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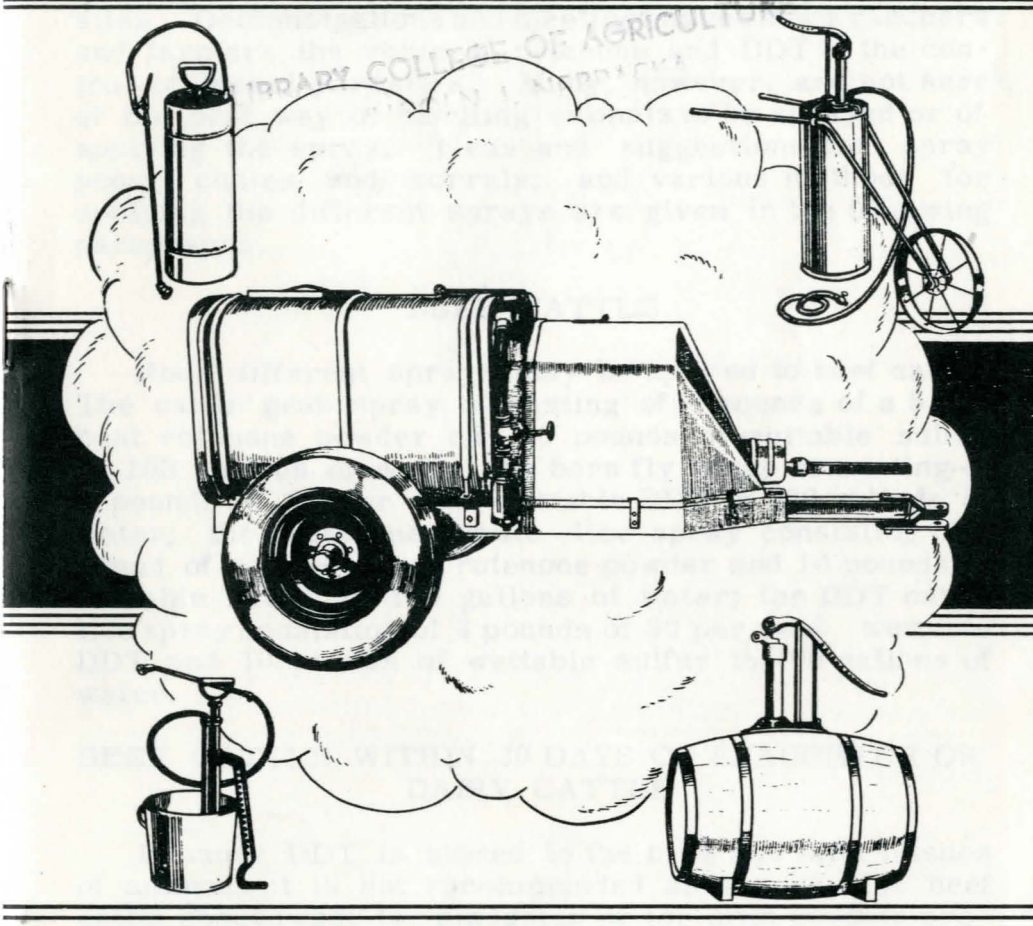
Equipment, Methods and Materials For Spraying Livestock



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EQUIPMENT, METHODS AND MATERIALS FOR SPRAYING LIVESTOCK

Robert W. Helm, Extension Entomologist

"What type of chute or pen do I need?"
"How do I apply the spray to get the best results?"
"Can range animals be sprayed?"
"What materials are recommended?"

These are some of the many questions that are asked about the spray method for controlling livestock parasites. Demonstrations and meetings have shown ranchers and farmers the value of rotenone and DDT in the control of insect parasites. Many, however, are not sure of the best way of handling animals to be sprayed or of applying the spray. Ideas and suggestions for spray pens, chutes and corrals, and various methods for applying the different sprays are given in the following paragraphs.

