

# Helicopter Logging Feasibility Studied by Forest Engineers

Corvallis - The feasibility of using helicopters for logging operations on up-to-now inaccessible timberlands in the Pacific Northwest and Alaska has been demonstrated by forest engineers at Oregon State University, according to John E. O'Leary, project director.

O'Leary, associate professor of forest engineering at OSU, has been studying the possibilities of helicopter logging since June, 1961, under contract with the U. S. forest service.

Until recently, timberlands which seemed impossible to log with conventional methods were bypassed, O'Leary pointed out. The point has been reached, however, where such lands are too valuable to ignore.

**Considered Inaccessible**

In Alaska alone, there are approximately 2,000,000 acres of valuable timberland which up to now, have been considered inaccessible but which could be logged economically by helicopter, he added. It seems quite likely that helicopter logging may have an important place in the future of logging, O'Leary believes. He lists at least seven situations where helicopters may be used in preference to the conventional logging methods. They are:

1. If it is cheaper to log by helicopter than other logging methods because of high road building costs or low timber volume per acre.
2. If soil conditions prohibit building logging roads or dragging logs.
3. If conventional methods would destroy the beauty of a particular area.
4. If quick action is needed to remove timber while it still has economic value from fire-killed, bug-killed, or wind-thrown stands.
5. If right-of-way problems hinder the development of a road system.
6. If special orders require the removal of a certain species in a mixed stand prior to the final cut.
7. If the topography or location of the timberland is such that it requires a special logging method which the helicopter can provide.

**Certain Conditions**

Helicopters cannot be used everywhere economically, O'Leary emphasized, and will not compete, for the most part, with the conventional machinery used for logging. Certain conditions must first exist in an area in order for helicopter logging to be possible and economical.

A few of these conditions are: low temperatures and elevations should exist in order for a helicopter to give best performance; the weather must be fairly good because helicopters are grounded by dense fog, sleet, and winds in excess of 30 knots; water, where logs can be dumped, should be within a mile of the logging operations; and helicopter maintenance facilities should be nearby.

The helicopters used for logging, because of their high cost and maintenance problems, likely would be owned and operated by helicopter companies rather than by the logging companies themselves, the OSU forest engineer said.

**Average Rental**

Studies show that the average rental of a helicopter would be approximately \$300 per hour for a machine with a 5,000 pound lifting capacity. Machines with 10,000 and 20,000 pound lifting capacities might be rented for approximately \$500 to \$800 per hour, respectively.

This high cost per hour is the reason why conditions have to be such that the operation can be carried out quickly and efficiently. In an efficient operation, under the ideal conditions mentioned previously, about 14 to 17 trips could be made per hour, studies show.

Because it appears that helicopter logging will play an important part in the logging future of the Pacific Northwest and Alaska, O'Leary has recommended that the U. S. forest service conduct further tests to determine the long-term durability and economy of helicopter logging, conduct trial operations making time and motion studies, and participate in programs to develop helicopter logging in appropriate areas.

## 4-H Club News

**Antelope Cooking, Clothing**

The March meeting of the Antelope Cooking and Clothing 4-H club was held at the home of Donna Barton.

Roll call for the cooking club was on "something difficult you have made." Judy Hill and Kathy Pritchard, cooking Junior leaders, supervised the meeting and assisted the members. Assignments were given by Judy.

The annual buffet supper will be held March 22 at 7 p.m. at Mary Ellen Wallis' home. The members' parents and the 4-H extension agents will be guests.

Judy Hill and Paulette Anderson led a discussion on table manners.

A demonstration entitled, "experimenting with milk," was presented by Donna Nevin. Janice Pritchard led the singing.

The clothing roll call was "something you would like to make."

Mrs. Don Anderson told the girls about a practice style show to be given by Miss Marion Echo March 26 at 7 p.m. at the extension auditorium.

A clothing workshop for the older members is scheduled for March 9 at the Anderson's home.

The next meeting will be April 6 at 10:30 a.m. at the home of Judy Hill.

Judy Hill, Reporter

**Spoons and Needles**

The Spoons and Needles 4-H club met recently at the home of Mrs. C. Wieskamp.

We completed setting up our work schedule for the remainder of the year and refreshments of cookies and punch were served.

The next meeting will be held at the home of Mrs. F. Norris on March 14.

Sue Woodcock, Reporter.

## Summer School At OSU Slated For Twelve Weeks

Corvallis - Twelve weeks of summer school - including an 8 and 4-week session - are planned at Oregon State University starting June 17 as part of the "year round" school plan on campus.

Course offerings will be substantially expanded again this year to meet the needs of increasing numbers of summer school students, according to Dr. Franklin R. Zeran, dean of education and director of summer school.

The 8-week session - designed in part for public school teachers whose summer time is limited - is scheduled June 17 to Aug. 9. It will be followed immediately by a 4-week intersession Aug. 12 to Sept. 6.

By putting the two programs together, a student may earn a full term's credit plus, university officials pointed out, and "speed up" graduation date, lighten regular school loads, or broaden the educational training.

About 40 special workshops and seminars are planned, in addition to regular coursework in the various departments. Most will run two weeks.

## MEADOWBROOK FROZEN DESSERT MELLORINE

Vanilla, Chocolate, Strawberry

Gal. ctn. **79¢**

## COCKO' WALK TOMATOES

No. 303 Can **9 FOR 99¢**

No. 2 1/2 Can **15¢ Ea.**

## NEW ICELANDIC FROZEN SOLE FILLETS

Caught in Icelandic Waters. Skinless

1-lb. Pkg. **59¢**

## Bill Proposes One Voters Pamphlet

Salem - (AP) - There will be voter's pamphlet per household instead of one per voter if the legislature passes a bill approved Wednesday by the House Elections committee.

