

The POULTRY HEALTH

Messenger

FEATURED IN THIS ISSUE

**What to Do for Bronchitis,
Roup and Colds**

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WHEN YOU MOVE—Don't forget to tell us about your new address. We want you to have an unbroken file of the **POULTRY HEALTH MESSENGERS** so your library on Poultry Diseases will be complete and up to the minute.

Just a postcard with the old and the new address will do. Thank you!

THE FIVE AGES OF MAN

1. "Daddy, I know how to do everything," said the little boy of five.
2. "What I don't know isn't worth knowing," said the young man of twenty.
3. "Well, anyway, I do know my own trade from A to Z," said the man of thirty-five.
4. "There are very few matters, I am sorry to say, that I am really quite sure about," said the man of fifty.
5. "I have learned a bit, but not much, since I was born; but knowledge is so vast that one cannot become wise in a short lifetime," said the man of sixty-five.

Our Annual Short Course

WHEN PEOPLE drive as far as 1,400 miles and gather in large numbers from every state within a radius of a thousand miles to attend a short course, the programs must offer something unusual to attract them.

That is exactly what happened in connection with Dr. Salsbury's Short Course on Poultry Diseases which was held in Charles City, Iowa, August 30 to September 1, 1933. From as far away as Dallas, Texas, Massachusetts and Utah serious-minded hatcherymen, service men, feed and poultry supply dealers came in large numbers to get expert advice and learn all they could about the latest developments in the treatment of poultry diseases.

The group picture on this page shows a part of the people who attended the meetings. It was not the type of crowd that usually attends conventions where more or less of a holiday spirit prevails. These people were in dead earnest and came for a serious purpose, namely, to get information that will help them in their business.

And they certainly were not disappointed. Expressions of approval and words of appreciation that were expressed verbally during the short course and poured in on us by letter since then give us every reason to believe that something truly worthwhile had been offered.

Forenoon and evening sessions were held in the beautiful new high school auditorium which seats 1,500 people. The main floor was usually filled to capacity, and those in attendance listened attentively to the lectures without any evidence of fatigue, even though the discussions lasted from early morning until eleven o'clock at night.

The lectures covered such topics as "Field Problems of Disease Control," "Incubation Problems and How to Meet Them," "The Diagnosis and Treatment of Chick Diseases," "The Use and Abuse of Literature by Dealers," "Flock Management Under Confinement," "Health and Profit in Poultry," "Dealer Sales and Advertising," "Poultry Nutrition in Health and Disease," "Some Observations on Culling," "The Problem of External Parasites," "Today's Views of the Most Troublesome Poultry Diseases," "How to Give Proper Information on Disease Control to the Farmer," "Dressing Your Sales Window," "Brooding Problems," "Merchandising Ideas for Dealers," "Summer Management Problems," "Credits and Collections," "Testing and Vaccination," "Worms and Worm Prevention," etc.

During the afternoons clinics were held in the Manual Arts Building. In order to give everybody an opportunity to see and hear clearly the clinics were held in five different rooms, each treating on a different subject. For instance in one room instructions were given on blood testing with Stained Antigen, in another demonstrations on culling and caponizing, in a third section practical demonstrations were given on post mortem methods, and in the fourth division dealt with vaccination. While people were routed through these four different class rooms in small groups at fifteen-minute intervals, the rest of the people gathered in the large auditorium where birds were posted, and opportunities were given for microscopic practice, to study the latest literature on poultry diseases, to become familiar with the most modern methods of disease control.

Birds were brought in from eleven different states to be posted at the clinic.

This was the third annual short course to be held in Charles City by the Dr. Salsbury's Laboratories and the attendance is increasing from year to year. This year about 700 Dr. Salsbury dealers were present. The object of the short course is to give the dealers the very latest information on disease control so that they may be better able to give their customers the very best poultry health service and apply in practice the ideals of the Dr. Salsbury Laboratories.



A group of the people who attended Dr. Salsbury's Third Annual Short Course.

Roup, Colds and Bronchitis

The Causes—How They Act—What to Do

WHEN chickens have a running discharge from the nose and watery eyes, we usually say they have a **COLD**. When the eyes become large and swollen and the inside of the lids fills with cheesy pus; when the sinuses become full of cheesy material so that the whole face is swollen and all of this is accompanied by a characteristic putrid, foul odor, we call it **ROUP**.



Bad case of eye roup.

When several diseases are present at the same time there may be no two birds acting exactly alike. The stages of infection also are noticeable. Birds that have just come down show the acute, watery secretions, but those that have had the disease for some little time have more of a cheesy formation. Cankers may also be seen affecting the opening to the windpipe, the roof of the mouth, the juncture between the upper and lower beaks, the edge of the nose, eyelids and ears. These cankers practically always indicate a complication of chicken pox.

The bloody phlegm in the windpipe is characteristic of bronchitis and the cankers cause birds to choke to death quickly. The other forms of roup and cold spread through the flock rather slowly. The birds may be sick for a long time but the death rate is usually not very rapid. All of these conditions cause a falling off of the appetite resulting in a loss of weight and decreased egg production. The chickens are sick and disabled very much the same as a person affected with a bad case of cold or flu. Employment records show that colds are the most common causes of lay-offs and so with poultry, roup and colds are the greatest causes of loss in egg production during the fall and winter months.

How Caused

In order to understand the method of handling roup and colds and in order to get the best results one should know something about the causes. With proper information on causes one can better attack the situation and get the upper hand of what might become a bad situation. Following are the causes grouped into four classifications:

(1) Bacteria. There are several species of bacteria that cause roup and colds. Among them the cholera germs, staphylococci, streptococci and green pigment producers. These germs invade and destroy the tissues and bring about pus formation. They also cause toxins and poisons which are absorbed by the system and cause the bird to be sick all



Gasping indicates Bronchitis.

over. That is why birds often have a diarrhea when affected with roup and colds. The inflammation set up around the eyes and nose has more or less been spread to the entire digestive system. The germs cause fever.

(2) Pox Virus. Everyone recognizes the characteristic pox nodules when they appear on the comb or wattles but very often pox virus attacks only the inside of the mouth or other localized places where inflammation is set up and the persistent forms of roup and cankers are produced. On first examination this condition may not be recognized but if you look carefully, you will find some of these pock marks on some of the birds. They may be only small nodules around the eyes, at the base of the comb where it tilts over, around the nose, edge of the mouth, sometimes inside the mouth to form cankers and occasionally on the ears. But notice that they may be quite small and unless you know exactly where to look for them, you may pass them up. Furthermore, you may have to look at several of the birds before you find any. The point is that if any of these pock marks are found on the birds, the underlying condition is beyond question of a doubt Chicken Pox and vaccination with the pox vaccine should be resorted to at once.

(3) Bronchitis Virus. This should be more correctly called laryngotracheitis virus and is a specific condition not at all related to the other two. The virus is so small it cannot be seen even with the most powerful microscope. It invades the windpipe and other parts of the breathing organs and produces an inflammation which results in the production of a thick, glassy phlegm streaked with blood. This is poured out by the tissue cells into the windpipe and



Chicken Pox Symptoms: Small pimples breaking out on comb, wattles, around the eyes, beak and ears.

very soon causes choking. The virus does not seem to be found in the blood but only in the respiratory organs.

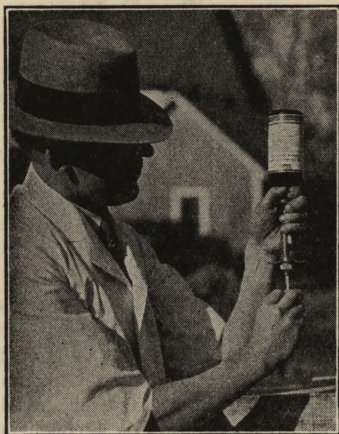
The characteristic of the condition is that it attacks the flock quite suddenly, spreads through the flock rapidly and results in a high mortality. The birds that survive develop an immunity that seems to last for life. The term bronchitis should be reserved for this type of

condition only and should not be confused with Nos. 1 and 2 listed above.

(4) This group includes all the factors that contribute to the other conditions and includes: overcrowding, overheating, sudden chilling, poor ventilation, exposure to wet weather, improper feeding, secondary devitalizing conditions such as worms, chronic coccidiosis, lice and mites. This grouping is very important because if all these factors are neglected, specific treatments given for the conditions listed under 1, 2 and 3 will not respond readily to the treatment. Let this classification simplify the understanding of respiratory troubles so that you can more easily carry on the treatment, which is the next step.

What to Do

The treatment of roup and colds can best be taken up in the same order as the causes. For the bacterial forms vaccination with the Mixed Bacterin is almost 100%



Proper method of filling syringe.

satisfactory. The immunity built up against the germs routs them from the inside. The secretions dry up and the tissues heal quite rapidly. The immunity also prevents other disease germs from getting into the tissues.

