

PIGEON DISEASES

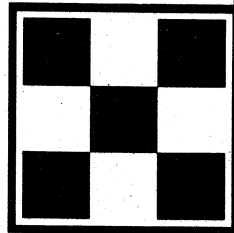
THEIR PREVENTION AND CONTROL

by

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®

PIGEON DISEASES

The success and satisfaction attained in raising pigeons for profit or for pleasure depends directly upon the control and prevention of disease. Pigeons are commonly raised under adverse conditions of inadequate nutrition and insanitary environment. These factors increase exposure and lower resistance to infectious and parasitic diseases. Serious disease losses are likely to occur unless an effective sanitation and management program is employed to prevent or limit exposure to infectious agents.

Prevention is especially essential because of the lack of established data regarding pigeon diseases. Effective disease prevention requires a thorough understanding and application of the principles of husbandry, sanitation, and nutrition. Good commercial rations are available which will adequately supply the needs of the fast growing squabs, breeders producing eggs and feeding their young, or the racers enduring long, hard flights. There are no miracle drugs or "short cuts" which will replace good management and sanitation in the prevention of disease. Disease prevention requires careful planning and hard work. A single serious outbreak can cost more in time and money than following a sound, preventive program.

Controlled experimental studies of pigeon diseases have been neglected. Fortunately, considerable information is available from studies of similar problems in other species of birds. All of this data is not directly applicable to the pigeon, but provides a foundation for field trials and observation. In the following brief disease discussions the treatments indicated have been reported to give good results in field outbreaks. In some instances the drugs have not been adequately tested and the recommendation should be accepted and used with reservation.

Before entering into a discussion of some of the specific problems, it would be well to briefly review the basic causes of disease. Disease may be simply defined as "any deviation from the normal state of health." The causes of diseases are classified as non-infectious, infectious, or parasitic.

Non-Infectious Disease: Losses from chilling, crowding, overheating, nutritional deficiencies, and injuries. Losses from these sources have been greatly reduced due to increased knowledge and application of better nutrition, sanitation, and management.

Infectious Diseases: These are caused by specific agents such as (1) bacteria, (2) viruses, (3) protozoan organisms, (4) fungi (molds). These agents gain entrance into the body where they multiply and produce injury resulting in death or poor growth and feed conversion.

Parasites: These include both INTERNAL and EXTERNAL parasites such as roundworms, hairworms, mites, flies, lice, etc.



BACTERIAL DISEASES

Paratyphoid: A serious and widespread pigeon problem.

- Cause: Members of the Salmonella paratyphoid group of organisms, usually S. typhimurium.
- Symptoms: Adult carriers may show no observable symptoms. Swollen joints and "wing boils" are more commonly observed in the female. The soft swellings usually involve the hock or wing joints. A greenish diarrhea may be present. The disease is more common and serious in the squab. Abnormal losses may be the first sign of the disease. This is usually followed by loss of appetite, loss of weight, rough feathering, greenish diarrhea, and joint swellings.
- Lesions: Enlargement and congestion of the liver, spleen, and kidneys. Small round spots may be found in the liver, spleen, and lungs. The intestine is inflamed and coated with excess mucous. The air sacs are frequently thickened.
- Diagnosis: This disease can often be recognized by the characteristic lesions, but isolation and identification of the causative agent is necessary for positive diagnosis.
- Treatment: Furazolidone - NF 180 administered in the feed, at 100 grams per ton, has been used with good results but has not been cleared for legal mixing in rations manufactured for pigeons. Sulfa drugs are helpful in checking mortalities. See your local veterinarian for specific recommendations.
- Prevention and Control: The paratyphoid organism can be passed through the egg. Therefore, it is not advisable to retain infected but apparently recovered birds for breeding stock. Breeders can be bloodtested for detection of carriers of S. typhimurium but not for other Salmonella species. Swab cultures from the vent can be employed to detect carriers if desired.

