FALL SEASON HERBAL WORMER & ALTERATIVE

Silkie and Java chickens enjoy the wormer/alterative remedy on a crisp fall day. They will eat the pumpkins right down to the rind, along with the carrots and herbs.

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Parasites and worms are everywhere in our environment, and contact is virtually unavoidable with our poultry. Although there are many chemical wormers on the market (some commercial wormers that are used were tested for other animals and are "off label" use like Ivermectin), application is usually worm specific, usage needs to be rotated, and now concerns are being raised with parasite resistance developing due to overuse and/or improper use. We have devised an herbal remedy where these kinds of worming concerns will not apply. Although this remedy can be used specifically for parasite overloads (meaning your poultry is showing symptoms), it can also be used as an alterative. The foundational action of an alterative is one that promotes a healthy state of functioning and restoration of balance. In the fall season, this alterative used as a preventative measure is recommended going into the winter months because of the toil it can take on your poultry's health. We believe the remedy we offer here will bolster the immune system, is highly nutritive, and can reduce the parasitic load to help the body come back into balance in the digestive system. Chances are, your poultry will have also gone through a molt at this time in the season, and it takes a lot of energy to grow the feathers back. The remedy we offer here will support that as well.

Utilizing Herbs

Before we describe the remedy, we would like to give you a simple understanding of how herbalism is practiced in regards to utilizing herbs. You will then have a better understanding of how each component of the remedy works, and how they work together. As herbalists we learn a single herb can provide many different actions, which are categorized into primary and secondary actions. An herb's primal energetics encompasses polar energies – hot/cold; dry/damp; and wind/damp, with the associated tissue states—excitation/depression; atrophy/stagnation; and tension/relaxation. A secondary action owes its effect to the primary action of the herb. For example, an astringent is a secondary action, which tightens and tones tissue, and therefore its primary action is to dry. There are too many secondary actions to list here, but some you might recognize are – analgesic, anti-inflammatory, antimicrobial, antiseptic and expectorant. A secondary action useful to know when thinking about "worming" is anthelmintic. Which means it is an herb that kills worms and parasites. If you are going to use herbal medicine wisely, you will be served well to learn the primary and secondary actions of each herb. Your understanding will not rely on memorizing what herbs will be useful for what. You will then not only understand how herbs actually work, but you also can be discerning when others present to you herbal remedies. For example, we see many poultry websites that report using (incorrectly) cayenne pepper as a "natural" wormer. Yet cayenne peppers primary actions are hot and diffusive, and its secondary action is diaphoretic and rubefacient. That means this herb increases peripheral circulation by generally stimulating circulation out from the core to the periphery. Cayenne is then used in issues concerning blood circulation that can also primarily benefit the heart. In that regard, it might help facilitate moving other herbs along in the blood to facilitate their actions, or even help the blood simply provide its nutrient giving and waste removing actions, but we see no direct connection to providing immune or digestive support in removing worms or parasites from poultry. So then your correct response for that remedy can be "Huh?" as was ours when we read of it. And thinking on it further, since cayenne is a stimulating and warming herb, it could possibly be a welcome supplement in winter months, but not something you would want to overuse in hot weather.

The foundation of the remedy is to bolster the immune system, create an inhospitable internal living environment for the parasites or worms, and then finally add support to the body to expel the parasites. We would want to address the primary actions of hot (excitation) as worms cause irritation and inflammation to the digestive system, damp (stagnation) associated with high parasite levels, and wind (tension) due to sudden conditions like diarrhea. We should always try to be "Earth wise" and use herbs and plants as they are in season to be in tune with Mother Earth to take advantage of the synergetic offering. For the fall season we have come up with the remedy of pumpkin, garlic, dandelion and carrots. The beauty of this natural remedy goes beyond the concerns of chemical wormers, and has many other additional benefits. One benefit is cost. For example, dandelion greens are available in the produce isle

of the supermarket these days, but why pay the steep price for something when most lawns offer them for free? Another benefit would be the opportunity to worm a flock without the use of harsh chemicals. If the ingredients are homegrown, the treatment can even be organic! This means no wasted eggs waiting for the chemicals to leave the bird's body and no tainted meat, should you choose to harvest the bird soon after.

