



Photo 1. Animal No. 87 two years after branding. The area has been clipped to reveal the "7," but the "8" is still concealed by long hair.

Hot Iron BRANDING for Hog Identification

H. F. HINTZ · H. HEITMAN, JR. · R. ALBAUGH

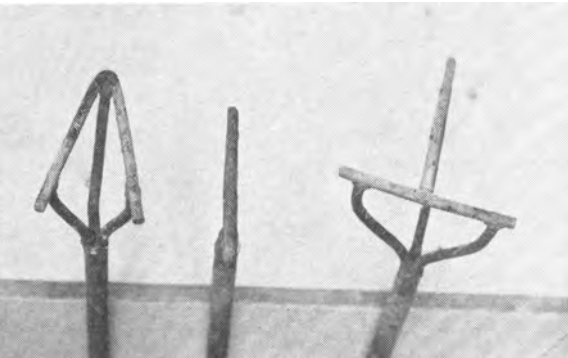


Photo 2. Branding irons with six-inch-high symbols were made of 3/8-inch rake tooth. Code for numbering is shown below.

0 —	5 ✓
1 T	6 <
2 H	7 ^
3 L	8 >
4 T	9

Hot iron branding was successfully used in these tests as a permanent method of identifying hogs. Branding irons with 6-inch symbols made out of 3/8-inch rake tooth were effective markers. Application of lanolin to the brand decreased susceptibility to fly strike but did not affect legibility. Clipping the hair prior to branding was useful, but not necessary. However, even with good brands and well-defined borders of scar tissue, subsequent growth of long hair often concealed or obscured the brand so that animals had to be clipped after 1 1/2 to 2 years to insure rapid identification. Branding did not affect carcass quality when placed on the carcass where the skin was to be removed.

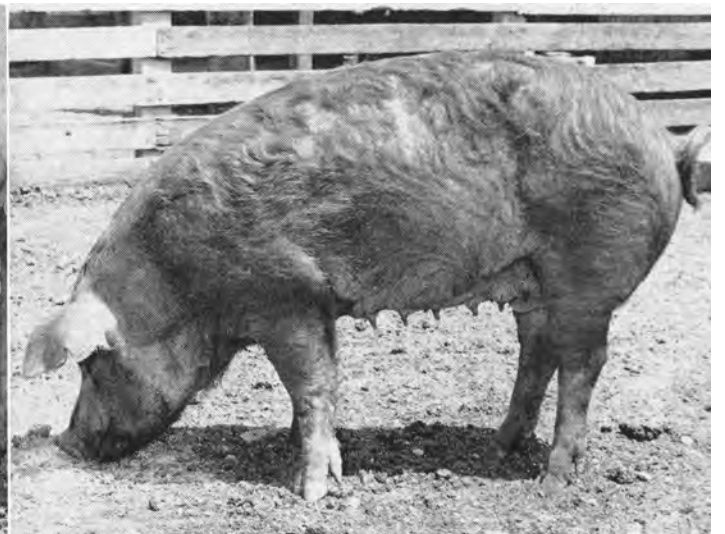
HOGS ARE usually identified by ear notches and this is a satisfactory system under some conditions. However, ears can be torn in fights or other accidents, making notching unacceptable as a permanent method of identification. A permanent identification method is desirable not only as a good farm management

practice but also is essential when animals are to be used as collateral for loans. Tests at University of California's Davis campus indicate that hot iron branding is an acceptable method of permanent identification.

Early attempts to brand hogs were not particularly successful. The brands were applied in the loin region, while the hogs were restrained by snubbing to a post with a rope tied with a slip knot around the upper jaw. The 3-inch numerals with 1/4-inch flat bases then in use, produced a brand that was often illegible within 2-3 months after branding. When the brands were burned deeply, they were blotched and several animals developed sores and healed slowly. However, some of the numeral brands were successful. For example, photo 1 shows animal No. 87 two years after branding. When the area is clipped, the brand is very clear, but the long hair can conceal the brand as indicated in the picture. The area around the "7" has been clipped but the hair has not been clipped around the "8."