BEEF CATTLE

Four different sprays may be applied to beef cattle: The cattle grub spray consisting of 5 pounds of a 5 per cent rotenone powder and 10 pounds of wettable sulfur in 100 gallons of water; the horn fly spray consisting of 4 pounds of 50 per cent wettable DDT in 100 gallons of water; the rotenone cattle lice spray consisting of 1 pound of a 5 per cent rotenone powder and 10 pounds of wettable sulfur in 100 gallons of water; the DDT cattle lice spray consisting of 4 pounds of 50 per cent wettable DDT and 10 pounds of wettable sulfur in 100 gallons of water.

BEEF CATTLE WITHIN 30 DAYS OF SLAUGHTER OR DAIRY CATTLE

Because DDT is stored in the milk and fatty tissues of animals it is not recommended as a spray for beef cattle about ready for slaughter or for milk cows in production. It is recommended that methoxychlor be used in place of DDT. Methoxychlor is equally as effective as DDT for lice and horn fly control.

Fairly large spray pens or corrals may be used by the large operator for all except perhaps the cattle grub spray. When applying the back spray for horn flies the cattle may be crowded into pens such as that shown in Figure 1, and sprayed rapidly with a power sprayer. Care should be taken to wet the backs well with the horn fly spray. For cattle lice the same pens may be partly filled, and the

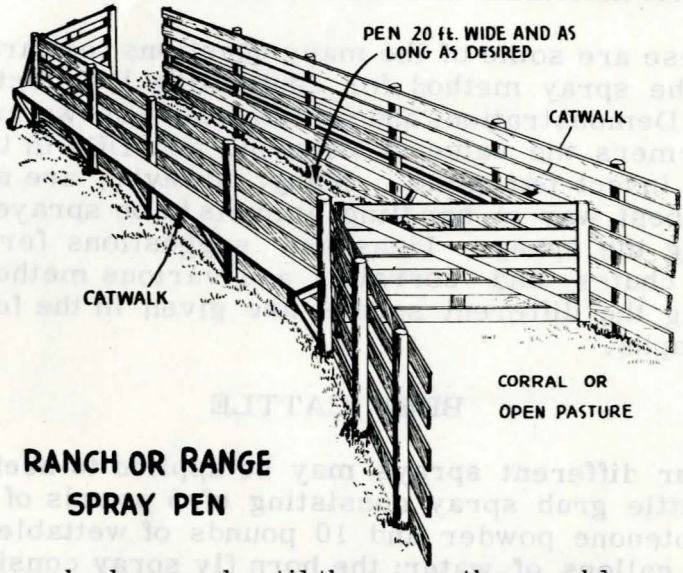

Fig. 1 **RANCH OR RANGE SPRAY PEN**

animals worked around until they are thoroughly and completely wet with the spray. The power spray operator may work from the outside of the pen for fly control if an adjustable spray gun is used. Commercial or custom spray workers prefer to spray from the inside of the pen for lice control as the animals can be worked with the spray gun and complete coverage is assured. Ranchers not wishing to move animals long distances may build simple pens for fly and lice control on the open range or pasture.

As the cattle grub spray must be applied individually to the backs of the animals, smaller pens or chutes are convenient. Ordinary narrow chutes such as those found on most ranches may be used. Faster treatment may be obtained with the use of spray pens such as that shown in Figure 2, and larger pens with overhead catwalks can be used. An adjustable spray gun set at a hard driving spray

under 400 pounds of pressure is suggested for grub control. Higher pressures tend to break the spray into such fine particles the actual penetration may be reduced. Figures 4, 5, and 6 show the proper place and method for applying the spray. Lower pressures may be used for grub control if a spray brush or rake such as is shown in Figure 3 is used. Raking or brushing substitutes for high pressures in breaking the scales and loosening the hair over the grub holes.

