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# THE STATE COLLEGE OF WASHINGTON

INSTITUTE OF AGRICULTURAL SCIENCES

## *Poultry Pointers*

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## FOWL POX

The Poultry Council<sup>1</sup> of The State College of Washington

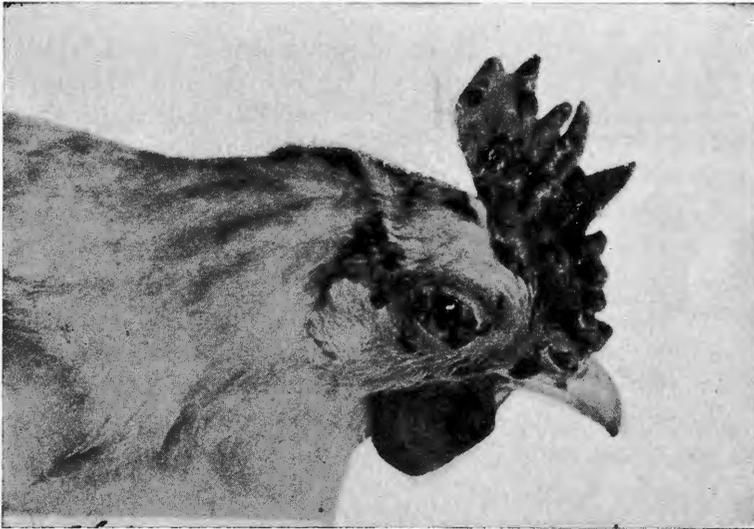


Fig. 1.—Natural infection with fowl pox.

Fowl pox is most prevalent in the State of Washington in the fall and winter months. The death rate is usually not high unless there are a large number of birds with windpipe cankers or infected eyes. When fowl pox occurs in a flock of laying birds, the owner may have

<sup>1</sup> THE POULTRY COUNCIL of The State College of Washington is composed of staff members of The State College of Washington at Pullman and Puyallup engaged in teaching, research, and extension work in poultry husbandry and pathology.

financial loss through decreased egg production. When pox affects males in the breeding flock, the result may be a high percentage of infertile eggs. Chickens, turkeys, pigeons, and English sparrows are more commonly infected, but pox is sometimes found in other fowl. Humans cannot catch this infection.

**CAUSE.** Fowl pox is a contagious disease caused by a definite filterable virus. The dried scabs which fall from the comb, wattles, and other parts of the body may, under certain conditions, remain infectious for several years.

**APPEARANCE.** Birds in a flock which have fowl pox may show any or all of the following three typical forms of the disease:

1. Raised, yellow or brown, wart-like scabs on comb, face, and wattles.

2. Grayish-yellow membranes, known as cankers, found in the mouth and windpipe.

3. A discharge from eyes, nostrils, and cleft of palate, which is at first watery and later becomes thick and pus-like. This material often hardens between the eyeball and eyelid. Birds which have this type frequently lose the use of the eye. In turkeys, fowl pox may appear in the eyes and mouth without noticeable pox lesions on the skin. In these cases, yellowish, soft scabs form on the inner surface of the eyelids. This causes the eye to swell and to water a great deal. Cankers may form around the tongue and corners of the mouth.

In the beginning of an outbreak of pox, the caretaker often finds in the flock what seems to be a nasal cold, a decrease of appetite, and a slump in egg production. Careful inspection of the flock will often show that a few birds have typical forms of pox. As the disease progresses, more birds will be found with pox scabs on the head.

**Fowl pox should not be confused with coryza (colds), infectious bronchitis, or infectious laryngotracheitis, as these ailments are separate and distinct diseases.**

**INTRODUCTION AND SPREAD OF THE DISEASE.** Introducing birds which are in the initial stages of infection to a poultry farm, is a common manner of spreading the disease to clean premises. Wild birds, small animals, and humans may mechanically carry the disease from one farm to another. Dirty and contaminated shipping crates and sacks may also carry the infection from farm to farm. It has been shown that mosquitoes, which feed on the

combs of infected birds, and then on combs of non-infected birds, will carry the disease virus to the healthy birds. Birds which fight may pick the comb of an infected chicken or turkey and then pick the combs of several healthy birds, thus giving them the virus of pox.