In addition to vaccination, treat the infected birds locally, that is, by means of an instrument called a nasal syringe, wash out the sinuses with a CAM-PHO-SAL solution. If the pus and rotten material is not re-

moved from the sinuses, the bird has a poor chance to recover. It is like an abscess or boil. The foul material must come out. In the early stages it can be very easily removed by fitting the nasal syringe up against the roof of the mouth and forcing the medicated liquid through the nose and eyes. The secretions will be washed away, the antiseptics will kill the germs. When hard, cheesy cores are formed and the condition has become chronic, an operation is necessary. With a sharp knife one may cut into the bulging parts and with a pair of forceps the material may be removed. Then irrigate the sinuses with CAM-PHO-SAL solution to kill the germs and stop the bleeding. The operation tends to be bloody because there is a good deal of blood around the head. Be sure to make the opening large enough so that all the material may be washed out. Small openings close up so quickly that they do very little good. Make a bold, generous cut. For better understanding on how the pus accumulates in the sinuses, look at the picture on page 8.

How to Vaccinate

It is simple and easy to vaccinate with the Mixed Bacterin. First, see that the vaccinating syringe is in working order, tighten the plunger by turning the handle to the right so it feels just right and has the proper suction. Pull the plunger out completely, fasten the needle to the syringe and insert the needle through the rubber stopper of the Bacterin bottle. Hold the bottle upside down. Force the air from the syringe into the bottle and then release and draw the fluid into the syringe. If it is not full the first time successive pumping strokes will expel the air and fill it completely. Withdraw the needle from the bottle and you are ready to vaccinate.

Have someone hold the bird with side toward you feet up and head down. With the left hand run the fingers between the feathers along the breast, find the area where there is little feather growth. Here insert the needle, push the plunger until the proper amount is given, withdraw the needle and pinch the opening left in the skin with the thumb and finger of the left hand. This keeps the bacterin from running out through the hole. You are then ready for the next bird. Birds may also be laid on the table and held there by an assistant. This method is used for all kinds of bacterin vaccination.

How to Spray for Roup

Spraying the entire flock with Cam-Pho-Sal is the easiest way to treat roup and colds. It is particularly satisfactory in the early stages. Two or three things must be kept in mind when spraying. First, be sure that the build-

ing is tight so that the drafts will not take the fumes away. It is necessary for the birds to breathe the medicated vapors for 15 or 20 minutes in order to get any good from the work. Confine the birds to as small space as possible, to get the birds to inhale just as much as possible. Use three teaspoonfuls of CAM-PHO-SAL to each one-half pint of hot water and spray a half-pint of this solution for each 100 birds every time you spray. In severe cases spray once every hour during the first day, after that spray 3 or 4 times each day. Spray at least twice each evening after the birds are settled for the night.

Another method of generating CAM-PHO-SAL fumes in the air is to mix 3 teaspoonfuls of CAM-PHO-SAL with half a pint of water in a bucket for each 100 birds. Put the bucket on the roost and drop a red-hot brick into the bucket. Repeat every three hours.

When the weather is damp one can get better results by mixing one part of CAM-PHO-SAL with seven parts of kerosene and spray it as directed above. The CAM-PHO-SAL and kerosene mixture stays in the air better and does not produce an excessive amount of moisture when this is not desirable.

For spraying birds in batteries, cover the batteries with canvas or gunny sacks to confine the medicated vapors to the birds in the batteries. It is only the vapors that reach the chicks' breathing organs that do any good.

When spraying, use a good continuous sprayer that develops a fine mist. Avoid a poor fly sprayer that squirts rather than sprays. In larger houses, use a sprayer of such size as will spray fast enough to thoroughly saturate the atmosphere.

To help check the bowel trouble which always accompanies, put two PHEN-O-SAL tablets in every quart of drinking water and milk. Do not overlook this important point.

POX as a complication of colds requires special attention. If pox has just started in a flock, the birds should by all means be vaccinated with the Pox Vaccine. If this is not done, the trouble is apt to keep on spreading slowly for months. It will take about two weeks to develop an immunity following vaccination but after that there should be no new cases of pox.

Vaccination may cause some setback but it is better to take the setback all at once than it is to take chances on having the disease spread through the flock for a long period of time. Flocks that have had the disease for a long time may be too far gone to vaccinate. It does no good

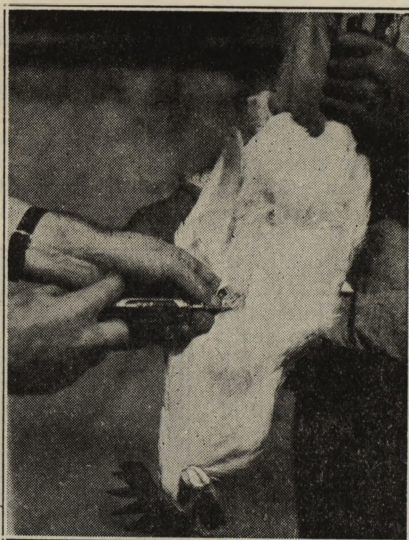
to use the Chicken Pox Vaccine on birds that have already had pox.

The Place for Pigeon Strain Pox Vaccine

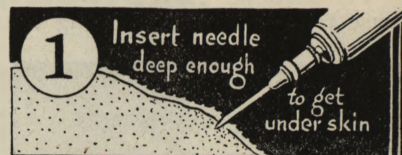
The pigeon strain vaccine may be used on laying birds and in affected flocks with greater safety than the chicken strain. It is the proper vaccine to use in emergency cases where one cannot take a chance on the setback following the regular chicken pox vaccination. The only point to keep in mind is that the immunity following the pigeon strain vaccine lasts approximately three or four months.

How to Apply the Pox Vaccine

The pox vaccine is applied to the
(See page 11)



Method of inserting needle.





OUR NEW BUILDING

Under Construction

On September 19 contracts were signed and let by Dr. J. E. Salsbury, president of the Dr. Salsbury's Laboratories for the construction of a new office and laboratory building, and work was started the following day. The building will be located in Charles City, Iowa, south of the river on paved highways 218 and 18. It will be a three story structure of fire-proof construction throughout. The materials used will be re-inforced concrete, brick and tile with Bedford stone trimmings.

The plans call for a building complete in every detail. The main, or second floor contains the general offices, equipped with accousticon ceilings and resilient floors, and the private offices. Of special public interest will be a museum case built in the hallway. When completed this case will contain a variety of poultry disease specimens. This museum will be maintained for its educational value. Display space is also provided for a complete educational program. The entrance and public waiting room is attractively designed.

A mailing room on this floor is arranged to take care of the extensive dealer mailings and the distribution of the Poultry Health Messenger. Shipping facilities and a large storage refrigerator complete the arrangements on this floor.

Approximately half of the third floor is devoted to the Biologic Department. This is maintained under government license and approval must be had from Washington for every item of construction and arrangement. This unit is entirely separate from all other departments. In this unit will be found a private office with built-in library facilities, coat closet and running water and a group of separate rooms for the preparation of Fowl Pox Vaccine, for transferring cultures, for harvesting cultures, for mixing and also for labeling. A large kitchen is equipped with both hot air and steam sterilizers and with commodious work tables. Separate rooms are also provided for the preparation of Anthrax and Black Leg products. Two large incubators and one large working refrigerator are located in the center of the unit and are easily accessible from all the other work rooms. Elaborate cabinets are planned for each one of these rooms to take care of the precise and technical requirements. The popular reception accorded Dr. Salsbury's bacterins and vaccines has necessitated a very complete unit to take care of the future demands.

The remainder of the third floor is utilized for pharma-

ceutical manufacture. In this department will be found large mixers, rapidly revolving tablet making machinery and huge copper pans for coating the tablets. Labeling of the finished products will be done on this floor. Space is also provided for storage. Skylights and fans in both departments of the third floor overcome any dark corners and provide adequate ventilation.

The first floor contains separate units for the production of Fowl Pox Vaccine and Bronchitis Vaccine. Both of these units are entirely separate from all other departments and also come under U. S. Government supervision. A chemistry room, experimental room for research work and a diagnosis room are located on this floor.

Dr. Salsbury's new school on poultry diseases will also be housed on the first floor. The facilities for the school will consist of lecture rooms and laboratory rooms fully equipped to give instruction on poultry diseases in a scientific and practical way. The educational staff of this school will consist of veterinarians and other instructors each of whom is an expert in his particular line. The school is a development of Dr. Salsbury's fundamental business principle, to render the kind of poultry health service that all poultry raisers need and want. The course will be of about thirty days' duration. A more detailed announcement regarding this school will be made soon. Detailed information will be sent to all those interested in such a school.

For the convenience of students and employes such things as drinking fountains with chilled water, commodious cloak rooms and showers have not been neglected. These comfortable accommodations will enable not only the production of high grade products but a pursuit of experimental laboratory and research work for the advancement of scientific knowledge on diseases of poultry and their treatment under practical conditions.