Elections Director Jack Thompson said it would save \$35,000 a biennium. He noted the pamphlets are a major operation involving six semi-trailer truckloads of paper and a 30-day round-the-clock press run.

The committee also approved a bill raising the number of electors required at a non-binding convention from 250 to 1,000 and requiring completion of the proceedings in one day.

The question was raised last year when would-be candidates tried to get nominated by holding running conventions lasting several days.

# Always More Meat for Your Money at Thunderbird

## PORK Sale

Young Corn Fed Pork Direct from the Midwest - You Can Taste the Difference

<b>Pork Roast</b>	Fresh Picnic Cut, Tender Young Pork	<b>27¢ lb</b>
<b>Boneless Pork Roast</b>	Fresh Shoulder Butt Well Trimmed	<b>49¢ lb</b>
<b>Pork Steak</b>	Meaty Blade Cuts - Nice To Pan Fry - Bread or Bake	<b>43¢ lb</b>
<b>Spare Ribs</b>	(Small Pork Ribslets) Swell for "Sweet 'n Sour" or to Bake	<b>29¢ lb</b>
<b>PORK SAUSAGE</b>	Country Style Pleasingly Seasoned Fresh	<b>3 Lbs. 89¢</b>
<b>SLICED BACON</b>	Morrell's Frontier Reg. Sliced	<b>35¢ 2 Lbs. 69¢</b>



**BAR S FULLY COOKED HAMS**

Short Shank - Surplus Fat and Skin Removed. Fine Mild Cured Ham - No Water Added.

Shank End Cuts . . . **39c lb.**  
 Butt End Cuts . . . . . **49c lb.**  
 Sliced Ham - Center Cuts . . . **79c lb.**

**LENTEN SPECIAL**

**Red Snapper**

For Lenten Meals

**39¢ lb**

**Rib Steak 69¢ lb**

USDA Good and Choice - Tender Aged Beef - Real Tasty

**SPENCER STEAK 79¢ lb**

Eye of the Rib - Boneless No Waste - Flash Frozen

**YOUNG TURKEYS 35¢ lb**

Swift's Royal Rocks. USDA Inspected No Parts Missing. 12 to 18 Lbs.

SMITH PEAS	No. 300 Can	10c	10 for 99c
PHEASANT BLUE LAKE GREEN BEANS	No. 303 Can	13c	8 for 99c
BANQUET BONELESS CHICKEN	5 oz. Can	25c	4 for 99c
EARLY CALIFORNIA CADET PITTED OLIVES	No. 211 Can	25c	4 for 99c
SILK FACIAL TISSUES	400 Box	20c	5 for 99c
GERBER'S BABY MEATS	Strained 3 1/2 oz. or Junior Can	20c	5 for 99c
FELINE TUNA CAT FOOD	No. 1/2 Can	13c	8 for 99c
DERBY EGG NOODLES & CHICKEN	1-lb. Jar	29c	
MISS LOU CUT COVE OYSTERS	8-oz. Can	25c	4 for 99c
RANCHO CHICKEN NOODLE SOUP	Reg. 33c 22-oz. Can.	4	for 99c
HARTZ WESTERN BEER	11 oz. Bottle	6	for 79c plus dep.
DELRIK SHORTENING	3 lb. Can	59c	
THUNDERBIRD MAYONNAISE	Qt. Jar	39c	Gal. \$1.49
THUNDERBIRD SALAD DRESSING	Qt. Jar	33c	Gal. \$1.29

BIG IDAHO FROZEN FRENCH FRIES	1 1/2 lb. bag	29¢
HEINZ CREAMED HONEY	Reg. 33c 10 oz. Ctn.	25¢ 4 For 99¢
SANI CLOR LIQUID BLEACH	Gal. Jug.	39¢
PAY DAY OR MILK SHAKE CANDY BARS	5c Bars Ctn. of 6	19¢
HALEY'S CHILI BEANS	40 oz. Can	25¢ 4 For 99¢
REAL PRUNE PRUNE JUICE	Reg. 39c 24 oz. Bottle	29¢
HUNT'S PORK & BEANS	No. 300 Can	9¢
JOAN OF ARC KIDNEY BEANS	Reg. 2/29c No. 300 Can	10¢
FROZEN POPSICLES All Flavors.	5c 12 for 59c	
HERSHEY'S INSTANT COCOA MIX	38-oz.	79c
PILLSBURY FLOUR	10 lb. Bag	89c
JIFFY BISCUIT MIX	40 oz. pkg.	27c
GIANT HERSHEY BARS Mr. Goodbar Krackie		29c
MARY ELLEN'S - A CUP TO A CUP STRAWBERRY JAM	20-oz. Jar	49c

Always More For Your Money



# Thunderbird

## Discount MARKET

CORNER JACKSONVILLE HIWAY AND LOZIER LANE

MEDFORD LIONS ANNUAL PANCAKE DINNER Benefit Sight Conservation HEDRICK JUNIOR HIGH Wednesday, Mar. 13, 5-8 p.m.

**OPEN 9 a.m. to 9 p.m.**

Grocery Prices Effective Thursday Through Sunday, March 10 We Reserve the Right To Limit No Sales to Dealers

MARY ELLEN'S JAMS PLUM	20-oz. Jar	43c	APRICOT-PINEAPPLE	20-oz. Jar	47c
SCHILLING'S VANILLA EXTRACT	4-oz. Bottle	79c	VERMONT MAID WAFFLE & PANCAKE SYRUP	24-oz. Bottle	63c
MAXWELL HOUSE INSTANT COFFEE	10-oz. Jar	\$1.39			