Pumpkins and carrots can be grown at minimal cost the first season and if seeds are saved from an heirloom variety; they can be grown for free forever after. Garlic does have a start up cost, but again, with proper management, it's just a one-time expenditure.

Remedies

Pumpkin: Pumpkin meat, and especially the seeds, are a remedy that was famous in the 19th century for treating tapeworms in people (interesting to note that Ivermectin is not effective against tapeworm). Pumpkin owes its antiparasitic properties to the protein cucurbitan in the seed. It anesthetizes the worm, but the results could be variable due to the uncertain concentration of this constituent in the seed. The pumpkin meat is cooling and moistening (95% water), and holds medicinal value, although less active than the seed. Along with cucurbitan, the seeds are sweet, moist and nutritive. Besides fat and protein, the seeds are high in minerals and vitamins, especially zinc, and can be very supportive to the immune system.

When choosing a pumpkin variety, look for one that touts a large amount of seeds. Any type will do, but it's the seeds that hold much of the magic for the purpose of worming. When growing pumpkins, there are a few important points to keep in mind: temperature, space and pollination. Pumpkins adore warm soil and germinate best above 70°. If your growing season is short, it might be a good idea to start your seedlings indoors a few weeks before your area's last frost date and transplant outdoors after *all* danger of frost is past. If direct sowing, plant seeds one to two inches deep into fertile soil at 10 feet apart or more depending on variety. Don't fuss too much about the position of the seed in the soil...they know which way is up. The seed packets will give specific instructions for the variety you choose. They need full sunlight, meaning at least six hours a day.

A fertilized female pumpkin blossom will grow into a very beneficial pumpkin!

In general, pumpkins are planted on a mound of dirt with up to five seeds per hill and again, this will vary depending on variety. Water gently at first, taking care to not wash the soil away from the seed, and they will sprout in 7-14 days. Dig a moat around each hill to retain water. Also, try to water at ground level as opposed to spraying from above. The sandier your soil, the more water the pumpkins need.

The third thing to pay attention to is pollination. When the plants begin to flower, pay attention to the bees and other pollinators. Pumpkin plants have male and female flowers. The female flowers having a bump behind the blossom. This is a baby pumpkin. They need the pollen from the male flowers for it to develop. If it seems you don't have many bees, it may be helpful to use a small paintbrush to transfer pollen, insuring a good crop.

Days to ripening may vary by as much as a month, so be sure to check the seed packet. A pumpkin is ready to be harvested when it sounds hollow when thumped. The skin will be hard or tough. Push on it with a fingernail and if it leaves a dent but does not puncture, this is a good sign. Another good indicator will be its stem, which will begin to get hard. When cutting the pumpkin from the vine, leaving more stem will help the pumpkin last longer. Be sure to save some seeds for next year.

Garlic: Garlic is one of the most ancient medicines in the world. Many of us probably know of its tremendous amount of medicinal properties and components, including sulfur compounds (sulfonamide is a popular drug used in chemical applications for coccidiosis), minerals, enzymes, vitamins and flavanoids. Although generally a warming herb, in this application is it used to address digestive stagnation and tension for diarrhea (parasite overload) and also support the immune system.

Garlic can be planted either in the fall or the spring. There are many varieties of garlic. It is possible to grow garlic using heads purchased from the produce aisle in a supermarket, but a better idea is to purchase it from a feed store, home and garden center, or some similar place. Usually if a store sells seed potatoes, garlic will be nearby. Garlic is very easy to grow and likes well-drained soil. Each head of garlic will break apart into several cloves. Each clove should be planted about four inches apart and about an inch deep for spring planting, pointy end up and the slightly flat end down. If garlic is planted in the fall, it should be planted deeper to prevent heaving, a few inches deep and a layer of straw before the snow comes is helpful. Just about all the fussing it needs, once planted, is to be watered and weeded.