It is the rapid growth of the business as a result of Dr. Salsbury's popular poultry health service that has made this new building necessary. It will provide ample facilities to enlarge the present service and to make it more valuable than ever to the thousands of poultry raisers in all parts of the world.

The company will continue to use the present building to do a part of the manufacturing and as a warehouse. The new building is to be completed about January 15, 1934.

Jeff in The Speed Trap

An Original Story
By William Herbert Rice

"DARN!" exploded little Mrs. Morrison, bursting into her husband's store. "Darn-Darn-Darn!" "Naughty, naughty!" chided her husband, reaching for a bottle of Cam-Pho-Sal, "Papa'll have to wash mama's mouth—"

"I don't care, Jeff!" she flared, crushing the letter in her hand, "Mother writes that she isn't coming to Long Island this summer—says she's taking no chances on a dinky island."

"Dinky?" echoed Jeff. "Why, Long Island's a hundred and twenty-five miles long! Isn't a Somnambulist, is she, Janet?"

"No, a Methodist. Oh!" she wailed, her chin quivering, "I might have known you were just teasing."

"There, there!" comforted Jeff, hurdling the counter and throwing his arm around his wee wife. "I'm awfully sorry, honey—but what's to be done?"

"I—I don't know," sobbed Janet, "I—I—Oh! I know, Jeff! If Mohammed can't go to the mountain, the mountain can go to—"

"Holland, Michigan, and Mother's—eh? No, Janet; not a Chinaman's chance! Of course," he continued, "you can go, but I must stick around and dig myself out of the red. Business, you know—"

"Business!" pouted Janet, "Always Business! Listen, big boy," she smiled, standing on tip-toe, and running her fingers caressingly through his thick Titian thatch, "this is the only 'red' I'm interested in. You know, Jeff, since you branched out of the feed business and started handling Dr. Salsbury's poultry remedies, you've been sitting pretty. The Doctor's panaceas and pills for pale pullets have made a hit around Tuperton Corners, and made you famous, besides. What you should do, now, is to drive out to Iowa and take the Doctor's 'shortcourse'—you know—the one at Charles City, where poultrymen from all over go each summer to learn to dissect chickens and study inside stuff. It would be money in your pocket, Jeff!"

"So?" scoffed Jeff.

"Pos-i-tively!" insisted Janet. "After you come back, you'd triple your sales; you could hold clinics, post mortems, test chickens for B.V.D.'s and—"

"They don't wear 'em around here," grinned Jeff.

"There you go!" flushed Janet. "Anyway, you know what I mean; and, Jeff," she rattled on, cuddling closer, "on your way out, you could drop me at mother's in Michigan and—"

"Nothing doing!" interrupted Jeff. "You're a slick little sly-boots. I'll bet you could gold-brick a Scotchman. The trouble is, your little scheme's impossible—and that's that!"

"Oh, yeah?" said Janet, smiling.

Five mornings later, they started for Iowa. Father Knickerbocker was still in his nightshirt when they bridged in, and tunneled out, of Manhattan. In Mid-afternoon, high in the pine-clad Alleghenies of Pennsylvania, they stopped to refill themselves and their motor.

"When you hit Scot City, 'bout six miles ahead," warned the gas man, "take it easy. Th' Constable and th' J. P.

are in cahoot, there. Keep 'er down to fifteen—or else."

A tiny speed limit sign, three sleepy stores and an antiquated car, was all that they saw when they eased into Scot City. Cautiously, they inched past the slow-motion car. Suddenly, its city-sized siren let loose, and—startled by its raucous scream, Jeff jammed on the brakes. The noise maker drew alongside.

"Where's the fire?" demanded a collarless old codger, climbing from his car and displaying his shield. "You're under arrest, young feller, for speedin'!"

"Speeding?" gasped Jeff, "Great Guns! I was crawling!"

"Passed my car—didn't you?"

"Yes, but—"

"No buts about it! My car's geared down to fifteen, exact. Any car passin' mine, is exceedin' th' speed limit. Follow my car, young feller—and no tricks!"

As the Constable and his prisoners entered the J. P.'s yard, they met the tall, cadaverous, shifty-eyed arbiter.

He was clad in overalls and carried two dead chickens in his hand.

"Afternoon, Judge!" grinned the officer. "Here's another. Usual charge; caught him speedin' lickety-split through Main Street; claims he's a poultry expert from down Long Island way."

"Poultry expert, huh?" growled the J. P. "Th' woods is full of them fakirs! Well, young feller, how about it—guilty?"

"The officer says so," shrugged Jeff. "How much?"

"Ten dollars, or"—the J. P. paused—"or, I'll tell you what I'll do. I'll halve your fine, providin' you tell me what ails my chicks. They're dyin' like flies."

"OK!" agreed Jeff. "We'll look into it." Without a word, he took one of the J. P.'s dead chicks and opened his penknife. With sure hand and dextrous speed, he laid bare each organ. Finally, he paused. "Look!" he said, "green liver—white spots all through; red specks on the heart, spleens large, mucus in intestines. That's Hemorrhagic septicemia and typhoid, you know."

"Meanin' which?" quizzed the J. P.

"Cholera. It comes from a germ in the blood—the Pasteurella avicidia. You see," he explained, "the little devils get into the blood from contaminated food and drink, it's just too bad. It's the only chicken disease that kills quickly—mighty infectious and spreads like bad news. The thing to do," he continued, "is to vaccinate the whole flock."

"Not 'by a jugful!" sputtered the J. P. "I won't have my chickens cut to pieces!"

"You don't understand," laughed Jeff. "All you do is inject the Cholera Typhoid Bacterin under the skin, the disease is fought off by the bacterin and in a couple of days you'll lose no more. I've got a syringe along and if you and the Constable will lend a hand, I can vaccinate your flock, pronto. Nine cents a bird, including the Bacterin," he added.

"Let's see," computed the Pirate. "Ninety grown-ups



Aided more or less—by the clumsy, cussing limbs of the law,
Jeff vaccinated the flock.

and sixty chicks at nine cents. That's exactly twelve dollars—Right?"

"Wrong as two rabbits!" checked Jeff, "but—fork over! Thanks."

Two hours later, the job was finished.

Aided more or less—by the clumsy, cussing limbs of the law, Jeff vaccinated the flock and culled out the hopeless cases, disinfected the chicken house with Salsbury's Poultry House Disinfectant, prescribed the Phen-O-Sal for the drinking water, corrected the ration to suit the sick flock and—to even up for his fine—sold the J. P. his syringe for five dollars.

Chuckling over his good deed of the chicken coop (and his financial coup, as well) Jeff hustled for his car. To his surprise, Janet—flushed with excitement—was behind the wheel with the engine running. "Jeff!" she whispered, "Jump in—Quick! I heard the old crooks scheming! They think they're going to nab you again," she panted, sliding into gear, "and get back the money that money the J. P. paid you. Look! The old buzzard's cranking his car—"

"Let's go!" snapped Jeff, leaping in. "He might—"

"Never fear, big boy," giggled Janet, stepping on it, "I let the air out of his tires."

In the next issue read what Jeff saw and heard at Dr. Salsbury's Short Course in Charles City.

The Fall Worming

Fall is naturally the time for such homely chores as house cleaning, remodeling and other neglected jobs. Wormy chickens is the sign of a neglected job and therefore the fall worming has become a regular program on most farms. Now is the time to get the pullets as well as the old hens in condition to stand the rigors of heavy winter laying and they should be wormed just as soon as possible. The most popular method of worming is to use Dr. Salsbury's Combination Kamala-Nicotine Caps for both round and tapeworms. With one individual treatment the job is over. Where flocks are affected only with tapeworms Dr. Salsbury's Kamala Caps should be used or where they are affected only with round worms the Nicotine Caps may be used. Some people prefer to use these two Worm Caps a week or ten days apart because they feel that a better job can be done if the round and tapeworms are removed separately. When there is no objection to handling the birds twice, this is a very good procedure to follow.

Wormy birds have inflamed bowels; they have a great deal of toxins and poisons in the system. These things should be taken into consideration when worming the birds and better results will be had. If the birds are put on preparatory treatment using Phen-O-Sal in the drinking water and a tonic such as Avi-Tabs in the mash for four or five days before worming, the birds will go through the period in much better condition. While the cost is a little bit higher this way, the birds stand the treatment so much better and come through in so much better condition that it makes the extra treatment very much worth while.

Following the worm cap treatment plan to start the birds on a monthly worm prevention program using Avi-Tabs. For the small microscopic tapeworms that are often found deeply imbedded in the intestinal lining, there is nothing superior to continued treatment with Avi-Tabs.