Three-inch symbols with a 3/16-inch base and round faces were used in the

Photo 3. Animal No. 101, 15 months after branding with 6-inch iron. Photo 4. Animal No. 52, 15 months after branding with 6-inch iron, showing a good brand with clearly defined scar tissue but it is obscured by long hair.



next attempt. These irons were only lightly applied but again, after two to three months, the brands were difficult to read. Some of the brands were blurred and others were very faint or impossible to read, unless the hair was clipped.

In another trial, the branding irons used were 6 inches high and made out of 3/8-inch rake tooth. Only three irons, T, I and V, were used (photo 2). The symbols were used to represent numbers 0 to 9 by rotating to different positions as shown below:

For example, animal No. 347 would be branded \perp —A. Thus, numbers 0 to 999 could be branded by using only 3 irons in 1 to 3 places on the loin. The hair was clipped from the area to be branded. Lanolin was applied to brands

of half the animals about every third day for 30 days. The treated brands peeled more cleanly than the nontreated; in fact many of the nontreated brands had a curled scab with open raw wounds that were very susceptible to fly strike and had to be treated with fly repellent. Within 5 months all brands were healed and apparently lanolin had had no effect on the legibility of the brand. For example, the brand on animal No. 101 (photo 3) was not treated but was very legible even after 15 months. Animal No. 52 (photo 4), treated with lanolin, also has a good brand which is partially concealed by long hair after 15 months.

Clipping prior to branding, while not necessary, was very helpful. For example, the brands on animals not clipped were

as legible as brands on clipped animals observed 6 weeks after branding. When the hair is clipped, it is easier to apply uniform pressure and to observe the progress of healing and susceptibility to fly strike. The branding iron should be applied when it appears the color of white ashes. The pressure should be uniform but excess pressure should be avoided.

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Insecticides and Integrated Control in Peaches

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Guthion gives excellent control of both the Oriental fruit moth and the twig borer in peaches. When used at reduced rates the mortality of beneficial insects and mites is greatly reduced. There are good possibilities for using this chemical in an integrated control program for peach pests.

CURRENT PEST CONTROL practices in peach orchards are not entirely satisfactory, with infestations sometimes left too high, or other pest organisms increased. Investigations toward the development of an integrated control program for pests of peaches will hopefully result in a series of practices that will economically control the pests while keeping undesirable effects at a minimum. In any integrated control program there is a great need for chemicals that are both effective against the pest at which they are aimed, and as innocuous as possible to the non-target, beneficial organisms.

The two most important pests of peaches in California are the Oriental fruit moth (*Grapholitha molesta*) and the twig borer (*Anarsia lineatella*). These two moths are responsible for "wormy peaches."

A series of chemicals were tested for control of both the Oriental fruit moth and the twig borer. The effect of these chemicals on the two-spotted mite and on beneficial insects was also measured. The series included Biotrol BTB (a formula-

tion of *Bacillus thuringiensis*), Diazinon, Geigy S13005, Guthion, Imidan, Niagara 10242, and Ryania. The treatments were applied to three-year-old trees of the Halford variety in plots of four trees. Each plot was replicated three times in randomized blocks. Treatments were applied June 4 and July 13, 1965. Shoot strikes were counted June 30 and August 18; mites were counted on August 23; and infested fruit was checked at picking time, August 26.

The parasitic wasp *Phanerotoma flavitestacea* was used as the test species to measure the effect of treatments on beneficial insects. Cylindrical screen cages 9 x 3 inches were sprayed, each with a different chemical. After the spray was dry, ten specimens of the parasite were placed in each cage, with a supply of pure honey as food. All specimens were of the same age. Each cage was hung in the plot that had been treated with the same chemical. The cages were examined

EFFECT OF DIFFERENT RATES OF GUTHION ON THE SURVIVAL OF THE PARASITIC WASP PHANEROTOMA FLAVITESTACEA

