Bulletin No. 93 - Comparison of Sheep Branding Paints

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A Comparison of Sheep Branding Paints

C. J. OVIATT, Asst. Wool Investigations

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Sheep Branding Paints.

INTRODUCTION.

A continual demand for reliable information concerning sheep branding fluids called for an investigation, the results of which follow. Range conditions in this state are exceedingly severe upon paint brands, and experience teaches that but few will last the season.

A perfect branding fluid will have two main characteristics, as follows: First, the brand will be permanent enough to withstand range conditions for one year and show with reasonable plainness at the end of that time. Second, its composition will be such that it can be completely removed by ordinary scouring solutions. These conditions are hard to obtain, but this is the problem of the manufacturer. Under range conditions a permanent brand is an absolute necessity, not only in determining the ownership of stray animals, but also in the customary breeding operations. An indistinct brand oftentimes means much trouble and loss. It is also imperative that the brand be of such material that it will scour readily. Every drop of paint placed upon wool must be removed before the wool can be manufactured into cloth. If the brand will not scour out by the usual methods, then hand labor must be employed to go over every fleece and clip off the brands. This not only means the loss of the wool clipped off, but it means a considerable amount of money expended for labor, all of which eventually comes out of the pockets of the wool grower.

In some localities a brand placed upon the ear, nose or forehead where it would not injure the wool would be sufficient. In fact, in many cases the entire absence of a brand would serve as the best identification mark. It is the duty of the wool grower to use as little paint as possible, placed where it will be the least injurious to the fleece. When the sheepmen appreciate the decreased price of wool due to extravagant use of paint they will exercise more care in the selection and application of their brands.
ATTITUDE OF MANUFACTURER.

In the big woolen mills the manufacturer of cloth takes no chances with paint brands. The fleeces are worked over by hand labor and the brands clipped off. Brands that will scour and brands that will not are treated alike. This is an exceedingly costly operation and is necessitated only by the too liberal use of undesirable paints. If all wool growers would use a scourable paint the labor would be eliminated and the saving could be added to the price of wool.

In order to ascertain the comparative efficiency, durability and scouring out qualities of different paints on the market, the following tests were made:

PLATE I.

This cut shows the system of marking employed so that all brands would be subjected to similar treatment. Note that, for instance, Paint No. 4 appears on right side of one sheep and on right shoulder of next. This picture was taken immediately after branding. The sheep were dipped July 20th, and were branded five days later.

OUTLINE OF EXPERIMENTS.

Six different paints were used, the names or descriptions and numbers of which follow:

1. Common Paint, i.e., Venetian red, linseed oil and turpentine.
A Comparison of Sheep Branding Paints.

5. Special Sheep Branding Fluid, Devoe & Raynolds Co.

In all twelve sheep were used, of which six were branded before dipping and six after dipping. In the first lot were two Rambouillets, two Cotswolds and two Shropshires. The second lot, those branded after dipping, was made up entirely of Rambouillets. The brand, which was a capital letter O with the number of the paint directly underneath, was applied with the common branding iron. Each sheep in each lot was branded with six different brands in such a manner that, for instance, Paint No. 1 appeared on the right shoulder of one sheep, on the right side of the next, on the right hip of the next and so on through the lot. By this method, in each lot, all the paints appeared on each sheep but in a different position on each sheep. Plate I helps illustrate the method. In this way the brands were subjected to the same treatment and a comparative test could be made.

PLATE II.
The above cut shows brand on sheep branded before dipping. This brand had been on only four months. Plate III shows the same view of this sheep a little less than two months later.
In branding the iron was placed upon a pad of wool saturated with the fluid and then applied to the sheep. Common paint, Kemp's, Perfect, Special, and Harmless were very easy to apply, being just thick enough to avoid dripping. The fluid from the Oregon Wood Distilling Company was rather thin and hence hard to apply so as to give a perfect brand. The pigment and base in the Special had precipitated, and this necessitated considerable stirring before the liquid was ready for use.

The sheep were allowed range conditions as nearly as possible and notes were taken at regular intervals. As is usually the case, the brands faded rapidly on the coarse and long-wools, remaining visible as a brand only five months. On the medium wooled sheep the brands were more durable, while they reached their maximum on the fine wools. However, none of the prepared paints remained for a full year. Some were indistinct in five months while some persisted during eight months. The Common paint, however, remained for the full year on the downs and fine wools. Similar tests show that lamp black, a little white lead and linseed oil make as durable a paint as the one tested here and known as Common.

PLATE III.

Same sheep and view as in Plate II about two months later. Brand has been on nearly six months and is fading rapidly.
Careful examination at regular intervals and at close of test show these paints to have durability ranking as in the following table:

<table>
<thead>
<tr>
<th>PAINT</th>
<th>On Coarse Wools</th>
<th>On Medium Wools</th>
<th>On Fine Wools</th>
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<tbody>
<tr>
<td>Common</td>
<td>Mos. 7</td>
<td>Mos. 12</td>
<td>Mos. 12</td>
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<tr>
<td>Devoe &amp; Raynolds &quot;Special&quot;</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Oregon Wood Distilling Company's</td>
<td>5</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Kemp's Australian</td>
<td>5</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Sherwin-Williams' &quot;Harmless&quot;</td>
<td>4</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Stockman's Supply House &quot;Perfect&quot;</td>
<td>4</td>
<td>6</td>
<td>5</td>
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</table>

SCOURING TESTS.

A scouring solution of olive soap, water and soda ash at an average temperature of 130°F. was used in this test. The brands, clipped from the fleeces, were subjected to this treatment for twenty minutes and then cleaned in hot water. It was found that the fineness of wool had little or no effect on the scouring out qualities of the paints.

PLATE IV.

Picture taken immediately after branding. Note how plainly brand shows in detail on fine wool sheep. Compare with Plate V.

Kemp's scoured out perfectly, leaving no trace of paint upon the scoured wool. The fluid from the Oregon Wood Distilling Company did not scour so well and small quantities of paint would cling to the scoured wool. The Perfect was
next in rank, but scoured with considerable difficulty. This
treatment had but little effect upon the remainder of the paints.

<table>
<thead>
<tr>
<th>Paint</th>
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<tr>
<td>Common</td>
<td>Does not scour</td>
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<tr>
<td>Devoe &amp; Raynold's &quot;Special&quot;</td>
<td>Does not scour</td>
</tr>
<tr>
<td>Oregon Wood Distilling Company's</td>
<td>Fair</td>
</tr>
<tr>
<td>Kemp's Australian</td>
<td>Scoured perfectly</td>
</tr>
<tr>
<td>Sherwin-Williams' &quot;Harmless&quot;</td>
<td>Does not scour</td>
</tr>
<tr>
<td>Stockman's Supply House &quot;Perfect&quot;</td>
<td>Fair</td>
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</table>

PLATE V.

Picture taken immediately after branding. Note absence of sharpness in detail. Brand is less effective and less desirable on this wool.

CONCLUSIONS.

A paint made of Venetian red or lamp black as pigments mixed with linseed oil is much more durable than the prepared paints tested. The right consistency may be obtained by the addition of turpentine.

Brands remain a greater length of time on downs and fine-wools than on coarse wools.

The fineness of the wool has no effect upon the scouring out qualities of the paints.

Kemp's was the only paint to scour perfectly. The fluid from the Oregon Wood Distilling Company scoured fairly well but it was impossible to secure a complete removal by ordinary methods.