Spray the Litter, Roosts and Yards

with

Dr. Salsbury's

Mite Death Disinfectant

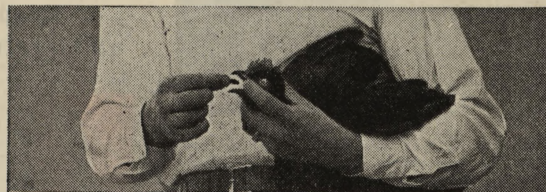
For the ordinary disinfection of the poultry house mix it with water according to directions on the label. For combating mites, lice, coccidia and worm eggs, mix one part of the Disinfectant with three parts of distillate or light mineral oil.

The most economical and satisfactory time tested spray on the market.

WORM

Your **FLOCK**

The Successful Way



Dr. Salsbury's

NEW LINE OF WORM CAPS

For Chickens and Turkeys

Poultry raisers will welcome this good news . . . a new line of Dr. Salsbury's CAPS that provides a Cap for every need. Gives you a specific worm treatment for each type of worm infestation . . . assures the most satisfactory results.

NICOTINE CAPS

for Round
Worms

Contains the recognized, fully-approved dosage of 2 grains of Nicotine Sulphate per tablet in adult size Caps so that results will be assured. Caps are properly coated.

KAMALA CAPS

for
Tapeworms

Contains the right amount of pure Kamala powder and extract per tablet to get the worms. The Caps are properly coated, holding their medicine intact until they strike the seat of the worms.

KAMALA- NICOTINE Combination Caps for Both Kinds

These balanced Combination Caps are properly coated, blended with supporting and stimulating drugs that keep up the heart action and body functions while the other drugs are acting on the worms.

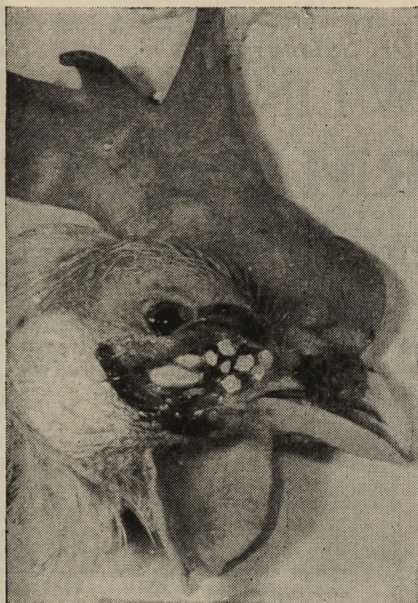
Dr. Salsbury's WORM CAPS are prepared in such a way that the medicine is not liberated until it gets into the intestines where the worms are located. They are properly coated so that they are easy to give and the medicine is protected from evaporation and disintegration. There is real value in these Worm Caps at our new low prices.

You will find the sizes and prices of the above new line of Dr. Salsbury's Caps on page 14.

ROUP—COLDS—WORMS—A



Roup affects the eyes, nostrils and mouth, producing first a watering, then pus and finally cankers. Early treatment pays.



The skin of the face has been cut away to show the deep-seated cankers and cheesy substances in the sinuses. Note how the pus goes in with finger-like projections even back of the eye. The nose is full of sticky secretion.

They Take the PRO

ROUP

Roup and colds may be classified into four groups as to cause and treatment.

1

Bacteria of various kinds cause about 85% of all forms of roup and colds. For this condition vaccinate with Dr. Salsbury's MIXED BACTERIN (FOWL) and spray with CAM-PHO-SAL. Immunization with the Bacterin and spraying brings about quick relief in the bacterial forms of colds.

2

Pox virus is another common cause of the persistent roups particularly when complicated with cankers and diphtheria. Pox can be entirely prevented by vaccinating with Dr. Salsbury's CHICKEN POX VACCINE. It may be used in affected flocks when necessary. Treat the sores with CAM-PHO-SAL.

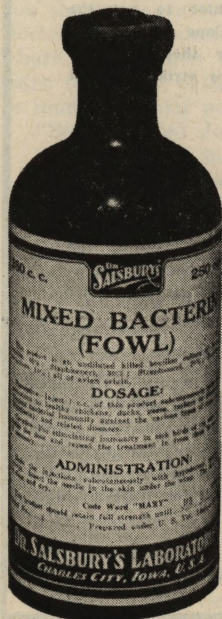
3

Bronchitis virus, technically called laryngotracheitis produces a disease with gasping, sudden onset and high death rate. Run temperatures high, spray with CAM-PHO-SAL. Bacterin vaccination is only of indirect value.

4

Poor ventilation, overcrowding, sudden changes in the weather, poor feeding, chronic coccidiosis, worms, lice and mites reduce the vigor and vitality of the chickens so that they are more susceptible to roup and colds.

For best results in treating and preventing various bronchial troubles, do not let any of these conditions prevail.



Chickens may be successfully wormed and vaccinated at the same time. This eliminates extra handling and disturbing. It pays to give the chickens the treatment they need for what ails them.

*A sick hen cannot pay
her hospital bill nor
a dead hen her
funeral expenses*



Before Worming

◆ PROPER WORMING AN

e the FALL HEALTH Problems!

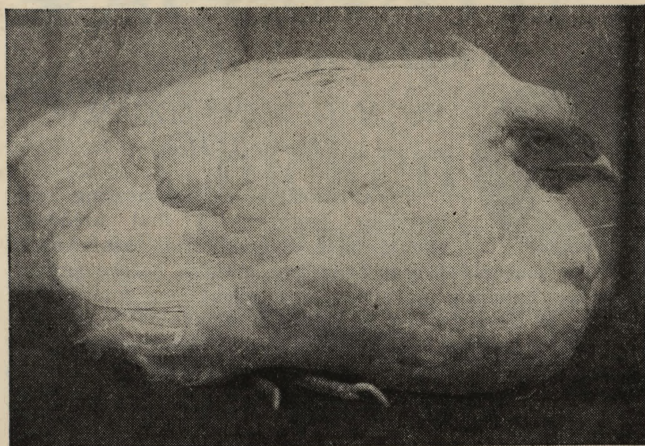
FIT Out of POULTRY Raising

WORMS

Do not let the chickens go through the fall and winter having their vitality and strength sapped by the destructive worms. Get rid of the worms now so the birds can become profitable for you. To be money-makers, chickens must be healthy; to be healthy, chickens must be free from worms.

There are three important kinds of worms; tape-worms, round worms and cecal worms. Each one causes its own type of illness and is located in its own favorite portion of the intestines.

Treatment for worms should be done in an intelligent manner, keeping these facts in mind. Intestinal healers, tonics and follow-up measures have a definite place in the worm control program.

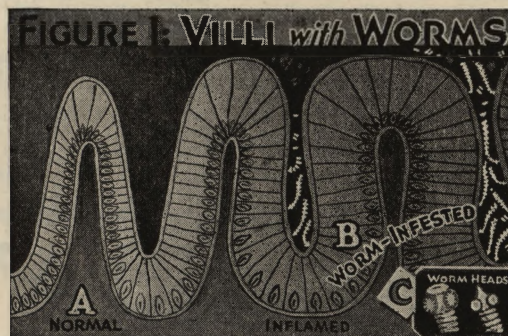


Worms in chickens cause a variety of symptoms. In young birds ruffled feathers, unkempt appearance and underweight are characteristic. In older birds paralysis, run-down conditions and laziness indicate unprofitable birds.

See your dealer (name on back page)

Complete schedule of prices in various sizes on page 14

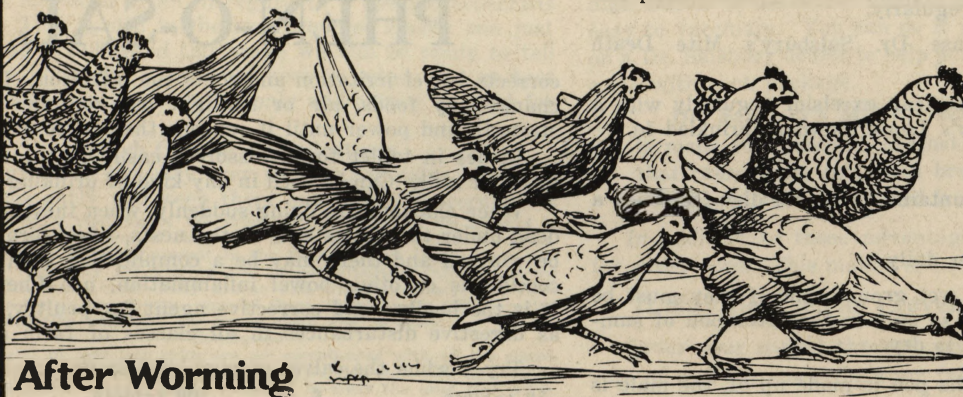
For tapeworms alone use KAMALA CAPS. For round worms alone, use NICOTINE CAPS. When both kinds of worms are found in the same flock, use the COMBINATION KAMALA-NICOTINE CAPS. It is the most practical one to use under average conditions and is the most popular with poultrymen.