Garlic planted in spring will not get as big as garlic planted in fall, but will mature around the same time, usually in August with the fall planted garlic sometimes in the lead. When the tops go from green and upright to brown/tan and falling over, the garlic is ready to dig. Gently lift the heads from the soil with a trowel or garden fork to avoid damaging it. Gently rinse or brush the dirt off and allow drying time in the shade.

Dandelion: Although the dandelion's lifecycle is important for many uses spring through fall, the increased bitterness of the leaves in the fall serves this application well. Dandelion action addresses stagnation and as a very effective diuretic works hand in hand with the

These garlic bulbs are curing on rack on a shaded porch, after a late summer harvest. Air circulation is important to this process for two weeks after harvesting.

pumpkin to help remove the anesthetized worms from the system. Dandelion bitterness will stimulate the kidneys and enhance the flow of bile and help replace potassium lost through excessive fluid loss like diarrhea. Dandelion is also highly nutritive and can also support the immune system. Dandelion greens can be collected from an untreated lawn or it may be more efficient to simply sow and grow them in a designated area for easy harvest. Any leftovers are a tasty and nutritious addition to salad. Once the plant flowers, the yellow blossom turns into the familiar white fluffy top. Each little piece of fluff is a seed, which is how they spread so successfully with a mere breeze. Getting a nice patch of "dandies" to grow is a pretty easy task. Just scatter the seeds on prepared soil, cover with a fine layer of soil or sand to keep them from blowing away and keep watered. They can be sown any time after the last frost date and while the younger leaves are tastiest in a salad, the more mature, larger leaves will go further for the purpose of parasite expulsion. When the plants flower, wait for some to go to seed and save some for next year. Remove the rest of the flowers to prevent another crop where you may not want them.

Carrot: Carrots have secondary anthelmintic actions (containing some sulfur), a mild diuretic (to help expel worms), and nutritive with a host of vitamins (A, C, B6), minerals, potassium, thiamine, folic acid and magnesium to again support the immune system. It is also good for intestinal inflammation and diarrhea. We liked the pairing of the orange of the pumpkin and carrots because it seemed to solidify it as a natural color to the fall season. Carrots can be purchased in sacks as deer feed, but again, it's often unknown how they were grown or if they were treated with chemicals. Carrots aren't too difficult to grow, are high in fiber and they come in three sizes: short, medium, and long. If your soil is heavy or dense, a short variety might be best. Carrots prefer light, well-worked soil without stones or twigs, a pH level from 6-6.8, and full sunshine. They are a cool weather crop and should be sown a couple of weeks before the last frost date. The seeds are quite tiny and can take up to two weeks to sprout. Sow them carefully, a half inch or so apart to get the most out of your packet. If this is too tedious, sow

more thickly and thin them out after they sprout. The seeds can be mixed with sand or radish seed to help spread them out. The radishes will sprout first, making the row easy to see. Sow a mere quarter of an inch deep and keep soil moist at all times. Pull the radishes as they are ready. This helps keep the soil loose for the carrots and makes more room for them to grow. Carrots will be ready to harvest in two to three months depending on variety. Allow a few to flower and go to seed... for next year.

We would let the availability of the pumpkin crop dictate when to start, as all the other ingredients should have been harvested at that point. Make sure all the ingredients are available, for two weeks, as this will not only address the adult parasite population that exists internally, but also the eggs that were laid that will mature within that time frame. Offering all ingredients free choice, your poultry will pick and choose what they need to eat. It is easy to just pile the crushed garlic, dandelion leaf and grated carrots right on top of a pumpkin cut in half. It may take a few days for your flock to become interested in eating this if these ingredients are new to them, and sprinkling millet or other foods or treats they like to eat on top can help to get them started. It helps when birds are still quite young; say 10 days or so, to introduce them to dandelion greens and chopped raw garlic. Chickens tend to be rather open minded when it comes to new things, but an early introduction will prevent the finicky guineafowl from turning up his or her beak as an adult. Another benefit to this would be that garlic has powerful medicinal properties and it's best if they are already accustomed to it should you need to treat an infection or just give the immune system a quick and effective boost.

You now have all you need to get started. Your poultry will come to love this remedy and dig right in every fall! And you will love the health benefits it provides your poultry in the coming winter months.

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