5-1955

Poultry sanitation

L. J. Gaffney

Follow this and additional works at: https://researchlibrary.agric.wa.gov.au/journal_agriculture3

Recommended Citation
Available at: https://researchlibrary.agric.wa.gov.au/journal_agriculture3/vol4/iss3/13

This article is brought to you for free and open access by Research Library. It has been accepted for inclusion in Journal of the Department of Agriculture, Western Australia, Series 3 by an authorized administrator of Research Library. For more information, please contact jennifer.heathcote@agric.wa.gov.au, sandra.papenfus@agric.wa.gov.au, paul.orange@dpird.wa.gov.au.
POULTRY  
SANITATION

By
L. J. GAFFNEY, B.Sc. (Agric.),
Poultry Adviser

A high percentage of poultry losses are caused by unsanitary conditions. Not all diseases can be eliminated by even the strictest attention to sanitation—but undoubtedly the losses can be substantially reduced.

Poultry-farmers are well aware of the heavy losses in terms of stock and productivity that are caused by poultry parasites and disease organisms. The farmer's best weapon of defence against most poultry diseases is sanitation, but under practical farming conditions it would be unreasonable to expect that all disease infections could be checked by even very strict sanitary measures. For example, sanitation offers no absolute safeguard against such important diseases as fowl pox, and pullorum disease. The fowl pox virus can be introduced into the flock from some distant source of infection by carrier agents such as mosquitoes, while pullorum disease can be passed on to chickens through hatching eggs from carrier birds. There is strong evidence to suspect that the various forms of lymphamotosis (leucosis) can also be transmitted through the egg.

Other poultry diseases such as coccidiosis and worm infestations are best controlled through proper sanitation. Poultry and for that matter, all animals are able to build up a natural resistance against disease if they are given the opportunity to do so. Usually the degree of immunity increases with age, providing the health and vigor of the bird have not been impaired, by a heavy attack at the outset. Hence it is essential to pay strict attention to sanitation during the initial growth stages, as it is then that heavy infection is most harmful to the chicken. It is interesting to note that more recent research on the lymphamotosis group of diseases reveals that the majority of birds become infected when very young chickens, and that after about 12 weeks of age the incidence of infection is very low. In the light of this knowledge, poultrymen can institute positive measures to reduce the incidence of lymphamotosis in their flocks and it should make them more conscious of the importance of rigid sanitation in chicken rearing.

PRINCIPLES OF SANITATION

Poultry sanitation is a term used to denote all those measures which will help to reduce the risk of disease. It covers the provision and maintenance of an environment which offers little or no opportunity for disease germs or harmful organisms to become established; the en-
The environment comprises everything with which the birds make contact and includes the atmosphere, poultry buildings, fittings, equipment, floor litter, runs and other birds. One or more of these environmental factors can be a source of disease infection. The environment to which healthy stock are to be introduced can be rendered hygienic by:

1. Interrupting the life cycle of the disease organism.
2. Allowing the natural elements of sunlight, dessication and aeration to cleanse the environment.
3. Using germicides to destroy organisms.

Many parasites and diseases spend part of their life-cycles outside the host body. This period may be spent in a secondary host, as in faeces, in the soil etc. Poultry producers are aided in their efforts to break the cycle of infection by the renewal of stock each year, also by the artificial incubation and brooding of chickens, which ensures that chickens do not come in contact with the parental stock which may be disease-carriers.

**INTERRUPTING THE LIFE CYCLE OF THE DISEASE**

A common method used to break the disease cycle is by clearing the area of stock and leaving this section idle for some length of time. In this way, the disease is denied contact with its host and the number of disease organisms is reduced. In practice, the usual procedure is to rest the brooder runs and rearing ground during the off-season for chicken rearing and to provide alternative runs for the laying flock. It would be unprofitable to leave large areas of housing accommodation idle for the same length of time particularly when the premises can be quickly rendered free of germs by the application of chemical disinfectants.

Another important measure is the strict segregation of different age groups, particularly during early life. Many instances can be cited of severe outbreaks of coccidiosis and roundworm infestations occurring when successive batches of chickens are run on the same ground or are allowed to intermingle. In such instances, the effectiveness of drugs to combat cocci-
The
A.M.P. SOCIETY
OFFERS YOU:–

- PROTECTION FROM PROBATE DUTIES
- INCOME TAX SAVING PLAN
- BEST POLICY RESULTS

Write or call
A.M.P. SOCIETY
PERTH
PHONE BA 2001

Please mention the "Journal of Agriculture, W.A.," when writing to advertisers.
KILL RABBITS
with the TESTED and PROVEN Fumigant
LARVACIDE

LARVACIDE is the most successful post-war rabbit exterminator in use all over Australia. LARVACIDE will not only do your job properly, but it will also do it in a fraction of the usual time and at much less than usual cost. Being 5½ times heavier than air, it stays in the burrows and keeps right on killing. For the first time in history you can achieve successful eradication of the greatest curse the man on the land has ever known. Prove it for yourself—you’ll find it does everything claimed.

