Value Of Poultry Improvement Plans To Producers And Buyers Of Chicks, Poults, Eggs Defined

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"Caveat emptor, let the buyer beware," is an old adage which no longer holds true in the case of live chicks and poults, but is even more true today in the case of U.S. Approved Poultry Pullorum Free Poults, etc. These have definite marketing advantages which are of value to prospective buyers of live chicks and poults.

**LABELS TO PROTECT POULTRY**

U. S. Pullorum Clean

No infection at test.

U. S. Pullorum Tested

Eggs may have been infected.

U. S. Pullorum Control

Good

The National Poultry and Turkey Improvement Plans are projects operated by the state agencies of Animal Industry. In cooperation with the federal government, they maintain supervision of plans for pullorum disease control, and for breeding improvement, and encourage production of certain standards for the different classifications in all states under the plans. The plans must meet certain minimum requirements. Each state cooperating in either the National Poultry or Turkey Improvement Plans has an official state agency in California. The California State Board of Animal Health and the California Turkey Improvement Advisory Board, after consultation with the California Poultry and Turkey Industry, are the official state agencies operating under the authority of the Director of Agriculture by virtue of the California Livestock Act, through marketing agreements with the California Poultry and Turkey culture and the participating chicken and turkey producers. These agencies are independent agencies, composed of members of the industry which they serve. They employ a competent staff to aid in the administration of the plans.

**Scope Of The Plans**

Now, just exactly what do these plans mean to the producers of live chicks or baby birds or to the buyers of processed poultry?

The purpose of the National Poultry and Turkey Improvement Plans is to encourage better control of pullorum disease and eradication of chickens and turkeys. In California, the California Poultry Improvement Plan, the California U.S. Poultry Improvement Plan, and the California U.S. Turkey Improvement Plan are the official state agencies. Each of these plans has certain minimum requirements which must be met before the plans will cooperate with any producer of poultry. These requirements are based on the type of plan which will cooperate with any producer of poultry. These requirements are based on the type of plan which.

**Labels Are Buyer Insurers**

The various classes of the plans have, in all likelihood, outlooks much brighter and promising than the standards for much longer than the plans have been in existence. Participation in either plan means that the official state agency verifying the parties are being followed. It provides assurance that the various classes of birds brought under the plan will meet certain minimum specifications as be- lieved.

**Official Disease**

At the present time in the California Poultry Improvement Plan is con- cerned only with pullorum disease, a bacterial infection caused by Salmon-ella pullorum, and for which effi- cient methods have been developed. Properly used as an integral part of a program, these tests can be effectively carried out prior to the incubation of a flock of adult birds. Obviously, all eggs should be removed from the flock before incubation. If any of the hatching eggs are saved from that flock, they should be tested for pullorum disease, and other details of the disease control program are properly detailed. The California Poultry Improvement Plan is con- cerned only with pullorum disease, and, in order to be permitted to participate, certain pullorum disease programs must be in effect. The California U.S. Poultry Improvement Plan is concerned with ensuring a certain minimum procedure.

**Top Pullover Grade and Label**

The new class in U.S. Pullorum Standard classification for turkeys, for both turkeys and chickens, includes eggs of 60 day-old birds in this grade come from stock in California from which no infection was found. Previous tests in California have indicated that such birds would be free from infected birds, which were removed from the flock and the flock was retested the next year. The label for this class is printed in red and has the words "California U.S. Pullorum Clean" printed in black, designated this class.

**Top Pullorum Egg Quality**

In some states an additional, low- est, and the lowest classification for this plan in California. This classification for this plan is called the "Top Pullorum Egg Quality." The California U.S. Pullorum Egg Quality is not considered as the official classification for this plan, but is considered as the new classification for this plan.

**Market Adjustment May Face State's Prune Industry**

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some time preliminary tests have shown the effect of various insecticidal materials on the natural enemies of the long- tailed mealybug. Although these studies are not yet complete, certain conclusions have been reached. In addition to these local investigations, the University's Division of Biological Control has sent a scientist to South Africa to study the natural enemies of pests of California Agriculture. Part of his task is to obtain parasites and predators to be used against the long-tailed mealybug.