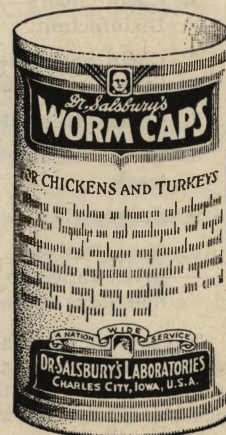
The above drawing shows the arrangement of the villi or lining of the intestines and where the small worms are located. Notice that many of them are well hidden in the folds.

As a flock treatment for mild infestations and for deep-seated microscopic tapeworms, use Avi-Tabs in a moist mash.

As a general tonic and for the ordinary run of worms use Avi-Tone Powder in the dry mash. These medicines pay their way many times over in increased vigor, vitality and production.



After Worming



D VACCINATING PAYS

Some Common Sense Thoughts about BREEDING

as told to A. V. Amet



By M. L. "SLIM" LOGAN,
Parnell, Mo.

In a life-time of trap-nesting and breeding Leghorns I find breeders should have a good rest before each breeding season. I rest hens two months before saving eggs for hatching purposes, and about one month for pullets. If birds persist in laying I remove all mash and trough feed scratch grains until egg production shows a big drop. As soon as the molt and resting period is over I resume mash feeding. My birds always lose body weight rapidly on going into a molt, but come back in weight before they return to normal egg production.

Our old friend Mendel, over in Europe, years ago taught that "like begets like." Strong stock lays lots of eggs, producing strong healthy chicks that develop into money makers whether pullets or cockerels.

Breeding has always been a common sense and simple plan with me. Working hard with plain common-sense will make success in breeding.

I find above all else my breeders must have size and vigor, they should be true to type and breed characteristics. They should be able to produce big eggs and eggs with strong, uniform shells. Chicks that are to be strong and vigorous must come from strong and vigorous breeding stock. I ask my friends to learn of the background and kind of birds my chicks come from.

Regardless of breeds, or breeding, feeds, or feeding I find the greatest need of my friends and neighbors in the poultry business is cleaner houses and cleaner poultry establishments. I try to keep in mind constantly that these ten cardinal rules faithfully followed will assist me most as a breeder:

1. Proper ventilation without draft.
2. Absolute cleanliness.
3. Clean roosts—I use Nic-Sal regularly.
4. Clean droppings regularly.
5. Clean floors—I use Dr. Salsbury's Mite Death Disinfectant.
6. Clean nests—I use clean excelsior regularly with a little Dr. Salsbury's Louse Powder sprinkled in.
7. Clean litter often.
8. Clean drinking fountains daily and disinfect once a week.
9. Supply clean water daily.
10. Keep birds off of wet ground, and if they must be given range to do so only in the afternoon of summer days when it is dry.

Regardless of what the pen is made up of, the male is going to exert half the influence of the entire bunch of pullets raised from that mating. One vigorous Leghorn cockerel can be given 25 hens and under ideal conditions fertility will be very good. The average poultryman will

hatch these eggs around 100 days each year, a fairly good hen will lay 60 eggs during this time, from 25 hens he gets 1,500 eggs and hatches 1,000 chicks, after allowing 20% for loss and rigid culling of the pullets he has 400 good pullets for the laying house in the fall.

You will find this male your most valuable asset or your greatest liability, depending entirely on the vigor of the male and the breeding behind him. If the breeding is unknown it is a "hit and miss" proposition—and you generally "miss." If the breeding is known and is right, you eliminate the miss and the good results are sure to follow. You keep a male for one purpose only, viz., to reproduce. If that male comes from known high producers as proved by the trapnest only, then you may expect and get a very substantial increase of eggs from the pullets above what their mothers laid. From the very common hens this kind of a male will double the egg production of the pullets over their mothers the first year. From fairly good hens this male will increase his pullet eggs from three to five dozen eggs above their mothers. It's a very conservative estimate to say this kind of a male will increase egg production in his pullets at least three dozen eggs per pullet above their mothers. From the 400 pullets you will have 1,200 dozen extra eggs, most of these extra eggs will come in fall and winter when they are highest in price. Figure this out for yourself, any way you like, figure them at the lowest price possible and the value of the good breeding male that is right is worth from ten to twenty times what you would have to pay for him without figuring the increased value of his female progeny. If our estimate is right, and we believe it is, then every poor mongrel male you use this season will cost you \$100 or more in real cash loss.

Don't be like the man at the circus that stood a long time looking at the giraffe, then turned to a friend and said, "There 'ain't' no such animal."

BOWEL TROUBLES

In Fall and Late Winter

Such as Diarrhea accompanying colds, from cholera, typhoid, blackhead infection or irritation from worms. Any of these conditions produce foamy, yellow, green, mustard and other types of off colored droppings. Off colored droppings indicate bowel trouble and for bowel trouble there is nothing better than PHEN-O-SAL. It has been adopted from medicines used in human medicine during the war and found to be very effective.

Dr. Salsbury's

PHEN-O-SAL

corrects bowel irritation and routs the infection. It is not changed by foods, air or sunlight but contains its full strength and power until it reaches the source of trouble.

Comes in tablet form, dissolves easily in the drinking water or milk. Can be used in any kind of drinking vessels.

When chickens are dying suddenly, when they are found dead under the roosts and on the nests, when birds are to be wormed and there may be a complication with chronic coccidiosis or other bowel inflammation, use Phen-O-Sal. It is the healing and corrective agent for poultry, as well as digestive disturbances in all classes of farm animals.

Try it when the calves or pigs have scours.

50 tablets.....	\$.50	300 tablets.....	\$2.00
125 tablets.....	1.00	500 tablets.....	3.00
		1000 tablets.....	\$5.50

ROUP, COLD AND BRONCHITIS

(Continued from page 4)

skin with a brush that comes with the package. The same method is used for both the chicken and the pigeon strains. By plucking a few feathers some of the vaccine may be brushed into the feather follicles. A "take" develops in from five to ten days and immunity begins shortly thereafter. The Chicken Pox Vaccine produces a much more pronounced and more easily visible "take" than the pigeon strain. The stick method may also be used but preference is always shown for the follicle-brush method.

In addition to the vaccination treatment, follow the plan outlined above for roup and colds. The Mixed Bacterin may be used to build up an immunity against the germs but it will not be specific against the pox because pox virus and the Mixed Bacterin are two entirely separate things and one does not immunize against the other.

Cankers and Diphtheria

Cankers and the diphtheritic form of roup may be caused by both bacteria similar to roup and by the chicken pox virus. If the cankers are caused by the virus there should be evidence of pock marks on the outside on some of the birds in the flock. If the cankers are due to pox, treat the same as outlined for pox. If they appear to be due to bacteria, treat the same as for roup and colds, using Mixed Bacterin and CAM-PHO-SAL.

The Treatment for Bronchitis

In handling the virus type of bronchitis every effort must be made to dry up the secretions and the bleeding in the breathing organs so that the bird will not choke to death. Since these secretions accumulate rapidly it is important that the treatment be started just as soon as possible and be pushed vigorously.

It has been found very helpful to heat the room in which the birds are housed to a fairly high temperature, that is, 80 or 85 degrees Fahrenheit. A brooder stove or any other stove that is available may be installed quickly and the house should be kept at even, high temperatures, doors and windows closed and only the ventilating system left operating. Follow this with CAM-PHO-SAL spray as directed under the heading of "Spraying" in this article. If these measures are done promptly and enough medicine is used to actually give the birds a chance, response will usually be quite satisfactory. If the work is delayed or done in a haphazard manner, doors and windows are kept open so that medicated fumes are dissipated in the air, success is less certain.

In all cases in which fever and inflammation is set up, use PHEN-O-SAL in the drinking water to allay the irritation and enable the birds to carry on digestion more near normal. If one is not sure as to the presence of bronchitis virus one may safely use the bacterin to vaccinate the birds.

Cholera germs are very common contenders in these respiratory troubles and the Mixed Bacterin is the proper one to use because it contains a high percentage of immunizing properties against these germs. A good deal of publicity has been given in regard to a specific bronchitis vaccine. This is still in the experimental stages and just as soon as it is beyond this stage we will be ready to tell you more about it. One must keep in mind that at best this virus will be a preventive only and cannot be used for curing sick birds.

Watch Out for Complications

Wormy birds fall easy prey to roup and colds. Remove the worms early and keep them out. Chronic coccidiosis manifested by a swelling of the intestine just back of the gizzard is a very bad complication of roup and colds. Use the coccidiosis treatment when you find this present in the flock. Check the feeding conditions so that they are getting the proper vitamins through yellow corn, alfalfa meal, other leafy greens and when necessary, cod liver oil. If the houses are drafty, remodel them, insert straw lofts, provide proper ventilation and keep the house clean and sanitary.

