

A GUIDE

TO ORGANIC LIVESTOCK FARMING:

POULTRY DISEASE PREVENTION

BY

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DEDICATION

Thank you God for the knowledge and ability

To my Mentor Dr Shedrach Pewan

To my loving husband

Disclaimer: All methods were not completely Practiced by us due to the financial implications, however methods were compiled from our practice and other farmers experience.

WARNING: Organic Livestock Farming is Favorable where preventive Farm Management is Practiced. In the event of a Secondary Outbreak, the attention of a veterinary doctor must be called.

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Chapter one:

ORGANIC LIVESTOCK FARMING

Organic Livestock Farming refers to the treatment and growth promotion of livestock with Natural products.

But what products do we refer to as natural products? Or organic products?

The Distinction between natural and organic products are illustrated thus:

The raw materials for natural products are derived from nature this means the molecular structure has not been altered in the laboratory, it is being used in its raw state. Example is the crushing of garlic clove or ginger roots to be administered to livestock directly. It is been said to be in its raw state, therefore it is a natural product. When a product is extracted from a raw material probably to isolate harmful compound that are dangerous to livestock or to extract a compound that is beneficial to livestock, and it is been processed natural, it is called an Organic product.. For example the garlic clove is known as an antibiotic, antioxidant and fat burner. it contains many active active ingredients, and it is high in sulphur.

Recently, garlic was discovered to have properties beneficial to livestock health management. the primary beneficial agent allicin was extracted and is sold as garlic extract. This is naturally produced.

In Conclusion, Naturally produced products are called organic products e.g garlic extract and raw products used in its raw state are called Natural products. E.g turmeric, garlic clove, ginger roots.

Benefits of Natural Products

- Preventing or curing diseases without leaving harmful residue in the meat.
- The abuse of antibiotics and failure to observe withdrawal time causes antibiotics resistance in human being.
- Improving animal health without using environmental harmful substances.
- Natural products reduces the ammonia smell in the manure.
- Improves poultry meat quality, poultry size and reduces feed conversion ratio.

- Natural products deal with health issues by preventing infections and diseases instead of waiting to have an outbreak before using a fast working medication.

Chapter Two

NATURAL AND ORGANIC PRODUCTS USED IN POULTRY .

Prebiotics: These are substances that enhance the development of the intestinal flora, without being absorbed by the animal. prebiotics also stimulates the immune system and prevent harmful bacteria from sticking to the intestinal walls. Examples of prebiotics are MOS (mannan oligosaccharides)

Probiotics: these are feed supplements that consist of live micro-organisms, they are used to support or recover the natural balance in the intestinal tract. Probiotics is very helpful after an intestinal infection.

Cinnamon: this a good antioxidant. Can be used alone or mixed with other herbs. cinnamon has antibiotics properties can serve as a good antibiotics for disease control.

PEPPER (cayenne)

Good for killing parasites, and parasites that causes indigestion.

Good for coccidiosis, kills worms.

Sprinkle $\frac{1}{2}$ teaspoon in instant feed.

GARLIC

Boost immunity and fights respiratory infections.

Kills external parasites.

Boost appetite

Reduce conversion ratio

10g/1kg daily in feed

GARLIC EXTRACT:

This is allicin, a component extracted from garlic. It is known to prevent most bacterial and fungi infection in poultry . regular addition of garlic extract into drinking water or feed effectively

controls intestinal worms, coccidiosis, boost appetite, increase weight and so much more.

NEEM EXTRACT:

Also known as DOGOYARO. This is very efficient in pest control, viral infections, fungal pathogens, intestinal worms and other protozoan.

LIME: Lime prevents worm infestation. Occasionally mix lime juice with drinking water. 1 tablespoon / 10 Litres of water It is very effective.

GINGER

Boost appetite, helps digestive process, a good immune booster.

Ginger has anti-inflammatory, anti-viral properties

10g/1kg feed.

PUMPKIN SEEDS : The seeds of ugu leave. The pumpkin seeds are very good in controlling tapeworm in laying birds. It can be soaked in water or applied in drinking water.

ALOE VERA

Helps cannibalism.

Apply in wound to drive off the cannibal birds

Improves Appetite when mixed with probiotics

SOUR MILK

Good probiotics, prevents diarrhea

Add to feed.

