

prehensive. If he has been six months in service he knows every bugle call. As the call comes to advance the rider can feel him working at the bit with his tongue to get it between his teeth. As he moves out he will either seek to get on faster than he should or bolt. He cannot bolt, however. The lines will carry him forward, and after a minute he will grip, lay back his ears, and one can feel his sudden resolve to brave the worst, and have done with it as soon as possible. A man seldom cries out when hit in the turmoil of battle. It is the same with the horse. Five troopers out of six, when struck with a bullet, are out of their saddles within a minute. If hit in the breast or shoulder, up go their hands, and they get a heavy fall; if in the leg or foot or arm, they fall forward and roll off. Even with a foot cut off by a jagged piece of shell, a horse will not drop. It is only when shot through the head or heart that he comes down. He may be fatally wounded, but hobbles out of the fight to right or left, and stands with drooping head until the loss of blood brings him down. The horse that loses his rider and is unwounded himself will continue to run with his set of fours until some movement throws him out. Then he goes galloping here and there, neighing with fear and alarm, but he will not leave the field. In his racing about he may get among the dead and wounded but he will dodge them, if possible, and, in any case, leap over them. When he has come upon three or four riderless steeds, they fall in and keep together, as if for mutual protection, and the "rally" of the bugle may bring the whole of them into ranks in a body.—*N. W. Farmer.*

LICE ON ANIMALS.

These wingless insects are found parasitic on all animals. Cattle are unfortunate in being the most common victims of lousiness. Sheep are rarely affected. We meet with this disease most frequently during the winter months, in neglected, half starved, dirty animals. Young animals are especially liable to be infected. Sometimes, however, even well-kept cattle suffer severely.

So-called lice are either true lice (*Hæmatopinus*) or bird lice (*Trichodectes*). The former have a slender, often spindle-shaped body, a pointed head, grayish blue color, and suck blood. The *Trichodectes* are broader, have a squareish head,

brown color, and have biting mouth parts, living on hair and epidermal scales. *Trichodectes* are usually found on neglected, unthrifty animals with long shaggy hair and a dirty scaly skin. They usually disappear as soon as the animal's condition improves. True lice, on the other hand, occur also on thrifty animals.

Every species of domestic animal has its own specific louse, or lice (horse louse, ox lice two kinds, pig louse, goat louse, dog louse, etc., and *Trichodectes* of the horse, ox, sheep and dog). The louse of one species of animal can not exist permanently on another species.

The remedy which has given the most satisfactory result to the writer is kerosene emulsion, made as follows: Kerosene, two gallons; common or whale oil soap, one quarter pound; water, one gallon. Heat the solution of soap and add it boiling hot* to the kerosene; then churn the mixture for ten minutes. Dilute the emulsion with twenty gallons of water and apply with a spray pump. If no spray pump is at hand, drive the animals, if many are to be treated into a narrow chute and apply the emulsion with a common watering can, being careful to treat all parts of the body.

Select a mild, sunshiny day for the operation. In the course of four days or a week repeat the application in order to destroy those lice that have, in the meantime, emerged from the nit. Where the animals have been kept in stables or pens, do not neglect to give these places the same treatment; they are just as lousy as the animals, and if not treated they will soon reinfect the animals. Finally, avoid conditions favorable to future infection, by giving animals proper care and keeping them in a vigorous, thrifty condition. For long-haired animals (calves), shearing might be recommended. Weak, run-down animals may require special nursing to recover completely from an attack of lousiness.—*Press Bulletin, Kansas Experiment Station.*

*NOTE—Be sure to have the water boiling hot when you add it to the kerosene, and churn it thoroughly, otherwise you will have trouble in making a good emulsion; which, when made right, should have a creamy appearance.

