These 24-year-old posts show that salts move UP and DOWN, rather than AROUND, a post. Post at left was treated with 3 holes, the middle one with 2 holes, and the right one with 1 hole.

Federal Cooperative Extension Service
Oregon State College
Corvallis

Extension Circular 556
Revised April 1955
Salt-treated posts after 24 years in the ground. Tops decayed and 6 inches were removed, but posts went back into ground for more service. An unusual record. John Swatzka farm, Tangent.

Salt Treatment for Green POSTS and POLES

MATERIAL

Use round, green posts with the butt portion unpeeled. This treatment requires a high wood moisture content. The moisture dissolves the salts and carries them through the sapwood.

The more the posts dry out the poorer the results. Only by prolonged immersion in water can you hope to approach the original moisture content of the wood.

FORMULA

Use 2 parts (by weight) of common salt to 1 part corrosive sublimate.

Three pounds of this mixture will treat 40 to 45 posts 4 to 6 inches in diameter. One rounded tablespoon of this mixture will treat one post of this size.

NOTE: Old directions called for arsenic in the mixture, but 20-year tests at the Post Farm have shown that posts last as long without this very poisonous chemical as with it.

APPLICATION

OLD WAY: Drill a 3/4-inch hole 1 to 2 inches deep in the post just above the ground and slanting downward. Insert the dry mixture and close the hole by nailing a piece of tin over it or by a plug, such as a 3/4-inch dowel. Be sure to close this hole tight to prevent stock from licking the poison. If convenient, drill the hole below the ground level and cover the plugged hole with earth after treatment.

DOSAGE:

- Average-size post, 1 rounded tablespoon in 1 hole.
- 7- to 9-inch post, 2 rounded tablespoons in 2 holes equally spaced.
- 10- to 12-inch post, 3 rounded tablespoons in 3 holes equally spaced.

NEW WAY: Since the chemicals move rapidly up and down but very little around the post (see illustration on front cover), the Oregon Forest Products Laboratory suggests using more holes—one for each 5 inches of circumference around the post. A post 4 to 5 inches in diameter would have three holes. Use 3/4-inch holes. Stagger them up and down to prevent weakening the post. Use the same dosage per post as above, dividing mixture equally among all the holes.

COST

The salts cost about 10¢ per 4-inch post. Once he has all the materials ready for use, one man can treat between 12 and 15 (one-hole) posts per hour by hand methods. Commercial grades of the mixture are less expensive than the refined grades.

SAFETY PRECAUTIONS

Prevent contact of the mixture with the skin. Wear goggles while handling the corrosive sublimate. Label containers plainly and store in a dry place out of reach of children—better yet, keep no corrosive sublimate on the place.

Some farmers treat the posts over a trench and fill in the trench after the treatment.

BEST METHOD?

Many western Oregon farmers have used the salt treatment for years and consider it an easy method with results worth the effort.

The Oregon State College Extension Service provides information about the salt treatment, but it does not actively urge its use. Corrosive sublimate is dangerous for ordinary farm handling.

The cold-soaking treatment recently developed is not so risky from the standpoint of poisoning. Cold-soaking with "penta" requires more labor than does the salt treatment, yet in many cases may prove more satisfactory. Cold-soaking can preserve tops of posts, whereas the salt treatment is primarily a butt treatment.
DO THEY LAST?

Doug-fir

Seventy-two salt-treated posts installed at OSC. T. J. Starker Post Farm near Corvallis were still standing after 24 years service. Most of the tops, however, had become too rotted to hold staples. These posts were round, unpeeled Doug-fir, 4 to 7 inches in diameter, averaging about 60 per cent sapwood. Untreated posts failed in 7 years or less.

Certain farmers have reported an average life of more than 15 years from salt-treated Doug-fir posts. A few have reported failures of treated posts before 10 years. The Oregon Forest Products Laboratory believes fewer failures will result if more holes are used (see page 3). Treating only fresh-cut posts is a wise precaution to avoid failures.

Lodgepole pine

The salt treatment, using only one hole, increased the service life of unpeeled lodgepole pine at the Post Farm. After 15 years, 15 of the original 25 posts are still standing though most are in poor condition. Untreated lodgepole pine posts last an average of 4 to 5 years. Better results would have been obtained with more holes.

Western larch

A farmer near Sandpoint, Idaho, reported no failures in salt-treated western larch posts after 22 years. These freshly cut, unpeeled posts were treated with only one hole. Although there was some rot in the tops, the posts were still serviceable.

White oak

A dairy farm near Corvallis tested the salt treatment on round, unpeeled, white oak posts. About 5 out of 6 of these posts failed in 12 years. All failures came at the ground line; tops were sound.

TOPS

To make the top of a post last longer: Slope it so that it will shed rain; peel portion above the ground. Peeled Doug-fir tops usually last 15 years or more. “Scabbing” will probably give results similar to peeling. Use a drawknife to pull off 2 narrow strips the full length of the top. The tops dry out, and decay is reduced.

Go around the fence line at a dry time and spray or brush tops heavily with a cold-soak solution (penta, copper napthenate, oil tar creosote). Treat wood only, not bark. The seasoned wood will absorb the preservative well. Fill the cracks. Repeat in 7 or 8 years.

ADVANTAGES

The cost per post for the preservative chemical in the salt treatment is low, and no special equipment is required for applying it.

Time and labor are saved. The posts do not have to be peeled or seasoned. In many instances posts may be cut along the fence line; this saves transportation and handling.

No training or experience is required in making the application, although extreme care should be used in handling the deadly poisonous corrosive sublimate.

No authenticated reports are known of stock having suffered ill effects by chewing on the treated posts or by drinking water poisoned by them. After the salts have dissolved and disappeared from the hole, there appears to be little further danger to stock if the plug falls out or is otherwise removed.

DISADVANTAGES

The salt treatment is applied only at the ground line and is believed to give little protection to the top.

The chemicals are dangerous unless handled with the care of a pharmacist.

SOURCE OF CHEMICAL

You may purchase corrosive sublimate from local drug stores or buy in larger lots from agricultural chemical houses in Portland.

ONE MAN’S VIEW

T. J. Starker, formerly professor of Forestry at Oregon State College, began tests of the Salt Treatment in 1928. He wrote the Oregon Farmer Magazine, August 20, 1953, “The salt treatment is not new. It was probably brought over from Germany. Early hop growers used it. The method has much merit. So far as I know there is no other method that gives so much longevity as cheaply and easily. Corrosive sublimate is a dangerous material. But so are chemicals to treat grain and to poison rats. To date I have never heard of anyone being harmed by using this chemical in treating posts. I have personally used it in treating hundreds of posts. Just be careful.”