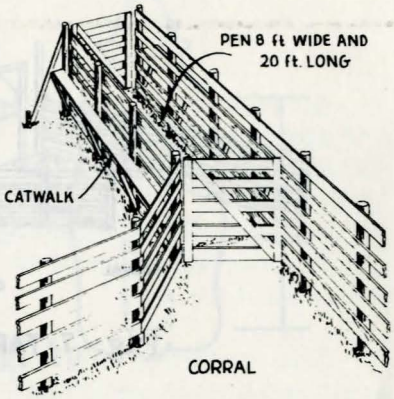

Fig. 2- **RANCH GRUB SPRAY PEN**

Fig. 3

Farmers, feeders, dairymen and small ranch operators who do not feel that they have use for large power spray machines may use wheelbarrow sprayers, barrel

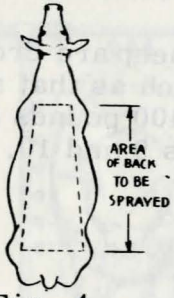

Fig. 4

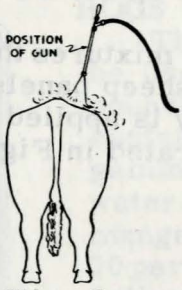

Fig. 5

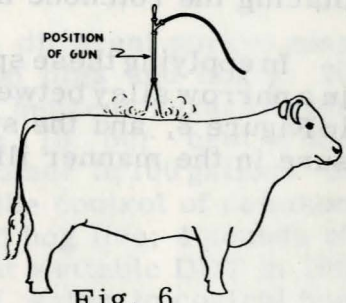

Fig. 6

sprayers, bucket sprayers or knapsack sprayers. High pressures are not necessary for fly or lice control, and in grub control a brush or rake substitutes for high pressures. Care in obtaining proper coverage and wetness are the essential factors. Dairymen may use their stanchions for holding the animals when applying any of the parasite sprays. Small pens, sheds and barns may be used by the farmer or feeder for fly and lice control. A short chute or alley such as that shown in Figure 7 may be easily constructed for grub control.

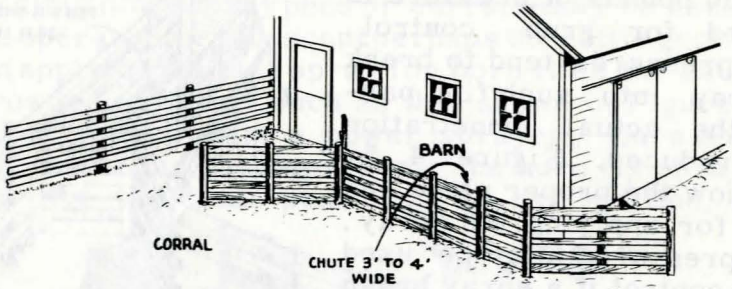

Fig. 7 - **FARMER CATTLE GRUB CHUTE**

SHEEP

One rotenone spray and one DDT spray are suggested as alternative sprays for the control of sheep "ticks". The rotenone treatment consists of 6 ounces of 5 per cent rotenone powder and 10 pounds of wettable sulfur in 100 gallons of water. The same amounts of wettable sulfur and water with 4 pounds of 50 per cent wettable DDT replacing the rotenone make up the DDT treatment.

In applying these spray mixtures the sheep are crowded in a narrow alley between sheep panels such as that shown in Figure 8, and the spray is applied at 400 pounds pressure in the manner illustrated in Figures 9 and 10.

