

Diatomaceous Earth

by
Jim Vines

Some of you may be familiar with a product called diatomaceous earth and use it in your loft maintenance program. Via the course of 'pigeon' conversations, I have come to realize that only a hand-full of people are aware of this product and its benefits to pigeon breeders. Diatomaceous earth can be used to rid your loft of insects, worms, and parasites on the loft floor, in the nesting boxes, and particularly in the feed (grain or pellets) with no diverse effect on the birds. Unlike Malathion, Sevin dust, and other insecticides, which are typically used to control insects and external parasites in our lofts, diatomaceous earth is not an insecticide and does not have a toxic effect on the pigeons or on their newborn squabs.

Diatomaceous earth is a pure and natural product with no chemicals or toxins. It is a light-colored porous rock based mineral composed of the shells of diatoms. A diatom is any of various microscopic one-celled or colonial algae of the class Bacillariophyceae, having cell walls of silica. It is in effect, a purely organic mineral with no toxic elements. It can be purchased at feed coops and is very reasonably priced. Processed - it has the weight and consistency comparable to powdered sugar.

I have used this product for at least ten years. Although I do use it in the loft (in the roosting boxes and nesting boxes) its most valuable use is in the feed. I add approximately two cups of diatomaceous earth to 50 pounds of feed (grain or pellets) and mix it thoroughly. If the feed is somewhat buggy (grain worms or weevils), it will be free of pests within 12 hours of adding diatomaceous earth. This product kills the insects or worms at the point of physical contact by lethally piercing or cutting them. The term diatom comes from the Greek word diatomos, which means, "to cut." I find that interesting since this is why it is lethal to insects, worms, and parasites.

The pigeons ingest this mineral (diatomaceous earth) along with their feed. As a result, it also acts as a remedy for internal parasites. I have had pigeon droppings tested at my veterinarian several times to check for parasites and worms. I have simply not had a case of any type of internal parasite since I started using diatomaceous earth several years ago. In fact, I also mix diatomaceous earth in the dog feed and get the same parasite-free results with my Rottweilers.

You can also sprinkle diatomaceous earth on the floor of your loft and in the nests to control mosquitoes and flies. Mosquitoes and flies can be a problem in the hot summer months, but diatomaceous earth will control them. It is not harmful to newly hatched squabs as is the case with Sevin Dust, Malathion, and other insecticides. I use cedar shavings in the nesting boxes, and I mix diatomaceous earth in with the shavings.

It is rare that a product with so many benefits is also remarkably economical. The cost is approximately \$12 for a ten-pound bag if you purchase it at a feed store or feed coop, and it goes a long way. Beware of pigeon supply distributors as they sell it for much more. At the San Bernardino National, one distributor had it for sale in one-pound bags for \$5; this is not a good deal. At the 1998 Des Moines all-breed show, a distributor of natural health care product for pigeons sold diatomaceous earth in a one-pound container for \$10 as a natural wormer. This price is definitely not a good value, however the container and label cost probably contributed to the excessive price. Diatomaceous earth is extremely light in weight. A ten-pound bag of diatomaceous earth is equal in size to a twenty-five pound bag of dog

food. A ten-pound bag of diatomaceous earth will generally last me for an entire year with an average of 100 pigeons. Add up what you spend annually on insecticides, dips, internal parasite medication, and ruined (buggy) feed. If it is over \$12 per 100 pigeons, this may be a product that will also save you money.

My purpose in writing this article is that diatomaceous earth might benefit other breeders. My experience has been that this product is both 'pigeon friendly' and 'wallet friendly', so I figured it was something worth sharing. You may want to give it a try.

Since writing an article last year about diatomaceous earth, several people have called and written letters asking questions. I have never had so much response to an article. With the arrival of the spring insects, the letters with questions have started a new wave and it is difficult to find the time to answer all of them. For this reason, I am writing 'Diatomaceous Earth Part 11' in hopes that I will satisfy most questions about this product.

