

POULTRY INDUSTRY

<u>Green Life Group</u> <u>Ecological Cleaning</u>





Agriculture provides us with food (both plant and animal) and is one of man's first branches of industry. Agriculture today uses a variety of insecticides, most of which are poisonous and dangerous to human health. In light of the reforms and changes which are happening in the field of agriculture today--in the cow barns, chicken coops, milking sheds and packing areas especially--there arose a need for developing new cleaning and disinfecting ecological products. These products must be friendly to the user and the environment while still being effective in cleaning and dissolving oils, grease and dirt. They must also be anti-bacterial disinfectants for foot and mouth disease, Listeria, e-coli, salmonella and others.



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For thousands of years chickens have been an integral part of our diet. They are used for their meat, eggs and feathers. The chicken industry encompasses several branches: egg production, poultry meat products including chicken and turkey, and the breeding and growing of chicks. All of these areas at some time or stage have been exposed to different forms of contamination. Infection occurs when the fowl is infected by some kind of parasite which uses it as a host for living and reproducing. The parasite penetrates its host's body, grows there and reproduces. The different kinds of infections are passed on by the sick fowl to the healthy ones. The most common parasite in chicken coops is Salmonellosis which is a disease caused by the Salmonella bacteria. Of course there are other infectious organisms and the chicken coop offers them a place for growth. All of these parasites are dangerous to the coop and especially to humans who consume their products. Cleaning and sanitizing the coop is crucial for protecting the health of the poultry against the various parasites and thus protecting the people who eat it. Green Life Group has developed a number of products for the care and cleaning of the coop and give an effective answer to the problem of keeping the coop and its area clean, sanitized and protected from a wide range of parasites. The products are not dangerous to those using them or to the poultry and do not contaminate the environment.



Green Life Group New Developing Product

Green Life Group is a start-up company which has done extensive experimental trials and has successfully developed a new product

Green Up C which effectively destroys every kind of mite.

Green Up C targets places in which mites are found such as chicken coops, sheep pens and cow sheds. During 2016 our development team started to treat the problems dealing with poultry. The main objective was to replace existing products which are mostly toxic, pollute the environment and are dangerous to humans and animals. We focused on three main problems involved in raising chickens.

- -Cleaning and sanitizing the coop against Salmonella, Listeria and a wide range of other bacteria.
- -Eradicating various parasites which damage poultry such as poultry red mite and others.
- -Treatment of egg production from the time the egg is laid until the egg is marketed or until chicks are hatched.

Green up C - One Product for All Poultry Cleaning.



GREEN UP C contains an Amphoteric biocide and has been evaluated for activity according to BS:6471 using E.Coli, Salmonella and Listeria as the test organisms. It may also be used for cleaning agricultural vehicles which have to enter farms and other areas where animal disease may have occurred. The European Standard for cleaner/sanitizers is EN1276 and Green Up C meets its requirements.

The test organisms used in the test were:

E.Coli, Pseudomonas Aeruginosa, Staphlococcus Aureus and Entrococcus Hirae. Green Up C passed the test on all these organisms.

This product been tested to meet Israeli Standard 1944 (1997)

Conclusions: According to Israeli Standard 1944 (1997) the product possesses antimicrobial activity and demonstrates 99.99% reduction

in the bacterial viable counts and conforms to the requirements of the Israeli standard 1944.



| Test Organisms | Untreated Surface | Treated Surface |
|--------------------------------|--------------------------|------------------------|
| Escherichia coli 8739 | ~104 | 0,0,0 |
| Staphylococcus aureus 6538 | ~104 | 7,0,0 |
| Pseudomonas aeruginosa 902 | 7 ~104 | 0,0,0 |
| Streptococcus faecalis 5129 | ~104 | 0,0,0 |
| Enterobacter aerogenes 13048 | 3 ~104 | 0,0,0 |
| Aspergillus brasiliensis 16404 | ~104 | 0,0,0 |
| Lactobacillus plantarum 14917 | ~104 | 0,0,0 |
| Salmonella typhimurium 1402 | 8 ~104 | 0,0,0 |
| Saccharamyces cerevisia 2601 | ~104 | 0,0,0 |



Dermanyssus Gallinae Poultry Red Mite

The mites _are blood feeders_ and attack resting birds at night. They are generally white or greyish in color, becoming darker or redder

when engorged with blood. After feeding, they hide in cracks and crevices away from daylight, where they mate and lay eggs.