Probably only a few birds will get pox from the original source, but after it is in these birds the disease then spreads to others in a house, or even to other houses. In some outbreaks of the disease the spread is rapid, with the majority of the birds in the flock becoming infected in a short time. In other outbreaks the spread is slow, taking several weeks or months for the disease to run its course.

**FLOCK TREATMENT.** The use of medicine in the feed or water has failed to control the disease. The most that can be done is to provide good living conditions and an adequate diet. The temporary use of a moist mash or pellets may help to prevent loss of appetite.

**INDIVIDUAL TREATMENT.** The following daily treatment may be of some help. However, the results are often unsatisfactory.

1. Remove cankers from the mouth and opening to windpipe with a small pair of forceps and apply 5 per cent solution of silver nitrate to the areas where the cankers have been removed.

2. Remove cheesy material from the eyes and apply two or three drops of a 15 per cent solution of argyrol. "Sulfa" ointments applied two or three times daily to affected eyes of turkeys have been reported to give favorable results.

**PREVENTION BY VACCINATION.** Even though precautions are taken against the introduction of disease on the farm, fowl pox will often occur. The only sure way to prevent pox is to vaccinate.

### **USE OF FOWL POX VACCINE REGULATED BY STATE LAW**

The following is quoted from the laws and regulations relating to livestock and dairying in the State of Washington:

"All live vaccines or attenuated vaccines used for immunizing animals or poultry against diseases shall be administered by authorized veterinary inspectors of the State Department of Agriculture, veterinary inspectors of the United States Bureau of Animal Industry, veterinarians duly licensed to practice in the State of

Washington or by persons who have secured permits from the State Department of Agriculture for the use of live vaccine or attenuated vaccines."

Permits to vaccinate are issued by the State Department of Agriculture only to poultrymen who have attended a fowl pox school and passed an examination. This permit authorizes the holder to vaccinate his flock only. These schools are conducted jointly by the Agricultural Extension Service, and the Western Washington Experiment Station of the Institute of Agricultural Sciences, The State College of Washington; and the State Department of Agriculture.

Ask your local county agricultural extension agent for information on the date and place of the next fowl pox school to be held to qualify poultrymen for the vaccination permit.

### VACCINATION OF CHICKENS

There are two kinds of vaccines which may be used on chickens. These are **fowl pox vaccine** and **pigeon pox vaccine**. For the kind of vaccine to use and how to use it, read the following:

**FOWL POX VACCINE:** This should be used on young chickens or hens in the molt to give a lasting protection against pox. Do not use this kind of vaccine on pullets about to come into egg production or hens in egg production.

**A. Age to Vaccinate.** Under Washington conditions, chickens can be most successfully vaccinated in the brooder house at five weeks of age. On farms where coccidiosis or blackhead is a problem in chickens five to eight weeks of age, the chicks can be vaccinated when three to seven days of age.

**B. How to Vaccinate.** Mix the vaccine according to the directions on the container. For **chicks five weeks of age or older**, dip the vaccination instrument in the vaccine and then pierce the skin on the featherless part of the thigh with the vaccination instrument. For **chicks three to seven days of age**, pull the skin away from the body in the region of the flank (in front of the thigh), blow on it to separate the down, and pierce the exposed skin with the vaccination instrument. Be sure to dip the tip of the vaccination instrument in the vaccine for each bird. Be sure to pierce the skin but try to avoid the blood vessels which you will see in the skin.

**C. Examination for "Takes."** Examine at least 30 birds seven to ten days after vaccination. If there are less than 80 per cent "takes,"

the chickens should be revaccinated. Be sure to vaccinate all chickens on the same leg or side of the body so you will know where to look for the "takes." A vaccination "take" will look like a small pimple or bump which may have a scab on top, and will show swelling and redness at the base.

**PIGEON POX VACCINE.** This is used to give a temporary protection against fowl pox where the regular fowl pox vaccine would react too severely.