Chronic Respiratory Disease or CRD: Common cause of so-called "colds" in many species of birds, especially pigeons, chickens, and turkeys.

- Cause: Pleuropneumonia-like organism known as mycoplasma zallisepticum. The disease is frequently complicated with secondary infections with E. coli and other bacteria.
- Symptoms: Runny eyes, nasal discharge, and a marked rattling. Loss of weight and appetite are frequently observed.
- Lesions: Windpipe is often inflamed and coated with mucous. Air sacs markedly thickened or coated with frothy exudate.
- Diagnosis: Presence of respiratory symptoms which last for weeks usually indicate CRD. This disease can only be definitely diagnosed by laboratory examination and demonstration of the causative organism. Bloodtesting for the CRD agent is helpful in establishing the presence of the disease.
- Treatment: There is no available treatment which will completely eliminate the infection from the birds. High level anti-



biotic therapy, especially when administered by injection, is helpful in alleviating the symptoms. Penicillin-Streptomycin combinations and wide spectrum antibiotics administered in the drinking water have been injected with some success.

See your local veterinarian for specific recommendations.

Control: The CRD agent can be egg transmitted so it would not be advisable to retain infected or recovered birds for breeding. Bloodtesting can be employed to establish the presence or absence of the mycoplasma organism.

Tuberculosis:

Causes: Avian strain of Mycobacterium tuberculosis.

Symptoms: A chronic infection which develops slowly with affected birds gradually wasting away. Joint lesions or skin lesions sometimes develop and are usually hard tumor-like nodules or masses.

Lesions: Small white spots or foci may be found on any or all of the organs, especially the liver, spleen or intestine. Frequently the lesions coalesce to form large tumor-like masses.

Treatment: None. Destroy all affected birds and if disease is extensive, it may be necessary to de-populate the loft and thoroughly clean and disinfect premises. Testing with tuberculin and elimination of reactors is sometimes practiced, but the test in pigeons is not too reliable. All equipment should be cleaned and disinfected. At least 6" of soil should be removed from dirt floored pens and the ground thoroughly saturated with a strong, penetrating disinfectant such as Purina's Insect Oil Concentrate and then covered with a layer of clean sand.

Other Bacterial Diseases: The pigeon appears to be quite resistant to many of the common bacterial diseases affecting other birds such as fowl typhoid, fowl cholera, and infectious coryza.

PROTOZOAN DISEASES

Another form of disease-producing agents are the protozoa or tiny single-celled animals. Trichomoniasis and coccidiosis are two common and serious diseases produced by these organisms.

Trichomoniasis or Canker:

Cause: Trichomonas gallinae.

Symptoms and Lesions: Carrier adults usually expose squabs by feeding. Symptoms appear in 7 to 12 days and are due to the severe injury to the throat, esophagus, and crop. Necrotic, cheesy exudate accumulates on the lining and in-



terferes with eating and may produce respiratory distress. Vomiting is sometimes observed in older birds.

Treatment: Enheptin has been a widely used treatment but other drugs effective against protozoan disease agent such as, Hepzide and Emtryl (dimetridazole), have given good results. See your local veterinarian for specific recommendations.

Coccidiosis:

Cause: Eimeria lobbeana and E. columbarum.

Symptoms: Birds go off feed, lose weight, and waste away. A greenish diarrhea is usually present and birds appear to be listless.

Treatment: Sulfaquinoxaline and other sulfa drugs have been used with success. See your local veterinarian for specific recommendations.

Prevention: Strict sanitation to prevent serious exposure. Remove droppings and replenish with fresh litter frequently. Eliminate damp areas as moisture is necessary for the oocysts to become infective.

VIRUS DISEASES

Pigeon Pox:

Cause: Pigeon strain of pox virus.

Symptoms and Lesions: Wart-like nodules usually found on the beak, eyelids, and feet but may occur on all parts of the body. Lesions may also occur in the mouth, throat, and windpipe, causing what is known as the "wet or diphtheric form" of pox. This form is much more serious and frequently results in death.