LARVACIDE is safe to use in accordance with the simple directions on every bottle. Simple and easy to handle, it is absolutely non-inflammable and non-explosive. With LARVACIDE, it is just a “one-second” job to shoot a burrow. Never before has Rabbit Fumigation been so simple or so effective.

SPECIAL NOTICE:
LARVACIDE is also available in convenient Glass Ampoules known as “LARVAMPS.” These are very handy to carry in a tin on horseback for treating odd holes that may have been overlooked. Price 7s. Carton of 1 dozen. Minimum rail order, case of 1 gross.
Fig. 3.—The top picture shows the chicken runs lightly tilled. In the lower picture, portion of the rangeland has been tilled and left fallow
diosis and drenching treatments against roundworms are considerably reduced. Chickens reared under such conditions seldom give a good performance in later life.

Young stock of different ages must be kept separate and they must be given sanitary conditions. These are key points in the rearing of healthy, robust stock.

**NATURE'S ROLE IN SANITATION**

The natural elements of sunshine, dryness and fresh air are germ-killers that are effective and which can be used in abundance. They play an important part in sterilising the soil and keeping the floor litter in a hygienic condition. Soil and litter are the two main sources of infection with which the poultry farmer has to contend, and if he is to succeed in minimising losses through disease, he must take appropriate steps to prevent the poultry runs and floor litter from becoming over-contaminated. Diseases usually flourish in dank places, which are excluded from sunlight and aeration, such as heavily manured ground sheltered from the sun, shaded areas near drinking vessels and excessively damp litter. Many factors are involved in preventing these conditions, and these should be kept in mind when designing the farm and equipping the poultry buildings. This aspect is treated in more detail in departmental leaflets Nos. 2120 and 2154, and need not be elaborated upon in this article, but it must be clearly understood that the essential requirement for housing poultry under local conditions is to exclude dampness and at the same time allow entrance of adequate sunlight and fresh air into the buildings.
Soil Hygiene.

Summer is the best time for allowing the natural elements to destroy disease organisms in the soil of brooder runs, rangeland and poultry yards. Even coccidial oocysts and roundworm eggs which can lie dormant in the soil over long periods, are destroyed by continuous exposure to sun, heat and desiccation.

Procedure.

After all stock has been removed from the ground, all surface trash and manure is raked clear and the bare ground is exposed for several weeks to the summer sun. Before cooler weather approaches, the upper inch or two inches of the soil is broken up and stirred by a suitable implement such as a rotary hoe or hand plough. This allows the purifying action of the sun in conjunction with soil aeration, to sterilise the ground more effectively. The liberal application of water-slaked lime powder to the cultivated land will also be beneficial. The rate of application may vary from 1 to 5 lb. per 100 square...

Fig. 6.—Using a stirrup-pump to spray the interior and exterior of a chicken-house with a disinfectant solution.

Fig. 7.—Day-old chicks introduced into clean quarters. Rigid sanitation is essential at all times, but particularly when the chicks are young.
feet, greater amounts being required where the soil is heavily contaminated. The ground is then left idle until the time arrives for planting to a green crop. The planting of quick-growing green crops such as rape, oats and barley in the brooder runs is delayed until some five to six weeks before the chickens are due, as too tall a growth provides a good harborage for disease organisms. Moreover with rank green feed there is the risk of fibrous material causing gizzard obstructions.

The ground has now been prepared in a hygienic condition and is ready to receive the young chicks.

Shade Trees.

The question of planting shade trees in the rearing quarters is often raised by farmers. As a general rule, runs adjacent to chicken houses should not be shaded from the sun. If growing stock require summer shade, temporary or moveable shelters can be erected in the yard in close proximity to the poultry house. In some cases, for example where a laneway exists on the rear or the western side of the rearing sheds, deciduous trees can be planted on this side of the houses. By pruning off the lower limbs of the trunk, the upper branches can be trained over to shade the roof of the building. A few flame-trees or other deciduous species planted in the rangeland will provide useful shade to young stock towards the end of the growing season. When it is time to “rest” the range, these trees should be severely pruned so that the ground near the base of the tree is exposed to direct sunlight.