PAW-PAW LEAF & SEED

A good de-wormer, prevents coccidiosis, Newcastle and salmonellosis

Dry seed for two weeks, grind then mix 10g/10L

Pawpaw leaf, bitterleaf

Grind mix in water@10g/1L

Chapter Three

TREATMENT OF POULTRY DISEASE

Digestive system:

Natural Products to boost intestinal health.

Prebiotics: mananoligosachiaride (MOS); provides an environment favorable to good bacteria.

Probiotics: these are favorable good micro-organism that occupy the intestinal wall leaving no space for pathogenoic micro-organism. (GREENFARMZ) probiotics is a combination of both prebiotics and probiotics. @ 1 g to 1 kg feed).

Garlic extract; The most important compound in garlic called alicin is extracted from other properties of garlic, especially the weight loss compounds of garlic. Green farm garlic extract (10 g/kg feed).

Cinnamon: Cinnamon is a great prebiotic, it's used to improve intestinal health. Cinnamon powder (10 g/1 kg feed).

Apple cider vinegar: is also a good natural product that improves intestinal health. Get the ACV with the mother content. 1 tablespoon to 10 l once daily.

Natural products like prebiotics and probiotics can improve intestinal health and also increase appetite.

Besides natural products emphasis should be placed on feed quality, quality of drinking water, mode of feeding.

I advise feed should be *ad libitum* (feed available all the time).

Also pay attention to sudden occurrences such as feather pecking. This is the first sign of intestinal problem.

PARASITES

Ecto-Parasites: these are external parasites that spend all their adult life on the host E.g.

Body Lice, scaly leg mites, northern fowl mites etc. also there are temporary ecto-parasites they feed on the host but do not live on

them. E.g. fowl ticks(blue bugs) bed bugs, chicken mites(red or roost).

HOW TO CONTROL

- 1) Stem and extract of tobacco. This will completely drive them by day 2, application on skin.
- 2) Paw-paw leaves
Burn to ashes and spread in pen
- 3) Garlic extract
Mix in water
10g/10l.
- 4) Cinnamon oil/powder mix in water
- 5) Onions (spring onions)slice serve to birds. This is quite expensive.

Endo-Parasites: these are Internal Parasites,a good example is coccidiosis:

- i. Aloe Vera : cut open ,extract juice and mix in drinking water.
- ii. Garlic Extract: Not your regular garlic cloves. Garlic extract is allicin extracted from garlic. Addition of garlic extract into water effectively controls intestinal worms and coccidiosis.

- iii. Neemextract (dogoyaro): this contains azadirachtin which has a significant effect on pests, virus, mites, fungal, pathogens, intestinal worms, bacteria, protozoans e.t.c.
- iv. Pawpaw (Carica papaya) latex and seed. Latex to infected birds mix with drinking water.
- v. **Paw-Paw seed extracts :**

Dry seed, grind to powder and mix with drinking water. This is very effective.
- vi. Lime:Prevents worm infestation mix juice with drinking water
N:B excess lime causes adverse weight loss in birds.

Increase Appetite: herbs that increase appetite because of their attractive smell are:

Cinnamon, thyme, garlic, oregano, and ginger.

1) Mix ginger and garlic extract.

7 of ginger powder + 7 g of garlic extract. Mix in 1 kg of feed.

In water

Add 7 g of garlic powder in 1 l boiling water .in a separate bowls , allow to cool overnight.

Do same for garlic extract. Add 25 ml of each solution L of water. give 12 hours daily.

Always prepare solution fresh

For raw products: 1 big ginger root =10 garlic cloves. Crush mix and sieve before mixing with water.

2) Garlic Extract.

10 g of garlic extract to 10 liters of water.

1 g of garlic extract to 1 kg feed.

NB:we prefer the garlic extract. As ordinary garlic clove contains some compound that can cause weight loss. So the garlic extract is advisable.

WATERY DROPPINGS

Herbs such as oak bark, cinnamon, can reduce diarrhea.

Probiotics also provides a balance intestinal flora.

Diarrhea: Aloe-Vera juice to drinking water till it stops. Oak bark and cinnamon mix with in drinking water at 5 ml/1 l till diarrhea stops.

Probiotics: 1 g/kg from old prevents diarrhea.