Conclusion

All forms of roup and colds are not complicated with all the above-described conditions, but these are enumerated that you may understand the various angles and be better prepared to treat the ones that arise. Reread the article, study the pictures on these pages as well as elsewhere in this issue until you have a clear-cut picture of this very common affliction of poultry.

The same discussion applies to practically all forms of roup and colds in turkeys, ducks, geese and pigeons and treatment for each species is the same, adapting them only as best one can to the circumstances under which the birds are housed.



VACCINATE

Against

Chicken Pox

In the Laying Flock Use the Pigeon Strain Vaccine
It Does Not Produce Setback or Unfavorable After Effects

For younger birds and when a permanent immunity is desired use the Fowl Pox Vaccine, chicken strain.

NEW PRICES ON

Dr. Salsbury's

Chicken Pox Vaccine

100 doses, retail.....	\$1.00
500 doses, retail.....	4.00

No discount for quantities up to 5,000 doses. On 5,000 up to 10,000, 3% discount is allowed. Over 10,000 doses, 5% discount is allowed. The above prices on Pox Vaccine apply to single orders and not on accumulated business. The pigeon strain and the chicken strain quotations are the same.

VACCINATE

Your Birds Against

Roup and Colds

Do you know that from 85 to 90% of all roup and colds can be successfully treated with Dr. Salsbury's MIXED BACTERIN (FOWL)? Where else can you get such a high degree of assurance against disease. It is simple and easy to vaccinate. You can do it yourself, or you can call on a Dr. Salsbury dealer to help you. Complete instructions come with each package.

Dr. Salsbury's MIXED BACTERIN for fowls is made to immunize against the common germs that cause roup, colds and bronchitis. It is properly aged, triple tested and is of full strength.

In addition to these advantages you get one full c.c. for every dose. This makes it a most economical bacterin.

It May Be Used as Preventive and Curative

Order your supply through your dealer at once and be sure of a fresh stock for your fall vaccinating.

120 c.c.....	\$2.40	1000 c.c.....	\$15.00
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Other size containers in proportion. See page 14.

Our Daily Mail

Paralysis From Affected Nerves

QUESTION: I am sending you two chickens by express and wish to have you examine them and find out what the trouble is. We've had this trouble for two years, and now the young chickens are commencing the same way. Some of the young and old birds have been diagnosed as leukemia aggravated with the virus type of paralysis.

Answer: Examination of these birds showed them to be infested with microscopic tapeworms, large round worms and a few coccidia. They also had a few tumors and diseased wing and leg nerves. The paralysis was undoubtedly caused by the affected nerves. We would suggest that you put the entire flock on a ten-day treatment of AVI-TABS using one tablet to every five birds in a moist mash. At the same time use 8 PHEN-O-SAL tablets in each gallon of drinking water. Thoroughly clean and disinfect the premises. There is no specific treatment for diseased nerves, but we find that by removing the worms and improving the general health and condition of the flock you will increase their resistance to this type of infection. Also give them a five-day treatment with AVI-TONE once a month as a general conditioner and tonic. This type of paralysis has been accused of being transmitted through the eggs. Bear this in mind should you consider using the eggs for hatching purposes.

Paralysis Caused by Microscopic Tapeworms

QUESTION: I am sending you two young chickens to post. They look wormy. I posted one but failed to find any worms excepting one round worm. These chickens are April-hatched, have been fed all they can eat twice a day and have free range. They are undersized for their age. I found a small white worm in the droppings. It is the size of a darning needle and less than a quarter of an inch long. Can you tell me what they are?

Answer: The cockerel which you sent was affected with a very large tumor on the gizzard, seriously affecting the functions of the digestive organs. There were several large tapeworms also present in this bird. In the small paralyzed bird we found a great many microscopic tapeworms causing severe intestinal inflammation. The bones were very soft, indicating that the worm infestation had upset the assimilative functions of the intestines.

We would suggest that you put the entire flock on the following treatment. Give each bird a KAMALA CAP to be followed with a ten-day treatment of AVI-TABS, using one AVI-TAB to every five birds in a moist mash as a daily treatment. Also give six PHEN-O-SAL tablets in each gallon of drinking water throughout the treatment. To put the birds in good condition we would suggest that you give them a well-balanced conditioning mash carrying a high content of minerals and cod liver oil. Also give them a five-day treatment of AVI-TONE once each month as a stimulant and tonic.

There is no specific treatment for the tumorous condition; as a rule it does not spread. The small white worm you spoke of was undoubtedly a cecal worm. These are very common in poultry and are comparatively harmless.

When Birds Will Not Eat AVI-TABS

QUESTION: Last week I ordered some of your AVI-TABS but

I cannot get the birds to eat the mash or ground feed in which the AVI-TABS have been mixed.

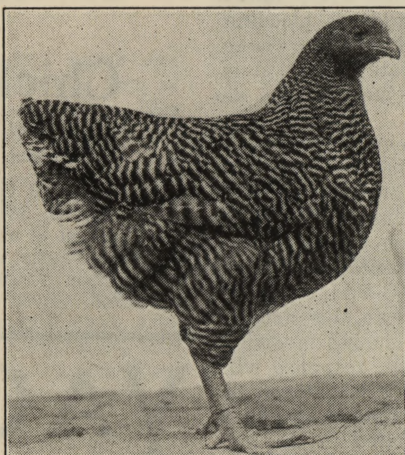
Answer: Usually poultrymen do not have trouble in getting the birds to eat the feed with the AVI-TABS in it. However, occasionally, a flock refuses to eat it when mixed according to the directions on the package. We would suggest that you add a little milk in the moist mash or pour some molasses over the top of the feed. Chickens usually eat coarse ground corn readily and this may be used for giving AVI-TABS.

Peritonitis, Lameness, Coccidia

QUESTION: Two birds, a White Leghorn and a Buff hen sent for laboratory diagnosis.

Answer: The White Leghorn was affected with microscopic tapeworms, lameness and a few coccidia. The buff hen had a severe peritonitis and intestinal inflammation. We found no worms or coccidia in this bird. If these birds are from separate flocks we would suggest that you treat the

White Leghorns for tapeworms, using a 10-day treatment of Avi-Tabs using 1 Avi-Tab to every 5 birds in a moist mash as a daily treatment. At the same time use the PHEN-O-SAL tablets in the drinking water as directed on the package. For the flock from which the buff hen came, we would suggest that you vaccinate with Mixed Bacterin and give them eight PHEN-O-SAL tablets to each gallon of drinking water for approximately one week, depending upon the rate of recovery. If the birds are from the same flock it would be advisable to treat the entire flock for worms and also vaccinate with the Mixed Bacterin.



Pasteurella Avicidia Organisms in Turkey

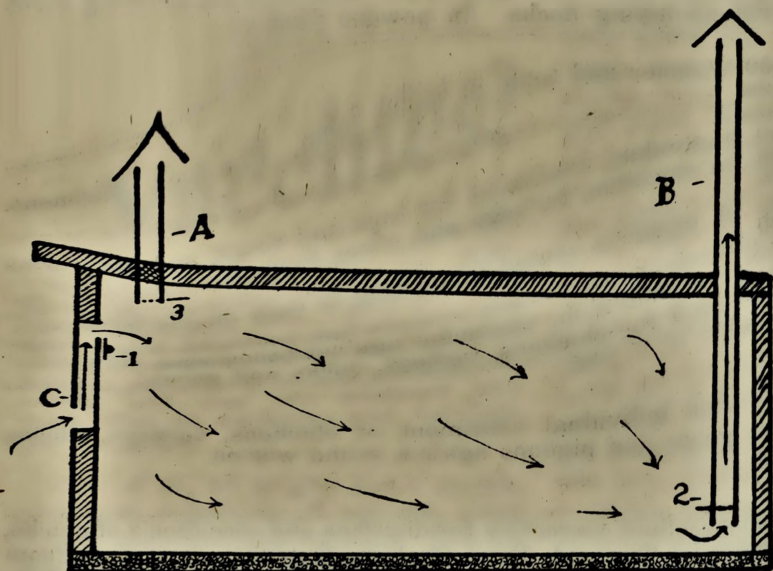
QUESTION: We are sending by express a part of a turkey. There has been a loss of 25 birds in 15 days and our local and state veterinarians are unable to ascertain the cause. We found the presence of hair in the flesh of the gizzard which we are unable to account for. We found in one corner of the turkey yard an old piece of brown paper with a quantity of hair which was used for plastering and insulation and thought this might have something to do with it. The birds die very rapidly and do not lose flesh. They have a balanced ration that thousands of turkeys are eating and alfalfa is fed in the bale. These birds were hatched April 9.