Treatment: There is no beneficial treatment for pox or other virus diseases. The scabs dry up and drop off at two to three weeks and recovered birds are permanently immune.

Prevention: Pigeon pox vaccine can be used for immunization as soon as the disease is recognized. Control of biting insects, especially mosquitoes, is important, as they serve to spread the infection.

Newcastle Disease: This virus disease affects most species of birds, including the pigeon, but does not appear to be a serious or important problem in pigeons. Vaccination is the only means of control but has not been employed to any extent with pigeons.

Ornithosis (Parrot Fever or Psittacosis):

Cause: Large virus of the psittacosis-lymphogranuloma group.

This virus has been isolated from most species of birds including pigeons. In most cases, the isolations have been from apparently



healthy pigeons in the wild, free flying populations. Few, if any, uncomplicated outbreaks of ornithosis have been observed in the pigeon. In general, the species appears resistant to this disease, with birds harboring the organism without developing symptoms of illness. When resistance is lowered by other diseases or stress factors, clinical infection may develop.

Symptoms and Lesions: Infection is usually present without symptoms or lesions, but clinical cases would show loss of condition and diarrhea. Lesions are similar in most birds and consist of a marked inflammation of the air sacs and occasionally the heart sac and other serous membranes covering the organs. The spleen and sometimes the liver is found to be markedly enlarged.

Diagnosis: Only by laboratory demonstration of the virus or serological tests. (CRD, aspergillosis, paratyphoid, and other diseases may produce similar lesions.)

Treatment: The virus appears susceptible to high levels of antibiotics, especially aureomycin.

For specific recommendations see your local veterinarian.

FUNGUS (MOLD) INFECTIONS

Aspergillosis (Brooder Pneumonia):

Cause: *Aspergillus fumigatus*. Fungus spores are inhaled into the respiratory tract and produce localized infections in the lungs and air sacs.

Symptoms and Lesions: Firm, round saucer-like plaques on the air sacs are highly suggestive of aspergillosis. Yellow, shot-like bodies in the lungs are characteristic, but similar lesions can be associated with paratyphoid and pullorum. Occasionally, visible fungus growth will be observed on the lesions and sometimes, thick, fibrinous layers cover the air sac membranes. Severe pneumonia is often found. Infections of the eye and brain have also been found to be due to this fungus.

Diagnosis: Isolation or demonstration of the fungus.

Treatment: None. There are no established treatments for respiratory fungus infections.

Prevention: An occasional case of aspergillosis will occur in any operation, but if losses are troublesome, it will be necessary to locate and eliminate the source of the infection. The common sources include moldy litter, mold in feeders, and contaminated damp areas.

Thrush (Fungus Infection of the Upper Digestive Tract):

Cause: A yeast-like fungus known as *candida albicans*.

Symptoms and Lesions: Lesions are found in the crop and are usually raised whitish circular ulcers. Necrotic debris may coat the lining. The crop, esophagus and mouth may be affected. Depression and emaciation accompanies the infection.



Diagnosis: Isolation or demonstration of the fungus.

Treatment: Mycostatin administered in the feed is effective for fungus infections of the digestive tract but has not been cleared or approved for addition to rations manufactured for pigeons. Copper Sulfate administered in the water at a concentration of 1:2000 has been used for years for treatment of this disease in many species of birds.

INTERNAL PARASITES

Large Roundworms (Ascarida Columbae): This roundworm is the most prevalent internal parasite in the pigeon and can readily be found in the small intestines.

Symptoms and Lesions: No symptoms are apparent unless birds are heavily parasitized when they may show loss of condition.

Treatment: Piperazine compounds have replaced most former wormers for roundworms. Purina's Liquid Wormer using 2 table-spoons to one gallon of water will worm 50 birds. The medicated water should be kept before the birds as the only source of water until it has been completely consumed.