This fall, however, the natural ene- mies of other pests, one mealybug predator does not live in California. New species not yet available to California have been received and are being reared and tested in the insectary.

**LADYBIRDS, LICEWINGS, PARASITES, TESTED AS LONG-TAILED MEALYBUG CONTROLS IN CALIFORNIA CITRUS**

**The long-tailed mealy-bug—Pseudococcus longispinus is a rather recent pest of citrus. Insect enemies of the long-tailed mealybug are being studied as means to increase the available control methods.**

As numbers increase they will be liberated in the field in mealybug infested groves. Parasites and Predators Identified

The work during 1946 demonstrated that several natural enemies in ad- dition to the parasites introduced in 1945's 20% of the long- tailed mealybugs is 100% of the parasites. Six species of pri- mary parasites or even parasites of predators were reared. Among the parasites, Anaschopus sidneyanus was by far the most com- mon, comprising 85% of those re- covered. Tetramorium pretiosum con- cerning 9%, Cosmopus gurneyi 4%, and Tetramorium pretiosum 1%.

Among the predators the California brown lacewing—Chrysopa califor- nica—was the most common, comprising 75% of those recovered. The Australian ladybird beetle—Cratoxylus—covered 14% and the California green lace- wing—Chrysopa californica—10%.

Based on an average of 10 citron groves, records graphically portray the changes which occurred in the long-tailed mealybug and its predac- tors from 1940 to 1944 and from 1946. Records show that the long-tailed mealybug started to build up rapidly in early spring. Natural enemies started to increase as the season advanced, and, in general, effectively stopped the long-tailed mealybug outbreak by June. The increase was not checked un- til late August, at which time the outbreaks reached economic proportions in certain groves.

Long-tailed mealybugs were reduced to low levels by April 1947 and remained low until the following spring.

No unusual increase of either predators, not parasites, were primar- ily responsible for this control. It was apparent that the parasites or predators were so numerous in the control points tested that predators, not parasites, were pri- marily responsible for this control. The effect of the parasites and predators on the mealybug populations was shown by the relative change in their proportions from March and April to May, June, and July. The parasites did not show this ability. The parasites were reared from trees by treatment with DDT, but the parasites were not as effective as the predators on the long-tailed mealybug parasitism. It was evident that the parasites, al- though not as effective as the predators on the long-tailed mealybug, "But the parasites on the long-tailed mealybug, although not as effective as the predators on the long-tailed mealybug, were effective in their adverse effects on the mealybug population. In the spring of 1947 long-tailed mealybug populations again started their annual upward trend. For some reasons, however, the most common and efficient natural enemy of the mealybug, the California brown lacewing, did not appear in numbers as early as it had previously appeared in previous years.

Parasites, as in 1946, apparently were not an efficient regulatory fac- tor. The other common predators, Australian ladybird beetle and Cali- fornia green lacewing were not able to maintain the mealybug as early as the brown lacewing had done the year before.

As a result, long-tailed mealybug population increases in general were not checked as soon or as effectively as in 1946. General reductions occurred principally in July and in 1947. The green lacewing appeared to be as effective as the mealybug when the lacewing was in the final subjugation of the mealybug population. In 1945, although the Australian ladybird beetle became common in California Citrus.

**Effect of Insecticides**

Preliminary studies on the effect of various insecticides on predac- tors and parasites of the long-tailed mealybug indicate that most insecticides, with the exception of carbaryl, pose possibilities to slow the increase of the mealybug and may be effective as an appreciable period of time. However, the fact that they are acting in its adverse effects on pre- dators but had no apparent effect on the long-tailed mealybug.

**Pesticides Continue**

Studies projected for 1948 are de- signed to determine the relative losses of both larvae and adults of the California brown lace- wing, the Australian ladybird beetle and the California green lacewing. The California Department of Agriculture will cooperate in this study.

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