Shade trees are extremely valuable on poultry farms in this State, where high summer temperatures prevail, but forethought in planting is necessary if the trees are not to interfere with farm sanitation.
THE USE OF CHEMICAL DISINFECTANTS

Chemicals can be effectively employed to reduce the incidence of disease in the environment. This mainly applies to the disinfection of poultry buildings, fittings and equipment, but they can also be used as an additional measure to sterilise heavily contaminated ground near poultry houses. The premises are usually disinfected before introducing each new flock of birds. Carbolic and cresol compounds, caustic soda and ammonia solutions are disinfectants which are effective and economical to use. Commercial products containing carbolic and cresol compounds are not expensive and are easy to apply. Caustic and ammonia solutions need to be handled with more caution. A general germicidal solution can be prepared by dissolving 1 lb. commercial lye (containing approximately 90 per cent. caustic soda) and 2½ lb. water-slaked lime in 5½ gallons water. Stirring the mixture will keep the lime in suspension until it eventually dissolves. Spray the floor and all surfaces and joints to a height of approximately two feet from the floor. Chicken runs can be disinfected by saturating the surface inches of soil with water and applying the solution at the rate of ¼ to 1 gallon to each square yard. Spraying equipment should be flushed after the treatment. The operator should wear a coat, hat, gloves, goggles and rubber boots for protection when using dangerous chemicals such as caustic soda. Caustic solutions of similar strength to that recommended above may strip paint and corrode galvanised iron and therefore other disinfectants are preferred for sterilising metal feeders, drinking vessels etc.

One other point needs mentioning before completing this review on poultry sanitation. It is sound poultry husbandry to remove ailing and injured birds from the flock as soon as they are observed, as apart from being likely disease carriers, other diseases can be introduced through them into the flock. As an illustration, it is quite common to find sick birds heavily worm-infested, even though the flock generally is practically free of worms. It is advisable to dispose of individual birds that are ailing or in poor condition, for they are seldom profitable even if they do recover. When not in a marketable condition, these birds should be killed and disposed of by burning in some type of incinerator or by deep burying. In some instances, such as chickens affected with coccidiosis, isolation in a pen set aside for this purpose where individual treatment can be applied, will often return them to good health.

By the way, those stray birds which are often seen roaming at will around the farm may be nullifying the entire programme of sanitation. It is well worth while to attend to the fences and gates to ensure that all your birds are securely yarded.

Wexham Hatchery

Breeders: Australorp, White Leghorn, 1st Cross
DAY OLD CHICKS:
Unsexed, Pullets and Cockerels when available
APRIL to OCTOBER DELIVERY, Freight Free
Air Freight Extra

6 WEEKS-OLD PULLETS
MAY to NOVEMBER DELIVERY
Plus Freight and boxing
All from Government Blood Tested
PROVED SECOND SEASON STOCK

HATCHERY:
Cnr. EPSOM AND SMITH AVENUES,
REDCLIFFE PARK - - - ML 543

Journal of agriculture Vol. 4 1955
"TREECLEARER" POWER SAWS . . . .
A MODEL AND PRICE TO SUIT ALL NEEDS

"BANTAM"
A lightweight low-priced machine, incorporating all the "Treeclearer" refinements. • Quick, positive blade location. • Powerful 320 or 420 c.c. B.S.A. engine. • Smooth, quick-acting clutch. • Ball and roller bearings throughout. • 32 or 36 inch blade. • With or without self-drive.

"SPECIAL"
A well designed, compactly built machine ideal for the man on the land, timber-worker or firewood cutter • Fitted with 7.7 h.p. Douglas or 8 h.p. Norman engine. • Self-drive is standard. • Timber-saving attachments make the machine a year round worker. • Clear your own land—cut your own firewood—do your own fencing. • A versatile money-maker.

"WOODSMAN"
A heavy duty machine built for timber workers. • Fitted with 8 h.p. twin-cylinder vibrationless Norman engine. • Incorporates patent blade turning. • Patent adjusting handles. • Heavy duty belts. • Large Wheels. • Self-drive is standard. • Axle adjustment for balance. • The finest power-saw built.

POST HOLE DIGGER  ELECTRIC DRILL  FLEXIBLE DRIVE BORER
SLIDING TABLE SAW BENCH  AIR COMPRESSOR  DRAG SAW

Other Attachments
Power Take-off
Concrete Mixer
Saw Gulleter

Treeclearing Machinery Division
OF GEORGE MOSS PTY. LTD. 331 MURRAY ST. PERTH. G.P.O. BOX R1288 PHONE BA9621

Please mention the "Journal of Agriculture, W.A." when writing to advertisers