Answer: In the turkey you sent we found a bacterial type of infection between the gizzard lining and muscular wall. Microscopic examination revealed some Pasteurella avicidia (Cholera) organisms present. We found no hair in this organ such as you described in your letter. The lungs were full of a serous fluid from which we made a microscopic examination and also found Pasteurella avicidia organisms to be present. A similar examination of the liver revealed the same organisms. Cultures that we obtained from the liver showed typical growths of Pasteurella avicidia.

It is our opinion that you would get good results by vaccinating with Dr. Salisbury's CHOLERA-TYPHOID BACTERIN. The dose for the size turkey you sent should be 4 c.c., as it is necessary to give an extra heavy dose to flocks that are heavily infected. Also give six or eight PHEN-O-SAL tablets to each gallon of drinking water or use it in a wet mash, for one week.

How to Ventilate the Chicken House

Here is a plan for home made ventilating equipment that you can easily install in your own house at little cost. It makes little difference what style of house you have, whether it is straw loft or not, the principles governing ventilation are exactly the same. The foul air should be



taken off from near the bottom. This can be done by arranging a stack high enough so the wind will blow across and create suction. Intakes should be provided from one and one-half to twice the space provided for the air exit. In the average house a flue measuring inside 10 by 12 should be used every twelve to sixteen feet.

Be sure to have the stack (b) at least three to four feet higher than any of the nearby buildings. This is essential in creating the proper draft. Your own ingenuity will enable you to adapt this general scheme to your own buildings.

Figure A is the tube for summer ventilation. The cut-off at 3 is kept closed during the winter and open in summer. B illustrates the outlet for winter ventilation. It starts within one foot of the floor and comes at least three feet above the highest point of the building. Shut off at 2 may be used to govern the amount of air escaping on very windy days.

The air intake occurs at C. Notice that it is taken in at a lower point, conducted between the studdings and enters the building near the top. Regulator marked 1 may be used for governing the inlet of air according to the weather conditions. The sides of the intakes and outlets must be tight and well insulated to give best results.

A hen requires but 15 to 40 cu. ft. of air per hour depending upon size. This means that a flock of 100 birds 4,000 cu. ft. of air should enter and leave the building each hour. This is equivalent to a wind velocity of less than one mile per hour. The intake should be larger than the outlets and for each 100 birds there should be two flues about 12x12 inches inside.

for Worms in Hogs

For pigs that are unthrifty, have a tendency to develop bull-nose, lose the curl of the tail and become scruffy, don't neglect the worm treatment.

Remove the worms from the pigs before it is too late and before they have done too much damage.

Dr. Salsbury's HOG WORM OIL is the highest quality of best recognized worming medicine. It contains supporting and stimulating drugs that strengthen the pig and improve its appetite while the worm medicine is acting on the worms. This is important for best results in worming.

In the Treatment of BRONCHITIS COLDS and ROUP

select a medicine that

- (1) kills germs,
- (2) loosens phlegm and mucus, and
- (3) is non-injurious to the patient.

Such a combination is

Dr. Salsbury's

CAM-PHO-SAL

It is mild and yet has powerful germ killing properties, is excellent for loosening the phlegm and drying up the secretions. It contains the very same kind of medicines used in treating colds in humans and is much cheaper.

Use Dr. Salsbury's Cam-Pho-Sal for spraying, smudging and fumigating, for washing out the eyes, nose and air passages, for treating bumble foot, vent gleet, etc., and for medicating the mash because it is a real cough syrup for poultry.

Prices and sizes on page 14.

Abortion in Cattle

The ravages of abortion disease (slinking of the calf) that has worried dairymen for the past generation has been given a severe blow by the discovery of live culture abortion vaccines. After many years of work such eminent authorities as the British Commission on Agriculture and Fisheries, the U. S. Department of Agriculture and many state institutions have concluded that abortion in cattle can be immensely reduced by vaccinating the young heifers with the live culture vaccine.

The U. S. Department of Agriculture has even gone so far as to recommend a certain culture as being safe and satisfactory for this work. It is now possible to start building up an immunity against abortion disease by vaccinating the young heifers and keeping this program of vaccination up each year. It is also quite safe to vaccinate the older cattle in the herd.

During the many years of investigational work no other treatment has been found as satisfactory for controlling abortion disease as live culture vaccination. We are prepared to supply abortion vaccine live culture made under government license from cultures furnished by the U. S. Department of Agriculture. This is fast becoming very popular with cattle raisers and will no doubt supersede all other attempted methods of control.

Abortion vaccine may be had in the following dose packages and prices. This is a very economical vaccine and is priced to meet the present conditions and give the dairy and cattlemen a product they can afford to use.

1 dose — 10 c.c. vial.....	\$.50
6 doses— 60 c.c. vial.....	2.00
24 doses—240 c.c. vial.....	6.00

DR. SALSBUURY'S MEDICINES FOR POULTRY

Preparations	Size Packages	Price	Uses
AVI-TONE 100% Medicine	5 lb. carton 15 lb. drum 25 lb. drum 50 lb. drum	\$ 3.00 8.25 12.50 24.00	Flock treatment for worms, worm preventive and general tonic. For baby chicks and turkeys, growing stock and laying flocks. In powder form.
AVI-TABS	50.....\$.60 100..... 1.00 200..... 1.75 400.....\$3.00 1000..... 7.00		Wormer and tonic in tablet form. For flock treatment.
KAMALA NICOTINE COMBINATION WORM CAPS	Adult Size 50\$.75 100 1.35 200 2.50 500 5.00 1000 9.00 Chick Size\$.5090 1.75 3.50 6.00		Individual treatment for tape and round and pin worms in chickens, turkeys and other fowls. A properly coated tablet that is easy on the birds.
KAMALA CAPS	Prices and sizes same as Kamala Nicotine Combination Worm Caps listed above.		For individual treatment against tapeworms only. Used for chickens, turkeys, ducks and geese.
NICOTINE CAPS	Adult Size 50\$.50 10090 200 1.75 500 3.50 1000 6.00 Chick Size\$.3560 1.10 2.50 4.50		For individual treatment of chickens, turkeys, ducks, geese and pigeons against round worms.
PHEN-O-SAL PRESCRIPTION TABLETS	50.....\$.50 125..... 1.00 300.....\$2.00 500..... 3.00 1000..... 5.50		Excellent corrective for diarrhea and coccidiosis of chicks, Fowl Typhoid, Fowl Cholera, Enteritis, irritation from worms, blackhead in turkeys, also duck and goose cholera.
RAKOS	1 pint bottle Gallon bottle	\$1.25 6.00	Triple acid treatment for coccidiosis in young and old fowls. Antiseptic and astringent.
CAM-PHO-SAL PRESCRIPTION	Small bottle Medium bottle Large bottle	1.00 1.50 2.50	For roup, colds, flu, gapes, bronchitis, brooder pneumonia, etc., in fowls of all ages. Pure medicine to be diluted with water.
STOP-PICK	6 oz. can 16 oz. can	.50 1.00	A preparation for toe, vent, tail picking, and all forms of cannibalism in poultry.
PAINT-O-SAL	1/2 pint 1 pint Quart can	.70 1.50 2.50	Stained dye for painting windows to prevent cannibalism and pickout.
MITE DEATH DISINFECTANT	Quart can Half gallon can Gallon can	1.00 1.50 2.50	To control mites, and disinfect poultry houses. A powerful germ killer and insect destroyer. For treating litter against coccidiosis dilute with distillate.
NIC-SAL	1/2 pint 1 pint 1 quart 1 gallon	.75 1.25 2.00 6.00	A nicotine preparation to paint on the roosts for lice.
LOUSE POWDER	1 lb. sift top can	.40	Very effective for dusting fowls for lice. May also be used in the nests to keep down vermin.
HOG WORM OIL	Quart can Half gallon can Gallon can	1.80 3.25 6.00	To kill round worms in hogs, sheep and poultry. A two ounce all metal syringe for administering oil, \$1.20.
HATCHERY SPRAY	Quart can Half gallon can Gallon can	2.75 4.50 8.60	Effective germicide for spraying eggs and incubators. Not poisonous.
RAT DEATH	4 oz. can	.50	A Red Squill preparation that kills rats and mice only.
FOWL POX VACCINE Chicken and Pigeon Strains	100 dose pkg. each 500 dose pkg. each	1.00 4.00	To prevent Chicken Pox by feather follicle or stick method of vaccination.
MIXED BACTERIN, FOWLS	60 doses, 60 c.c. 120 doses, 2-60 c.c. 250 doses, 250 c.c. 500 doses, 2-250 c.c. 1000 doses, 4-250 c.c.	1.50 2.75 5.00 8.00 15.00	A preventive and curative treatment against roup, colds, and related diseases affecting the head of chickens and turkeys. Note that you get one full c.c. per dose.
CHOLERA-TYPHOID BACTERIN	60 doses, 60 c.c. 120 doses, 2-60 c.c. 250 doses, 250 c.c. 500 doses, 2-250 c.c. 1000 doses, 4-250 c.c.	1.50 2.75 5.00 8.00 15.00	To vaccinate for Fowl Cholera and Fowl Typhoid in all poultry, both preventive and curative.
ANTIGEN	Write for special literature.		Blood or slide test for B.W.D. The Ultra-Rapid Antigen Test.
PULLORIN	Write for special literature.		Wattle method for B.W.D. testing.
TUBERCULIN	40 tests 200 tests	.75 2.00	For T. B. testing. Wattle method.
B.W.D. TEST CABINET	Complete equipment	5.00	For rapid Antigen test.
SYRINGE Complete with 2 needles.	10 c.c. 2 c.c.	2.75 3.50	Lifetime Bacterin syringe. Pullorin or Tuberculin testing syringe.

