This Process?
  - Namely, it is the first step in the preening process to absorb excess oils that might already be on the feathers. The accumulation of excess oils is

evident in two ways – a smelly chicken or a chicken with matted down, greasy-looking feathers. Excess oils also act as an attractant to mites – sort of like a bear to honey.

Where to Locate a Dust Bath - Location, Location!

Some Key Things to Consider.

- 1) If your chickens do not free-range, you will want to find a spot in their run that will receive sun while remaining dry. You do not want to end up with a mud bath! The warmth of the sun lends to another type of bathing – sun-bathing! Try to minimize placing in windy, unsheltered areas.
- 2) Placement of the dust bath should be away from their food and water areas. Chickens do make quite a mess while dust bathing. You do not want all the dirt flying into their food and water.
- 3) If you just have a coop - do not place the dust bath beneath their roosts – bird droppings in their bath aren't conducive to clean and healthy chickens!
- 4) You will want to have ample space to build a large enough dust bath area to accommodate the number of birds you have. Too crowded of a space and your ladies may get feisty!
- 5) If you let your chickens' free range, they will build a dust bowl to suit. I've found my chickens preferred building their bowls beneath my favorite plants. You can guide them away from your favorite plants by building a dust bath area where you want them. No guarantee this will work – chickens will be chickens!

## **Poultry 101 Dust Bathing Course 3**

### **How You Might Build a Better Dust Bath**

- I trust you have picked up a tip or two from Course 1 and 2. We left off deciding on a location for your flock's dust bath. Let's take a look at what size your container might be and then explore container options.
- A consensus around size is that it should be able to hold at least two or three chickens at a time. Chickens can get territorial and start pecking if there is not enough room for them. You might decide on going larger initially. If you are anything like me, you cannot stop at having just a few chickens! Another factor to size is the space you have in your coop or run for the container. And who is to say you cannot have more than one dust bath area for your birds if needed?

### **Container Options**

- A dust bath container can be as rustic as sectioning off an area with lumber or you can get as fancy as your heart desires...as long as you can countersink or secure the container, drill holes for drainage and your flock can easily get in and out of it. A few ideas to get your creative juices flowing –
  - Kiddie pools – these are easily adapted for this purpose. Inexpensive, durable, easy to drill drainage holes in and come in a variety of sizes.
  - Old tires – many folks just leave them unpainted however painted ones are quite cute. I always wondered if chickens could see colors and learned that yes, they can. In fact, humans can have two, three or four cones in their eyes and can see between 20 and 39 colors. Chickens have five types and can see more colors than the typical human! Paint your tires whatever color pleases you and your chickens. Choose a non-toxic /safe to use around livestock/low VOC (volatile organic compound) paint.
  - Kiddie sand boxes – These are great options as they come with lids to keep the sand dry. Might be a great option if you can't find a location in the run that is dry and out of the rain.
  - Old Rain Barrels – I saw a great idea online where someone had taken an old round plastic rain barrel and laid it on its side. Then they cut out a door on the side and filled it with the material. This is a good option if your dust bath is in the open weather.
  - Old crates, wooden boxes, cat litter pans, galvanized tubs, and plastic totes are other ideas. There are some very fancy dust bath boxes online with ideas for cool containers.

## Materials to Consider When Building Your Dust Bath

I have seen people use everything from simple dirt or sand to a complex recipe of ingredients when deciding what to put in their dust bath. A reminder that dust bath should have a combination of particle sizes from a fine dust to larger granulations. Avoid clays that can become compacted and hard.

Some common ingredients are:

- Dirt or Sand – mother nature at her finest! Dusty particles are needed to suffocate the mites and lice while large particle sizes feel great against their skin.
- Wood Ash – some folks use ash from their fireplaces – stay away from the ash from your burn piles, briquets or anything where lighter fluid or chemicals were used.
- Peat Moss – If you have clay soil, this will help break that up and provide drainage. It keeps the bath nice and fluffy. Peat Moss is also absorbent so will help absorb moisture that gets into the bath.
- Diatomaceous Earth – Use a food-grade DE rather than pool or filter grade. DE is known as a natural control for fleas, ticks, mites, lice, and other pests. It is also an absorbent able to absorb liquid and reduce odors that might be associated with the liquid.
- Herbs – fresh or dried. They make the bath smell nice and several of these herbs have insect repellent properties. Consider Borage, Catnip, **Lavender**, **Mint**, **Thyme**, Nasturtium, **Rosemary**, Tarragon.

Once you have chosen your materials and your container is ready to go, you can mix your ingredients together. When I am making a dust bath, I usually use dirt, sand, peat moss and DE in equal proportions. I should have mentioned this earlier when choosing your container, but you will want it deep enough to hold at least six inches of material while leaving about four inches of head space from the material to the top of the container. You can get your calculator out to figure out area and volume or like many flock owners, just eyeball it. You will figure out fairly quick-like what your chickens prefer.

If you have chickens that are a might reluctant to hop into the new dust bath you have created, you might lure them in with fresh herbs. Chickens have excellent eyesight, and they will see you with the green herbs, as you are cutting them up and letting them fall onto the surface of the dust bath. All it takes is one chicken and you are golden!

I would be remiss if I did not briefly mention dust bath box maintenance. With the dust bath being used every day, chicken manure is bound to build up. Not only that, but I have had my cats think it is a first-class litter box. Add to that the wind blowing debris around and you have the potential of unwanted material in the container. If your container is small, use a cat litter scoop to clean it out. If larger in size, you can use a rake to sift, lift and screen out the debris.

Let's talk a little more now about using Diatomaceous Earth in your dust bath. There is a lot of good information and a lot of misinformation online. Let's look at DE high level.

- What is DE? Diatomaceous earth is the skeletal remains of hard-shelled organisms that over time collect at the bottom of both fresh and saltwater bodies of water. When using DE with your flock or your animals, always choose a freshwater DE - don't use a saltwater one.
- Types of DE? There are different types of DE – not all are the same. There are non-calcined (safe) and calcined DE's. Calcined DE's are used for pool and water filtration purposes, oil absorbents, etc. Never use these DE's with your animals. They contain high levels of crystalline silica. Non-calcined DE's are used as feed additives, anticaking and flow agents and contain very low, less than one percent of crystalline silica and are safe for the everyday use with humans and animals.
- What to Use? When you are looking for a DE, you want a food-grade, OMRI Listed, FDA registered, GRAS (generally recognized as safe) DE.

We are Absorbent Products Ltd., and we have several diatomaceous earth deposits – one in a pristine plateau located in beautiful British Columbia (Red Lake Diatomaceous Earth) and one in the remote wilderness area of Westfall, Oregon (White Lake Diatomaceous Earth). Our DE's are used internationally in commercial poultry and animal feed, for agricultural purposes, in lawn & garden, with companion pets and for use in the care of backyard poultry flocks. Our Fresh Coop Dust Bath is the perfect gritty, wide-spectrum particle size DE dust bath that is safe to use when selecting a DE for your flock's dust bath.

Thank you. We have had a great time putting together this Poultry 101 class on Dust Bathing and hope you have enjoyed it as well. We understand it is not inclusive of all information on the topic and encourage you to continue your ongoing learning adventure!