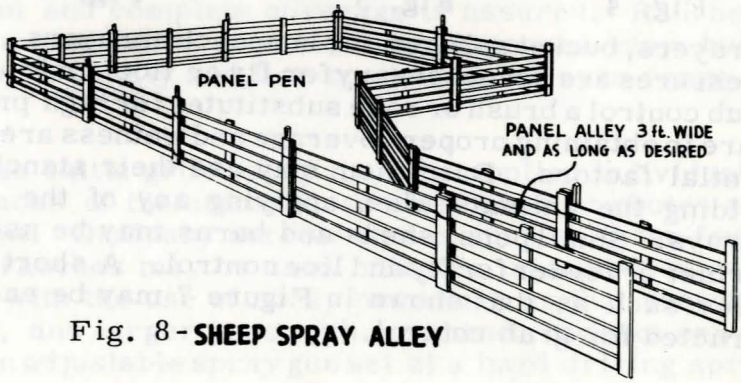

Fig. 8 - **SHEEP SPRAY ALLEY**

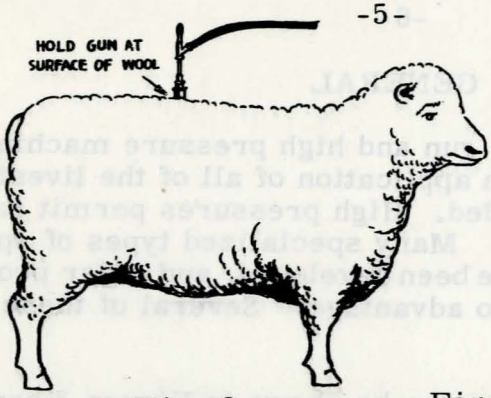

Fig. 9

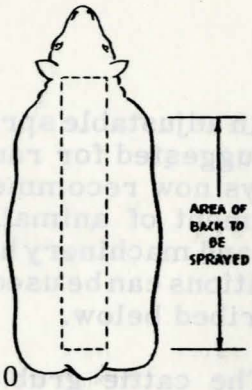

Fig. 10

A two- to three-inch ribbon of spray is applied from the neck to the dock on each side of the backbone. This method of applying the insecticides permits rapid treatment of unshorn farm flocks containing up to several hundred sheep. A spray boom like that shown in Figure 11 permits treatment of several thousand range sheep per day. Range sheep can be treated before or after shearing with the use of this spray boom.

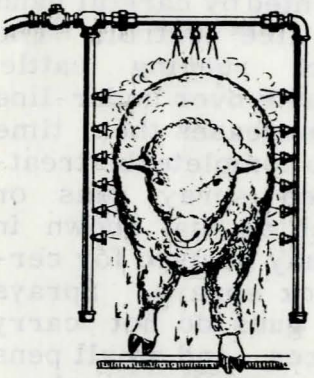

Fig. 11

HOGS

Three different sprays may be used on pigs and hogs: 20 pounds of benzene hexachloride containing 10 per cent of the gamma isomer in 100 gallons of water for the control of common mange and hog lice; 4 pounds of 50 per cent wettable DDT in 100 gallons of water to control hog lice; 5 pounds of 5 per cent rotenone powder in 100 gallons of water to control hog lice.

These sprays are easily applied by crowding the animals into small pens and spraying the heads, ears and backs. Pigs and small hogs when sprayed climb over one another, wetting themselves thoroughly. With large hogs care should be taken to wet them completely. Long pens or hog houses have proved best for use in spraying hogs.

GENERAL

An adjustable spray gun and high pressure machinery are suggested for ranch application of all of the livestock sprays now recommended. High pressures permit rapid treatment of animals. Many specialized types of spray guns and machinery have been developed, and under proper conditions can be used to advantage. Several of these are described below.

The cattle grub spray rake shown in Figure 3 can be used with low pressure spray machines and automatic spray cages and chutes. Spray cages and chutes may be used for the control of livestock parasites, but are generally slower to operate than the methods suggested above. Underline spray equipment, like that shown in Figure 12, may be used to advantage in obtaining a slightly longer killing period in horn fly control. It has no advantage in the control of grubs, and must be supplemented by careful hand spraying in lice control. The necessity of running cattle through a chute over under-line sprayers increases the time necessary to complete the treatment. Fixed spray guns or brooms such as that shown in Figure 13 may be used for certain livestock sprays. Sprays from these guns do not carry long distances, and small pens and chutes are necessary where they are used.

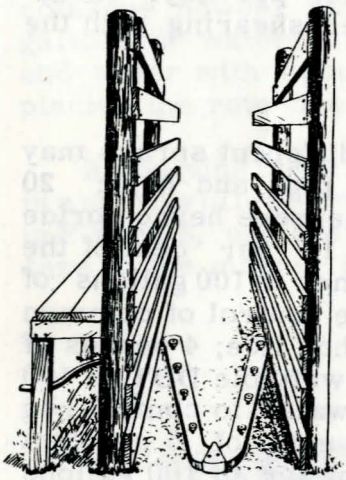

Fig. 12

Special short-shafted spray guns such as that shown in Figure 14 are easily manipulated, and will be less tiring to the operator in applying the sheep "tick" control sprays.

Fig. 13

Fig. 14