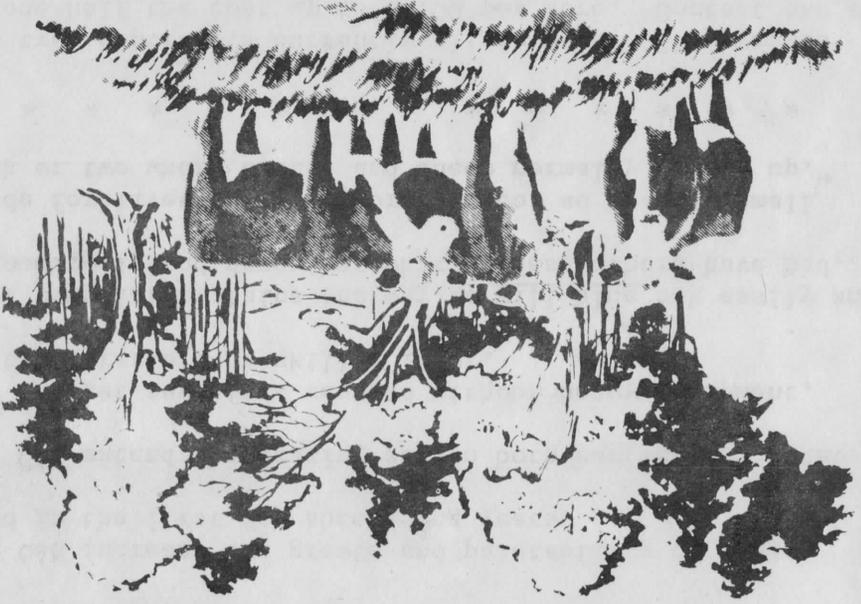


**GRASS**  
**NOT OAKS**  
**MAKES 'EM FAT**



Monte Bell, University of California Farm Advisor, Glenn Co.

Co-operative Extension work in Agriculture and Home Economics, College of Agriculture, University of California, and United States Department of Agriculture co-operating. Distributed in furtherance of the Acts of Congress of May 8, and June 30, 1914. George B. Alcorn, Director, California Agricultural Extension Service.

## Did you know that??

OAK TREES dominate much of the rangeland in Glenn County.

OAK TREES outcompete grass for sunlight, water and soil nutrients.

OAK TREES "drink" large amounts of water and cause springs and ponds to dry up faster.

OAK TREES often have rank weedy grasses under them.

## Did you know that??

YOU CAN open this land up economically.

YOU CAN increase the growth and palatability of range feed in the first and succeeding years.

YOU CAN extend the grazing season both earlier and later.

YOU CAN get sure-fire results without heavy equipment, costly materials or skilled labor.

This pamphlet explains one way to kill blue oak easily and economically and describes what success others have had.

Shade for livestock is important too, so leave a small park or two where cattle and sheep normally "shade up."

\* \* \* \* \*

Oak tree control is currently eligible for ACP payments of one-half the cost up to \$5.00 per acre. Contact the ASC Office, 135 South Tehama Street, Willows 30 days prior to treatment of trees.

Obtain a permit to use 2,4-D from your Agricultural Commissioner.

Number of trees per acre	140
Average diameter of trees	8 inches
Chemical used per acre	1.4 quarts
Labor time per acre	2.2 hours
Chemical, average \$3.50/gallon	\$1.23
Labor, average \$1.40/hour	3.08
Total cost per acre	\$4.31

## Clean up

The treated trees usually begin to disintegrate after two years and are fairly well broken down and on the ground in 7-10 years.

"Poisoned" trees rot faster than girdled trees because the tissue dies faster and there are no sprouts.

"Poisoned" trees burn completely. In some cases the roots burn into the ground.

Many wood cutters like poisoned trees because they can sell the dry wood immediately.

Other publications dealing with range improvement:

Fertilizing Glenn County Range  
Production of Range Clovers  
Improvement of Medusahead-Infested Rangeland  
Improve Your Range with Harding

## When to treat

For best results treat from January to June when soil moisture is adequate. However, trees may be killed the year around.

## How to treat

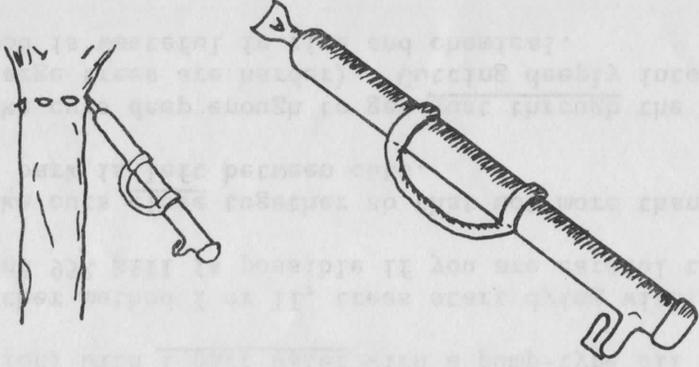
Ask the farm advisor or someone who has had successful experience killing trees for a demonstration.

Make cuts around the base of each tree, leaving no more than 2 inches of bark between the cuts.

Fill these cuts with a 2,4-D amine mix.

