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LET us help you prove the great advantages of using **National Motor Oil**—the supreme auto and tractor lubricant.

During many years this company has made only highest grade petroleum products, and thousands of the best business-men Farmers everywhere use only our **National brand**.

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Es-ee-co Tractor Oil. Especially made for modern tractors. Proper body to lubricate most efficiently—saves cash in machinery depreciation.

National Light Oil. Bright, clear light for lamps. No smoke, odor, charred wick or chimney. Best for oil heaters and all purposes.

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(Give date)
1 gals. gasoline per year. 1 do. auto grease per year.
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(For Wagons)

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This Can Only to Auto or Tractor Owners.

Not to Boys or Girls.

I own.....automobile or
(Give name above)
.....tractor,
(Give no. above)



Summer Dangers With the Chicks

By A. P. Marshall.

THE troubles at this time of the year cause many losses and, unfortunately, in a great many cases they could have been easily avoided. The preventative methods are always the better both because they are by far cheaper as well as on account of the better results they give.

Just at a time when more diligent effort should be shown in the general cleanliness of every detail in handling the chickens, a tendency is too often found to show more and more neglect probably due to the erroneous impression that the birds can shift for themselves when they are free to wander at will. This, of course, materially lessens the necessary labor, but does not imply that everything can be forgotten and good results obtained.

If we would for a few moments compare the difference in our own personal conduct between the different seasons; how we bathe frequently, eat lighter foods and observe more closely those things that tend to greater cleanliness in the summer season because they add to our comfort it would not be hard to appreciate that also the chicks would be more comfortable and consequently make better growth where the best environment is furnished.

Lice and Mites.

It seems a crime to feed expensive food to the birds largely to provide flesh for lice and mites to thrive on these hot nights. When we realize that the most vigorous methods will hardly eliminate the vermin entirely one can appreciate the rapid multiplication these pests must make where only dilatory attention is given the matter. Probably no detail has a greater effect during July and August than the lack of attention to keeping the quarters sanitary and clean.

During the summer months and, in fact, throughout the whole year, arrangements should be made to see that plenty of ventilation is provided for. This, however, should be supplied without drafts even in summer. A house with three tight walls and a good roof and a good share of the other side open should contain always plenty of dry fresh air. Sunshine and plenty of fresh air are nature's necessary essentials to proper conditions in the hen house. Very often a ventilator that allows the warm air to escape readily will help very materially to keep down the temperature in summer without causing a draft.

Possibly much of the neglect in summer is due to the fact that during the daytime the birds seem to be contented, but it is at night when they are quiet that they are most bothered by lice and mites. Both the body lice that are always with them and the red mites that literally swarm out in thousands at night suck the blood of the fowls and leave them impoverished and poor, instead of coming out of the roosts full of snap and vim as they should.

Dusting for Lice.

Two classes of external parasites, poultry known as lice and mites, will be considered here. There are several varieties of lice which attack poultry. They subsist mainly on the feathers and perhaps on the epider-

mic scales. They are found largely on the head and neck, under the wings and about the vent, and when present in large numbers they cause the fowls much discomfort. Persian insect powder (pyrethrum), powdered sulphur and some of the various preparations on the market such as the loose powders, are good in combating these pests. The hens can be dusted with one of these powders after they have gone to roost. Have the powder in a box with a perforated top. Great care must be taken in shaking the powder well among the feathers. Dust at least three times at intervals of about a week in order to catch the lice which hatch out after the first dusting.

The mites subsist on the blood of the fowls and are not usually found on the bodies of the bird, except when at roost or on the nest. During the day they inhabit cracks and crevices of the walls and floors. Sitting hens are often so annoyed that they are compelled to leave the nests in order to relieve themselves of these parasites. The free use of kerosene is such as to permit the birds being kept outside the house for five or six hours: Close all the doors and windows and see that there are no cracks or any other openings to admit air. Get an iron vessel and set it on a stove or range near the centre of the house; place in the vessel a handful of shavings or straw saturated with kerosene, and on these sprinkle sulphur at the rate of about one pound to every 20 to 25 square feet of floor space. Instead of using the shavings and kerosene the sulphur can be saturated with wood alcohol. When everything else is in readiness light the material and hastily leave the house.

Fumigating the Hen House.

The following method has proved excellent in ridding houses of mites and lice when the weather conditions are such as to permit the birds being kept outside the house for five or six hours: Close all the doors and windows and see that there are no cracks or any other openings to admit air. Get an iron vessel and set it on a stove or range near the centre of the house; place in the vessel a handful of shavings or straw saturated with kerosene, and on these sprinkle sulphur at the rate of about one pound to every 20 to 25 square feet of floor space. Instead of using the shavings and kerosene the sulphur can be saturated with wood alcohol. When everything else is in readiness light the material and hastily leave the house.

In case any anxiety is felt about fire a glance through a window will show whether everything is all right. There is very little danger of fire when proper precautions have been taken to have plenty of soil beneath the vessel. Allow the house to remain closed for three or four hours, at the end of which time one can safely conclude that there are no living beings inside. Now throw all the doors and windows wide open so as to drive out the sulphur fumes thoroughly, and then the fowls may be allowed to enter.

Let them in one by one and as each enters catch it and dust it well with insect powder, which will destroy the lice on the fowls. Tobacco dust is also good to use instead of insect powder. The birds and house have now been freed from vermin for the present, but the eggs of the insects have not been destroyed and in a week another swarm will be hatched out. Therefore it will be necessary to repeat the operation once or twice before the pests are exterminated. After this care should be used to see that no chance will be admitted to the house or yard without having been thoroughly rid of lice for one lousy hen will contaminate all the rest.

Where the age of a fowl cannot be told by the legs, there is often a dull, heavy look under the eyes of an old bird, which an experienced poultryman can take a glance. But in all up-to-date poultry, the birds are banded, and a record kept of them, so that there can be no mistake.



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VOL. XXXVI

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