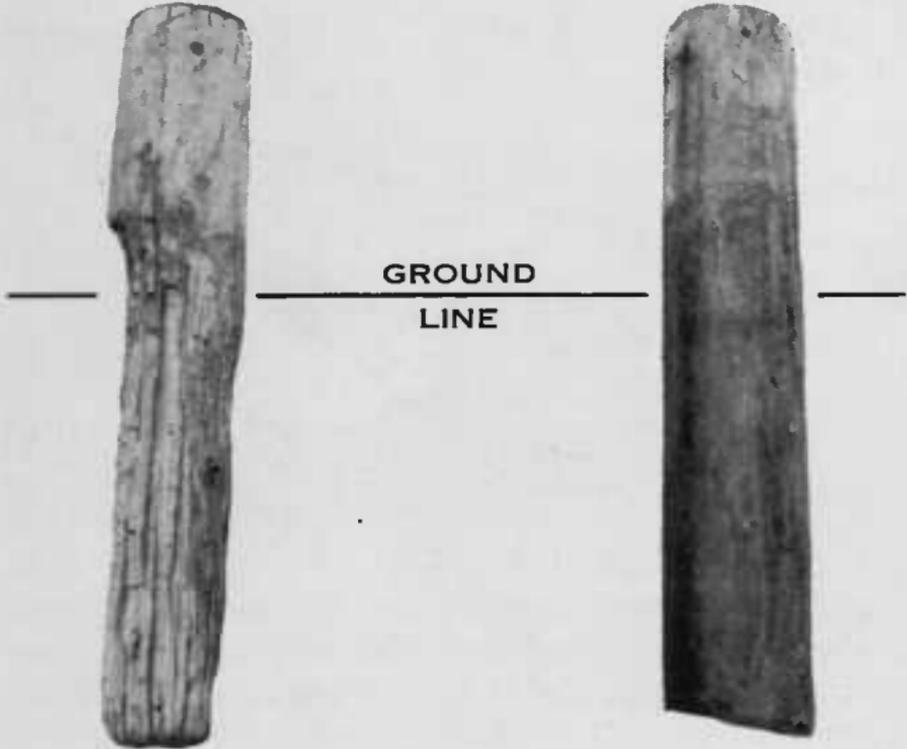


D

*Treated*

# PINE POSTS

*Will Last*



These pine posts were cut from the same tree and placed in the same fence. The one at the left was not treated, the other was cold-soaked 24 hours in 5 per cent penta. It is expected to last 15 to 20 years or longer.

Round pine posts will last 15 to 20 years or longer when treated by the cold-soak method. Round posts or poles of other species can be treated, but pines take better treatment with less work. It will pay to use them.

While any pine species is easy to treat, the lodgepole pine is recommended especially. It is abundant in eastern Oregon and is not in demand for other uses. Stumpage can be bought on national forests at little cost.

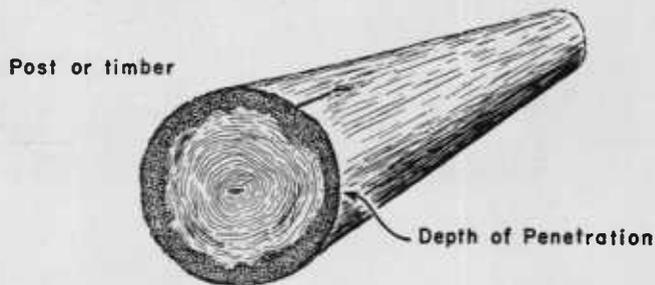
---

Oregon State System of Higher Education  
Federal Cooperative Extension  
Oregon State College  
Corvallis

# Why?

## Cold Soak Protects Wood from Rot

Two things are needed for long life of timbers placed in the ground. First, you must have an approved, standard preservative. Second, this preservative must penetrate into the wood. A post needs penetration of at least  $\frac{1}{2}$  inch at the shallowest point as shown:



Certain standard preservatives dissolved in light petroleum oils will penetrate into the sapwood of pine timbers simply by soaking. This method requires no special equipment, cost is usually small, and posts are clean to handle afterward.

## Preserving Solutions

Cold-soak preservatives thus far tested and approved by the Oregon Forest Products Laboratory include the following:

1. A 5 per cent solution of pentachlorophenol
2. A copper naphthenate solution containing 1 per cent copper
3. Oil tar creosote (regular *coal tar creosote* is too thick for cold-soaking)

"Penta" has been used most widely, but all three have good service records. County agents can supply names of dealers. The first two preservatives are most cheaply prepared by purchasing a concentrate which is mixed with a light petroleum solvent, diesel oil being the one most commonly used. Mix solutions according to directions of the manufacturers.

Follow these instructions:

***Peel. Season. Soak***

## 1. PEEL



The bark must be completely removed from the post. Even small shreds of inner bark prevent absorption of the preserving solution. Plan your work so you can peel within a few days of cutting because drying causes the bark to tighten. A draw-knife is needed for a clean job when the bark is tight. During the easy-peeling season a straight spade or straightened goose-neck hoe makes a good hand peeling tool.