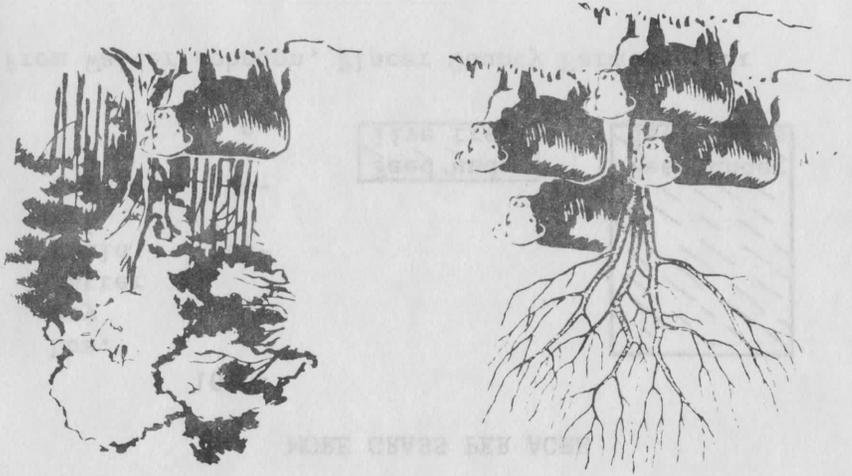
There are two methods to do this.

### Method I. Tree injector



The tree injector is a 4-inch cylinder with a cutting bit on one end and rigged with a valve so that the chemical will flow through a hole drilled in the bit.

Four out of five prefer grass under dead oaks.



Walter Johnson, Placer County Farm Advisor, recorded a six-fold increase in grazing time spent in treated areas.

Georgia trials\* showed shading affected grass.

1. Increased moisture content about 8%.
2. Decreased available carbohydrates 57-76%.
3. Increased the percent of undigestible lignin.

## Costs

Material and treatment labor for a typical area based on averages taken from ranchers' books and Glenn County ASC figures. Costs do not include foreman, vehicles or overhead.

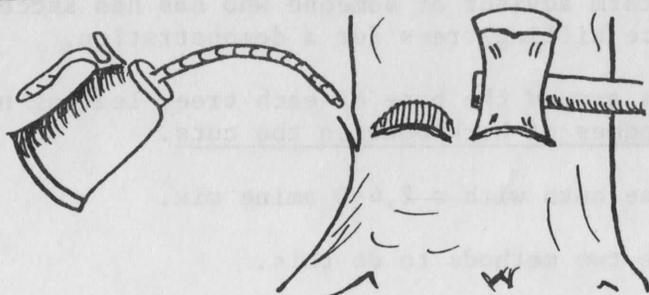
\*Journal of Range Management, July 1959.

Fill the injector with a mix of 1 part 2,4-D amine (4 lbs. acid equivalent per gallon) with 2 parts water.

Jab the base of the tree with the injector, lower it to open a cup for the chemical, and then trip the trigger and fill the cut.

Injectors are available in the county. Contact the Farm Advisors office.

#### Method II. Axe and oil can

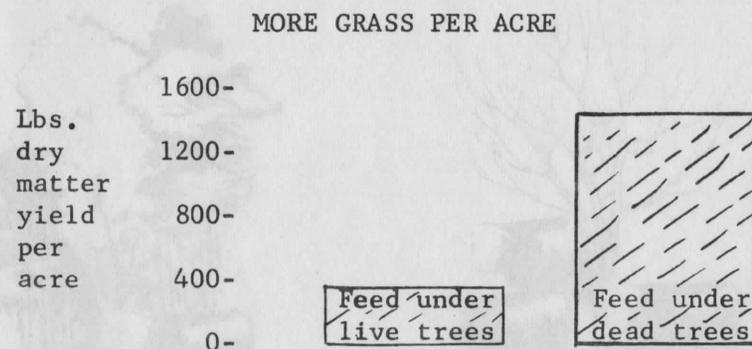


Make axe cuts around the tree and then fill the cuts with a mix of 1 part 2,4-D amine (4 lbs. acid equivalent per gallon) with 1 part water with a pump-type oil can.

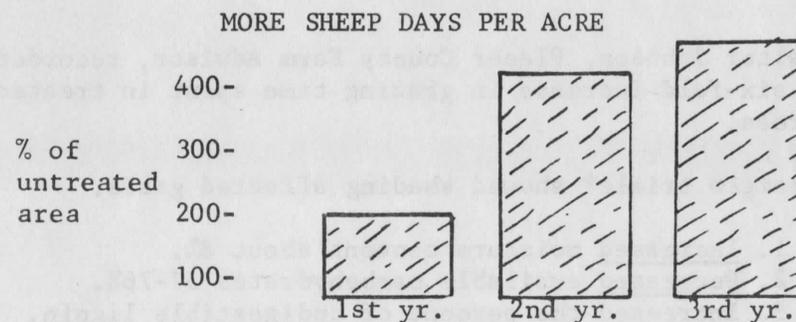
With either method I or II, trees start dying within 2 weeks and 95% kill is possible if you are careful to:

1. Make cuts close together so that not more than 2" of bark is left between cuts.
2. Make cuts deep enough to get just through the bark (large trees are harder). Cutting deeply into the wood is wasteful in time and chemical.
3. Make cuts level so chemical won't run out.
4. Fill the cuts with chemical.
5. Treat the trees when the soil moisture is adequate (January - June).

## Results



From Walter Johnson, Placer County Farm Advisor



Increases in sheep days grazing per acre by year following treatment

Experimental watershed study, UC Hopland Field Station

#### MORE WATER FOR USE

"A 200-acre watershed that used to dry up in June now flows the year around. The only change has been oak tree control."

Al Murphy, Administrator, Hopland Field Station