Control: Frequent and thorough cleaning to remove worm eggs, thereby limiting exposure.

Hairworms (Capillaria Columbae): A serious parasite when present in large numbers as the worms burrow into the lining of the intestines, producing severe injury.

Symptoms and Lesions: Heavily infested birds are usually emaciated, droopy, and have diarrhea. The intestinal wall is usually thickened but the gut may be flabby and distended. The lining is inflamed and often coated with a thick layer of mucous.

Treatment: There is still no effective approved treatment for this parasite. Some of the new wormers appear promising for control of this parasite.

Prevention: Rigid sanitation and frequent removal of droppings.

EXTERNAL PARASITES

Lice: Several species of lice may be found on the pigeon, but only the slender pigeon louse and the small pigeon louse constitute troublesome problems. All bird lice are chewing parasites, which obtain their food from feathers and body scales. Lousy birds are restless and may lose weight unless the lice are eliminated.

Control: Use Purina Malathion Dust or Purina Dusting Powder. Follow label directions.

Pigeon Fly (Pseudolynchia Canariensis): This biting insect is usually found in the feathers around the base of the tail. It is slightly smaller than the house fly. Heavily infested birds may be observed



shaking and stamping their feet and running their beaks through the feathers. In addition to the loss of blood and marked annoyance of the bird, this fly is a common carrier of the pigeon malaria organism.

Control: Use Purina Malathion Dust or Purina Dusting Powder.
Follow label directions.

Bedbugs (Cimex Lectularius): The bedbug is a wingless, flat, oval-shaped bug which is reddish brown in color. It feeds on the birds at night and hides in cracks during the day. When the parasites are present in large numbers, birds become pale and anemic from loss of blood. Squabs may be severely affected.

Control: Use Purina Malathion Dust or Purina Dusting Powder.
Follow label directions.

Pigeon Mites: There are several varieties found on pigeons, including roost mites, feather mites, depluming mites, and scaly leg mites. These parasites are extremely small, about the size of the head of a small pin, and in general do not cause much injury to the bird other than annoyance and loss of feathers.

Control: Use Purina Malathion Dust or Purina Dusting Powder.
Follow label directions.

Fowl Tick (Argas Miniatus): The fowl tick is a flat, gray, oval-shaped insect with a leathery appearance. The young ticks attach themselves to the bird and suck blood. When they mature, the ticks feed at night and hide in the cracks in the building during the day.

Control: Use Purina Malathion Dust or Purina Dusting Powder.
Follow label directions.

Flies and Other Insects: In addition to annoying the birds, any insect is a potential carrier of pigeon diseases. Therefore, control is important and can be accomplished by good sanitation accompanied by an insect control program.

Control: Purina Fly Checker - a solid bait fly killer - potent - long lasting.

Purina Fly Baits (Sugar Base or Dry Killer) - Scatter baits on floors or other hard surface areas where flies congregate.

Purina Insecticide Mist - A ready-to-use non-toxic insecticide product, in an odorless base oil, for use as a space spray or direct contact spray.

(Follow label directions when using these products.)



STEPS TO GOOD PIGEON HEALTH

It is much less expensive to prevent than to cure costly disease outbreaks. Careful sanitation is unquestionably the first line of defense against disease losses. Preventive practices to help avoid disease loss could be summarized under the four general headings:

1. Good breeding
2. Careful sanitation
3. Sound management
4. Good feeding

I. Good Breeding:

- A. Start with disease-free breeding stock. The adult serves as a reservoir of infection for the squab as well as carrying it to other adults.

II. Careful Sanitation:

- A. Remove all droppings each week. Daily removal is preferable and, of course, is essential during disease outbreaks.
- B. Eliminate all insects, rats, and free fly birds because they can serve as an excellent means of introducing parasitic agents.