TESTING TUBES—SYRINGE NEEDLES—DISSECTING SETS—OTHER EQUIPMENT

Cod Liver Oil—Write for quotations in barrel lots.

Garget—Special Bacterin for Garget. Write for special literature.

Blood tests for abortion—15 cents each.

DR. SALSBUURY'S LABORATORIES

BOX 140
CHARLES CITY
IOWA

What Are Bacterins and Vaccines?

Would you like to know something about the technical side of Dr. Salsbury's Bacterins and Vaccines? To most people bacterins and vaccines are rather mysterious things that come in bottles, and if one is not particularly careful one may get confused and think that all bacterins and vaccines are the same.

First of all, let us give you a simple, clear cut definition of serums, antitoxins, bacterins and vaccines. Serums are made from the liquid part of the blood taken from animals, horses, cattle and goats, that have been properly inoculated to develop the specific serum desired. Antitoxin is a serum made by inoculating an animal with a toxin. Bacterins contain killed bacteria and the by-products that have been grown on suitable laboratory media. Vaccines are live cultures either of bacteria or viruses. Bacterins cannot produce disease but the vaccines will produce a mild form of the disease. The immunity is produced by the body after certain cells have been stimulated to immunity production by the bacterins or vaccines injected.

The amount of immunity produced will be directly governed by the amount of immunity exciting substances injected with the bacterin. If a bacterin is loaded brimful of the various substances necessary, a good durable immunity will result against those specific germs. If a bacterin is thin and diluted or is given in very small quantities, very little immunity can be attained.

Dr. Salsbury's bacterins are superior in that they are properly ripened over a period of time which assures maximum immunity stimulating body production. The proper ageing of bacterins is just as important as the proper ageing of wine or beer. The bacterin must be properly preserved in order to hold these immunizing properties once they are produced.

Our bacterins are chemically treated which experience shows is a superior kind of treatment. You get more bacterin for your money with the Salsbury brand because you get one full c.c. for every dose. This makes a big difference when compared with bacterins using $\frac{1}{2}$ c.c. doses. The bacterin using $\frac{1}{2}$ c.c. you always have to use a second and third treatment. This runs the cost way up in order to

get the same amount of immunity that you do from one large dose given at one time. Results from vaccination are not always 100% and here are some of the reasons why. The person may have used the wrong bacterin for the disease at hand. For instance, some people erroneously vaccinate for roup when the chickens are actually dying from coccidiosis. (2) The infection may be unusually severe so that more than the ordinary amount of bacterin may be necessary. (3) The bacterin may not be specific for the disease and an Autogenous Bacterin that is made from the flock affected may be necessary.

As was discovered by Pasteur in 1880, it is necessary to have pure cultures by the specific germ and to prepare the bacterin properly in order to get maximum results. Sometimes that has been neglected in the past and as a result vaccination has received an undeserved black eye.

Dr. Salsbury's Bacterins are triple tested. This means that every precaution is taken to assure pure cultures free from outside organisms and absolute safety. Bacterins cannot cause disease and are safe to use at any time in young stock or producing flocks. Bacterins may be stored in an ordinary cold cellar. While an ice box is preferred it is not necessary.

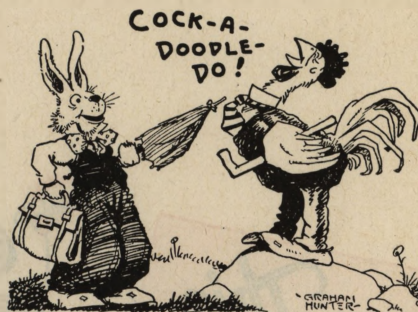
Bacterins carry a dating of two years and are therefore good merchandising items. Vaccines should be kept in an ice box. They should be used as soon after they are received as possible. Since vaccines are made of live germs no chance should be taken on their being injured by heat or exposure.

Autogenous Bacterins are those kinds of bacterin made from germs taken right from the affected flock. They are naturally the most specific and the best because they are made for that individual flock and are sure to immunize against the germs that are present. When other bacterins fail, remember that Autogenous Bacterins are the most specific.

Bacterins and Vaccines are used for the following conditions. Mixed Bacterin for the various forms of roup and colds caused by bacterial germs. They are not specific against pox or other virus diseases. Cholera-Typhoid Bacterin is used for both cholera and typhoid in the various species of fowls. Either one of these bacterins may be used in turkeys. Neither one is specific for blackhead although frequently used as an aid in handling turkey diseases.

Mixed Bacterins are used both as preventive and curative treatment. The Chicken Pox Vaccine is specific prevention against pox in old and young. The chicken strain produces a lifetime immunity and is preferably used on birds before they come into production. It may be used on birds

of any age although the older the birds the greater the danger of a setback. The pigeon strain is preferable for laying flocks and the only disadvantage is that it does not produce a lifetime immunity.



Br. Rab: "Whe'e you all bin so proud an' cocky?"

Rooster Red: "Been to Dr. Salsbury's Poultry Health Clinic just held by the Uptown Hatchery. There were peoples and chickens there by the hundreds and a man in a white coat lectured and spouted for two hours, then he looked down the throats and felt of the keel bone. On some he even broke the neck and cut them open. For me he prescribed Phen-O-Sal and Avi-Tabs and I'm feelin' a lot better—cock-a-doodle-do."



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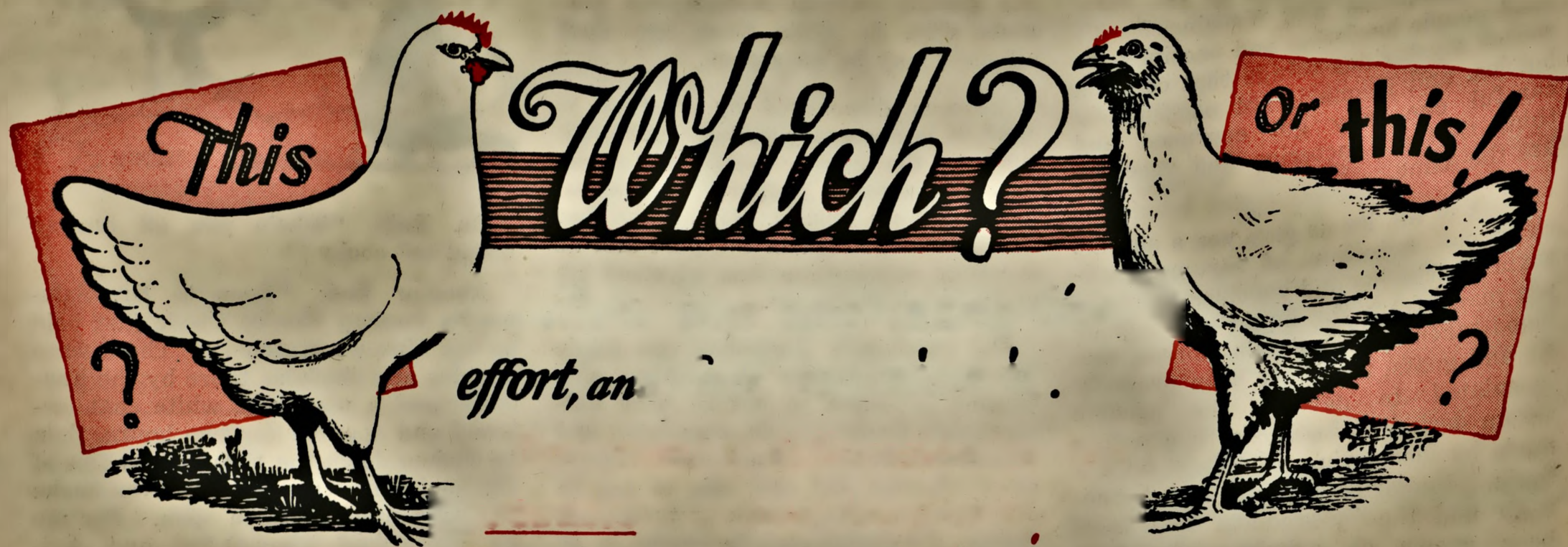
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