INTESTINAL INFECTION

Once you notice feather picking in your flock it is a sign of intestinal infection.

- 1) Allicin (garlic extract) 10g/10L of water.
- 2) Garlic + cinnamon in feed 14g/1kg feed.
- 3) Oregano oil(essential oil)1.5L / 1000L
Dried Oregano 4kg/1 ton of feed.
- 4) Probiotics 1g / 1kg from day old.

Coccidiosis

Once you begin to notice brownish, faces bloody faces, they are signs of coccidiosis (refer to the next chapter for poultry signs and diseases).

- 1) Garlic extract in feed 4 g/1 kg.
- 2) Crush 10 cloves of garlic in 10 l water.
- 3) Fruit of Lagenaria Vullgaris(calabash fruit,bush water melon).
In water slice into water, soak for 3 hours, filter and serve as drinking water.

Garlic + cinnamon feed (1kg/ton)

7g Pepper + 7g turmeric in water (5L)

Intestinal Roundworm and Tapeworm (DeWorm)

- Alicin (garlic extract) in drinking water or feed

- Papaya latex (pawpawmilk) milky substance from pawpaw leaf, branches etc.

Dosage: Mix heavily in drinking water for 3 days

Black head

Caused by poultry roundworm

- Fruit of solanum (green bitter garden egg)
Break and deep in drinking water every day for three days.
- Garlic extract (allicin) 50g/500L water
- Garlic and cinnamon 2kg/ton of feed

RESPIRATORY SYSTEM

Birds do not have the diaphragm as other animals and mammals do, so they are susceptible to respiratory infection spreading rapidly through the lungs and air sacs, peritoneum and rest organs. In dealing with respiratory infections quick and rapid response is necessary.

Sniffing coughing and breathing difficulties.

Garlic extract/garlic clove

Garlic has a strong antibacterial effect on poultry diseases e.g. Salmonella and c-coli

Uses and dosage:

Infected birds should be given daily in water till it clears out. Grind clover in water drinking.

Organo oil:

Extract 50g in 10L of water.

Mix in drinking water daily till it clears out.

20ml to 10L

Infectious Diseases (Viruses, Bacteria, Fungi)

Garlic extract (Alicin) – respiratory infections 1.5L/100L of water

Breathing difficulties: turmeric and pepper (grounded) feed 1g each to 1kg

Anti-Inflammatory and Pain Reduction:

Black seed/black cumin 150g in feed 1kg

Respiratory infection: oregano oil/leaf

200g – 4kg / ton of feed

250 – 2L / 1000L of water

NEWCASTLE DISEASE:

*) Aloe Vera Leaf 1 big leaf

Water 1 litre

Cayenne pepper 8 seeds

Make fresh and give as drinking water for three days.

*) Bark of locust bean (iru) tree.(Parkia Filicoide)

Break in drinking water . for 3-5 days.

CHOLERA :

Fruit of Boabab (ose in yourba, igiose in igbo, kukaa or kulambali in hausa)

Break and deep in drinking water 1-3 days daily

FEVER /HEAT

Garlic Extract or chopped garlic glove and chilli pepper (ata wewe in yoruba, tatashi(igbo), barkonu (hausa))

Blend with little water, add 50ml of mixture to 10 litters of drinking water.

FOWL POX ;

Mix garlic extract

1 tablespoon in 4L of water

Make a light mixture and sprinkle on birds

SKIN & FEATHERS

Feather growth: plantain leaves

Heal wound: chamomile or garlic in water, also mix garlic into paste and apply on the wound to dry off.

Garlic Extract (Allicin): drives red mite, mix in drinking water

Skin Infection: ginger, turmeric and pepper 200g – 300g / ton

Feather Pecking and Cannibalism: prebiotics, garlic extract in feed 1g/ 1kg feed

Snake repellant: sliced garlic sprayed around the pen.

FINAL THOUGHTS

- Be vigilant - continuous health monitoring of flock is essential.
- Rely on your Senses- use your sight, smell, touch and hearing to observe symptoms of your flock.
- Preventive Management- in organic farming it is important to adopt the preventive measure.always seek to prevent than to cure, the risk of loss and mortality might be too much to bear.
- When in Doubt Always Seek Expert Advice.
- Bio-security- always make sure to implement a good bio-security in your farm.
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