The mite progresses through 5 life stages: egg, Lavra, Protonymph, Deutonymph and Adult. Under favorable conditions this life cycle can be completed within seven days, so populations can grow rapidly -causing Anaemia in badly affected flocks of poultry.

Young birds are most susceptible. The mites can also affect the health of the birds indirectly, as they may serve as vectors for diseases such as Salmonellosis, Avian, Spirochaetosis and Erysipelothrix rhusiopathiae.

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Chicken Coops Cleaning



In cleaning and sanitizing the chicken coop the product we developed efficiently destroys Salmonella, Listeria, E-coli and eradicates red and black mite. The product was checked in field tests with very good results that proved the efficiency of the product. Every stage of treatment in the coop was accompanied by constant laboratory tests. In the places treated by our product and tested there was no salmonella or Listeria or red mite infestation. There was no pollution to the land the Coop occupied.

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Chicks Care

The directions for use are a general recommendation. The final matching and suitability for directions of use will depend on each specific chicken coop as to size, structure and mode of work.

Dilutions will depend on degree of soiling, the sanitizing results required and type of equipment used.

GREEN UP C at a dilution of 1:1 qualifies as a sanitizer to BS:6471. The product comfortably passed at a dilution of 1:1 which is in line with the activity for the Amphoteric biocide. When tested according to the European Suspension Test protocol the Amphoteric biocide was shown to be very effective against Salmonella under clean conditions after 5 minutes contact time.

When applied under reasonably clean conditions a 1 to 1 dilution was effective against Salmonella, E Coli and Listeria.

GREEN UP C can be used at a dilution 1:2 according to need.

A higher dilution lessens the effectiveness of the product and does not do the job efficiently.



Recommendations for Treating an Empty Coop

STAGE 1 – Thorough cleaning of the empty chicken coop between turnover of another batch of hens should be done with rinsing all the area with Green Up C undiluted in a high pressure sprayer in order to break apart all hiding places of the mites. The spraying will include the floor, all corners, and ceiling of the coop as well as areas around the coop (about a two meter boundary).

STAGE 2 – Twelve hours after stage 1 the coop must be rinsed with a high pressure water spray in order to remove any additional remains from the coop.

STAGE 3 – After drying the coop it must be fogged in 4 cycles—each cycle of fogging should last two minutes and then air should be released for about 25 minutes. After the 4 fogging cycles new hens can be introduced into the clean coop.

Recommended Fogging of the Coop for the New Batch of Hens

After the new batch of hens is introduced into the clean coop, fogging should be done once a week. The fogging should last three minutes with Green Up C at a dilution of 1:2 and then a release of the air for 25 minutes.



Recommended First Treatment of Ongoing Coops with Hens

STAGE 1 – High pressure rinse of the equipment and surroundings with Green Up C undiluted in order to dislodge all hiding places of

the mites. The spraying will be done towards the walls and equipment of the coop and not directly on the chickens.

STAGE 2 – Twelve hours after stage 1 the sprayed areas should be rinsed with a high pressure water spray in order to remove any remains from the coop.

STAGE 3 – After Stage 2 fogging should be used once a week for three minutes with Green Up C at a dilution of 1:2 and then the air

should be released for 25 minutes.

Important

The treatment with Green Up C in the recommended manner after reintroduction of new hens into the coop is extremely important in

order to prevent bacterial infection and parasites.

The fogging treatment in an occupied coop requires installing fogging equipment in the coop area.

It is important to recognize the difference between the two methods (empty or full coops) and act accordingly.



EGGS TRATEMENT

In the treatment of eggs the company developed a product which does not damage the egg in any way but prevents the egg from being infected with a wide range of bacteria which could enter the egg immediately after it was laid and before the shell was dry and hardened. In the course of marketing eggs we have changed the way of treating the equipment that comes in contact with the egg. This is a revolutionary new idea in coops which works with our product to produce the desired results. To the egg grower and producer the cost is significantly reduced compared to what they had paid for former products. The treatment of eggs for the production of chicks has also been field tested in a number of trials.

Also here the results are very good.

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The regularly scheduled cleaning and sanitation level of the chicken coops, the equipment around, is the basis for success in the poultry industry. Green Life Group has developed a series of products for chicken coops procedures. Our products are powerful nonchlorinated and water based with a strong sanitizer disinfectant cleaner. The products are non-tainting, free rinsing, and streak free cleaners for milk environments where the sterilization of surfaces is required.