## Suggestions for Cutting Pine Posts

A small treated post will last as long as a large treated post. Treat the smallest-size post that will meet your requirements. It takes about three times as much preservative to treat a 6-inch post as it does a 3-inch post and the smaller posts are easier to handle and cheaper. Posts 3 to 4 inches in diameter at the small end are usually satisfactory for line posts. Their main purpose is to support the wire. Corner and stretcher posts 5 inches at the small end and  $7\frac{1}{2}$  feet long are usually sufficient when treated.

It saves labor to cut trees during the fast growing season from May 15 to August 1, because they peel a lot easier then.

Sound, dead pines are satisfactory, but avoid those that show any evidence of rot.

If you are going to sharpen posts for driving do it before the seasoning and treating period.

## 2. SEASON

You want all seasoning checks and cracks to form before the wood is treated, so the preservative can reach and penetrate all surfaces exposed by cracks. Cross-pile the timbers 12 inches above the ground on bumper logs or blocks. Pile near the treating location to save labor of handling. Season at least 9 weeks so as to break the glaze.

## Breaking the Glaze

When the bark is stripped by hand during the easy-peeling season, the sap remaining in the wood may form a varnish-like glaze on the post. Glaze prevents penetration of the preservative. It does not form on timbers peeled by machines or by hand tools which shave off some wood along with the bark. Glaze remains on the post until weathering breaks it down.

The usual recommendation is to let the posts season during the summer and stand through several fall rains before treating. Or, let the pile stand throughout the winter and treat the following spring after 10 days of drying weather. One test in Utah showed that lodge-pole pine posts took fine treatment when cross-piled in the open sunlight and seasoned for at least 9 weeks.

Posts can be treated while in the glazed condition but the job becomes more complicated and costs are higher. One way is to punch holes through the glaze with an incising hammer, or to make shallow cuts with an axe. Such incisions would be made over the ground line zone extending from 1 foot below the ground to 6 inches above.



## 3. SOAK



Soak the butts of the posts until the preservative penetrates  $\frac{1}{2}$  inch or more at the shallowest point. Test by cutting a few timbers at the ground line to determine your soaking time. Examine the cuts immediately, for the oil creeps out over the surface and soon presents a false picture. The rate of absorption varies according to the condition of the wood; in general pine treated during the same season as cut requires 24 hours soaking. If seasoned over winter or longer, 12 hours. Long-seasoned dead timber,  $\frac{1}{2}$  to 6 hours. The bottom 30 inches of a 4-inch post will take up to 1 or  $1\frac{1}{2}$  pints for a good treatment. A 6-inch post will take up  $1\frac{1}{2}$  to 3 pints. An 8-inch post, 4 pints or more. If the pines have a deep sapwood they will continue to take up preservative beyond the above amounts. It will keep down costs if posts are taken from the solution when the minimum penetration approaches  $\frac{3}{4}$  of an inch.

After completing treatment of the butts, reverse the ends and give the tops a 30-minute soak in the preservative solution. This may take another  $\frac{1}{2}$  to 1 pint, depending on post size. Maintain the level of the treating solution in the drum or tank.

### Treating Equipment

For butt treatment, treating the lower 30 inches of the post, use a 55-gallon oil drum or a battery of them set 18 inches in the ground. For full-length treatment, use tanks a little longer than the longest timbers.

## Caution

Precautions recommended by the manufacturer should be observed in handling cold-soak preservatives. They are toxic. Avoid contact with the skin as much as possible. Some persons develop skin irritations from contact and should wear oil-resistant gloves and aprons. Wash thoroughly with plenty of soap and warm water within a reasonable time after contact.

KEEP FIRE AWAY

## Costs

The treating solution ordinarily costs farmers about 50¢ per gallon if they prepare any quantity. This runs about 7¢ per pint.

### ESTIMATED COST PER POST

	<i>Cents</i>
Post on stump (stumpage) .....	3 to 6
Cutting and hauling .....	8 to 16
Peeling .....	5 to 15
Cost of preservative solution .....	8 to 20
Labor (treating) .....	4 to 7
Depreciation of Equipment .....	1 to 2
	<hr/>
	29 to 66

## General Information

Both the treating drums and the posts to be treated require protection from rain; rain water or heavy dew on the posts interferes with absorption. If uncovered posts are badly soaked by winter rains they need 7 to 10 days of dry weather before treating.

The penetration of copper naphthenate solution is easily observed because of its green color. Penta solution is only slightly visible but an oil soluble blue or black dye put in the first soaking run will color the wood so you can set a time schedule for similar timbers. All posts in any one load should be of the same size and condition.

Treating in warm weather is preferable. Penetration may be somewhat slower in cold weather but treatment is possible providing ice crystals have not formed in the wood.

When treated, remove the posts from the solution and dry out of doors in a well ventilated spot out of direct sunlight. The posts are ready to use when they are dry enough to handle.

---

Cooperative Extension Work in Agriculture and Home Economics  
F. E. Price, Director

Oregon State College and U. S. Department of Agriculture Cooperating.  
Printed and Distributed in furtherance of the Acts of Congress of May 8  
and June 30, 1914.