III. Sound Management:

- A. Construct feeders and waterers so that contamination is at a minimum. Frequent cleaning and disinfection are important.
- B. Construct housing, runs, and equipment for ease of cleaning and disinfection.
- C. Keep buildings, litter, and runs clean and dry at all times.
- D. Isolate newly purchased birds or birds that are being returned from a show because they can introduce disease into the entire loft.
- E. Inspect all birds daily and isolate any sick birds immediately.
- F. Get a laboratory diagnosis when disease strikes. Until the cause of your problem is identified, definite steps cannot be taken for proper treatment and control.
- G. Dispose of all dead birds promptly.

IV. Good Feeding:

- A. Feed a balanced ration. It has been demonstrated that healthy birds are more resistant to disease, and the optimum level of nutrients will provide better health.



None of the above principles of disease prevention can be safely neglected and, of course, there are others that should be added in the individual loft. These are the fundamentals which serve as the foundation for a management and sanitation program that will reduce disease losses and provide the maximum in profit and enjoyment for every pigeon operator.

PURINA HEALTH PRODUCTS

C & S Powder: A general purpose product for cleaning nest boxes, floors, walls, etc.

i-0 Concentrate: For general sanitizing of surfaces which have been cleaned.

Drinking Water Sanitizer - Use as directed for adding to the drinking water of pigeons to aid in preventing the spread of disease organism through the drinking water.

INSECT CONTROL

Insect Oil Concentrate: Kills mites, ticks, stick tight fleas and bed-bugs. Spray the wooden parts of the loft not in direct contact with the birds using diluted Insect Oil Concentrate. Spray the dirt floors with i-0 Concentrate after manure has been removed. Cover with litter or rake before placing birds back in the loft.

1. Purina Insect Killer: Fleas, lice and ticks.
2. Purina Poultry Dusting Powder: Lice and mites.
3. Purina Malathion Dust: Lice and mites.

Building Sprays

Flies, Mosquitoes, gnats -

1. Malathion Spray - Premium
2. Insecticide Mist - Spray
3. Vapona Strip

Roaches, Spiders and Crawling pests

1. Malathion Spray - Premium



RAT CONTROL

Purina Rat Kill

Purina Mouse Kill

For complete information on these and other Purina Products see your local Purina dealer at the store with the Checkerboard sign.

Important - follow label instructions.

The label instructions on Purina Health Products are the result of years of careful research and testing by responsible scientists - and have been accepted by both federal and state governments. Always read the label carefully and follow directions for use.



THE PURINA TEAM FOR GOOD PIGEON NUTRITION AND SOUND CONDITION

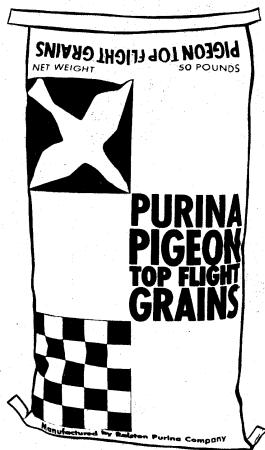


Purina Pigeon Checkers, 15% protein -- easy-to-eat pellets which contain a balance of proteins, vitamins and minerals to help build top body and feather condition. Purina's exclusive Micro-Mixing combines nutrients uniformly, too, so that each Checker pellet contains the nutrients that pigeons need for good fertility, production and hatchability.



New Purina Racing Pigeon Chow, 18% protein--easy-to-eat pellets specially formulated to keep birds in peak condition.

- . High protein, 18% with balanced amino acids to help build strong muscle tissue.
- . High energy, for flight endurance.
- . High vitamin and mineral fortification.
- . Harder Checkers, less waste.
- . Highly palatable with complete nutrition in every Checker.



Purina Pigeon Top Flight Grains, 15% protein.



Purina Pigeon Grains 11% Protein.

Let Purina's team of pigeon rations prove how they can help improve your birds' condition and performance. See your Purina dealer TODAY!

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