**A. When to Use It.** This type of vaccine can be used in unvaccinated flocks of pullets about to come into egg production or in flocks in egg production which have been exposed to fowl pox. When the birds go out of egg production, they should be revaccinated with the fowl pox vaccine.

**B. How to Use It.** This type of vaccine is applied by the "follicle" method and never by the "stick" method. This is done by taking about fifteen feathers from the leg and applying the vaccine against the open follicles with a brush. Be sure to dip the brush in the vaccine for each chicken.



Fig. 2.—Chick dead of fowl pox as a result of vaccination in web of the wing. Note fowl pox scabs on eyelids and corners of the mouth.

**Do not vaccinate chickens or turkeys in the web of the wing.** When the web of the wing is used for the vaccination, it is easy for the birds to bring their heads into contact with the vaccine or, later on, the vaccination "take." This may cause a severe generalized fowl pox infection.

## VACCINATION OF TURKEYS

**KIND OF VACCINE TO USE.** Use fowl pox vaccine. **Pigeon pox vaccine is not recommended for turkeys.**

**AGE TO VACCINATE.** Turkeys can be vaccinated between 8 and 12 weeks of age. Turkeys kept for breeders must be revaccinated at a later date. For these breeders, it is best to plan about six months between the first and second vaccination. Before revaccinating the whole flock, about 25 to 50 birds should be given a trial vaccination. In a week to 10 days after this vaccination, look for "takes." If no "takes" are found, put off vaccination of the rest of the flock for a month. If about 75 per cent of the birds show "takes," then the flock can be vaccinated in 10 days to two weeks.

### GENERAL RECOMMENDATIONS ON USE OF FOWL POX VACCINE

1. Chickens or turkeys which have a disease, such as coccidiosis, blackhead, colds, or severe worm infestation, should not be vaccinated.
2. Mix the vaccine (powder and fluid) on the day it is to be used.
3. At the end of each day's vaccination, burn the vaccine you have left over and all papers which were used as a cover for the vaccination table.
4. Keep the vaccine out of the bird's eyes and mouth. It is best for the person using the vaccination instrument not to handle the birds during the vaccination.
5. Do not place vaccinated chickens with unvaccinated birds until four weeks after vaccination, or vaccinate the chickens within four weeks of market time.
6. Do not place vaccinated turkeys with unvaccinated birds until eight weeks after vaccination, or vaccinate the turkeys within eight weeks of market time.

A complete list of Poultry Pointers available to interested persons is given below. These may be obtained from your county Extension agent.

No.	Name
6	Coccidiosis in Chickens and Turkeys—1946
8	Infectious Larngotracheitis and Infectious Bronchitis of Chickens—1947
9	Coryza (Colds) of Chickens and Infectious Sinusitis (Swell Head) of Turkeys—1947
10	Grow Healthy Pullets—1947
11	The Washington Laying House—1946
12	Cannibalism in Chickens—1947
13	Underfloor Heat for Poultry Houses—1945
14	Feeding and Management of Chicks and Pullets—1947
16	Turkey Raising in Washington—1945
17	The Washington Range Shelter—1946
19	Washington Home Grown Rations—1947
20	Feeding and Management of Layers—1946
21	Summer Force Molting of Hens for Commercial Egg Production—1947
22	Brooding and Brooding Equipment for Chicks—1947
23	Laying House Equipment—1946
24	The Washington Colony Brooder House—1947
25	Feeding and Management of Breeders—1946
26	Worms in Poultry—1946
27	Pullorum, Fowl Typhoid and Paratyphoid in Chickens and Turkeys—1947
28	Fowl Pox—1947
29	Eggs and Their Care, 1945
30	Nests and Their Care—1945
32	Feeding Turkeys—1947
33	Fowl Leukosis—1947
34	Common External Parasites of Chickens and Turkeys—1947
35	Broiler and Fryer Production in Washington—1945
37	Infectious Enterohepatitis (Blackhead)—1947
38	Backyard Poultry Keeping—1947
40	Turkey Breeder Houses and Equipment—1947

Date following title of bulletin indicates last edition available.

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