I will use the question and answer format addressing the things that people have asked about most. I have done more research over the last few months to become more qualified to answer some of your questions. The more I learn about Diatomaceous Earth, the more convinced I am of its value. For the sake of space, I will refer to Diatomaceous Earth as DE throughout this article.

Question: Are all varieties of DE safe and effective for pigeons when mixing it in the feed?

Answer: Purchase and use only PURE, agricultural grade or food grade Diatomaceous Earth. Once DE is mined, it can be milled or processed into a myriad of types for a variety of uses. Filtering and filler are the two main uses but DE also ends up in cosmetics, drugs, chemical insecticides, etc. Because the milling produces different sized and shaped particles, it is important not to use the filtering type for agricultural purposes. Filter grade has long crystalline structures, which may puncture tissue and injure birds and animals. DE used in agriculture must be milled until it is almost completely amorphous (like powdered sugar). This means it has no crystalline form left to cause damage to larger organisms.

Questions: Are there any additional benefits in using DE in the loft besides maintaining insect-free feed and parasite-free pigeons?

Answer: There are five distinct uses of DE in the pigeon loft. 1) Insect-free grain storage, 2) eliminating intestinal worms and parasites, 3) mineralization, 4) deodorizing/absorption, and 5) insecticide dusting.

Question: If DE is so effective on parasites and pests, why do the large chemical companies not market this product for farm use and grain storage?

Answer: This can be explained by the fact that Dow, Monsanto, Union Carbide, and other manufacturing companies don't really want their profitable poisons replaced by an inexpensive, plentiful, non-toxic, naturally occurring, low margin, and more effective material found in 27 countries of the world. It would simply not be good business.

Question: In your article, you refer to DE as a mineral. What kind of mineral is it, and is it beneficial to the birds?

Answer: According to National Geographic, finely ground DE may also provide a broad-spectrum of naturally occurring minerals including calcium, magnesium, iron, phosphate, sodium, titanium, potassium, and others. With the lack of mineralization in modern grain and pellet mixes, it isn't hard to conceive of mineral benefits from a finely ground natural mineral product.

Question: How does a non-toxic powder kill parasites and insects?

Answer: Death to insects and parasites comes within 12 hours after insects contact DE. Their skins are pierced by sharp edges of the diatom's siliceous shells, causing life's juices to flow out. DE removes the waxy protective finish of an insect's shell, causing acute dehydration and death.

Question: Does DE work only in dry form, or will it work wet?

Answer: It works both ways, however, it should only be used in dry form when treating grains and pellets. DE can be used wet for spraying loft walls and grounds at the rate of 1/2 cup of DE to a gallon of water. Incidentally, this liquid mix is also great for lawns, gardens, kennels, patios, etc.

Question: How much DE is too much for pigeons when mixing in the feed?

Answer: For stored grains, the recommended rate is seven pounds of DE per ton of grain. DE is effective at one ounce per bushel. To repeat from my previous article, I use approximately two cups per 50# of feed and have done so successfully for ten years. The Department of Agriculture and FDA allow DE to be sold as a food additive for up to 2% of an animal's diet. The rate of 2% is far greater than the ratio that I personally have used, however it is safe to do according to the DOA and the FDA.

Question: How much more effective is DE compared to products containing Malathion?

Answer: DE offers an easy answer to chemical contamination of stored grains. The Agricultural Research Service of the USDA conducted an experiment in 1985. As an examination of the effectiveness of DE, it was compared with Malathion-treated and untreated grain on 1,000 bushels of wheat. After twelve months storage, the DE-treated grain had 15 insects compared to 4,884 for Malathion-treated and 16,994 for untreated.

Question: I do not know where to buy Diatomaceous Earth where I live. Will you ship some to me?

Answer: I am not a distributor of this or any other product. Many have written and asked me to ship this product to them. I have tried to accommodate a few but I really don't have the time to do this. Most any Farmer's Co-op or feed store will stock DE or can order it for you.

I hope that this information is beneficial to some of you. Any time that I find an alternative to chemicals and drugs, I personally welcome it. Diatomaceous Earth has multiple benefits and is incredibly economical.

The End!