

OREGON STATE BOARD OF FORESTRY

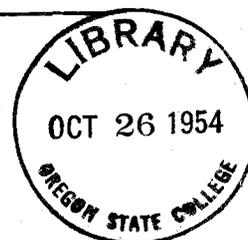
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OREGON CONE CROP, 1954

by

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The annual statewide cone crop survey and report is made by the Oregon State Board of Forestry. The survey data are gathered by ocular examination of the cone crop on various coniferous species of trees, at permanent stations and with intermediate road checks between. The amount of crown fruiting and the density of the cone crop are rated by numbers ranging from 1 to 10, as shown in Table I. Upon completion of the field work, these field ratings are compiled and averaged for each tree species throughout the state.

Table II indicates the common and scientific names of trees examined and the overall statewide rating of the current cone crop on each listed species.

TABLE I

CONE CROP CLASSIFICATION

None	1 - No cones on any trees.
	2 - Few cones on occasional trees.
Very Light	3 - Few cones on 25% of the trees.
	4 - Few cones on 25% of the trees - many cones on occasional trees.
Light	5 - Few cones on 75% of the trees.
	6 - Many cones on some trees - few cones on 75% of the trees.
Medium	7 - Some cones on all trees.
	8 - Many cones on some trees - some cones on all trees.
Heavy	9 - Many cones on 75% of the trees - some cones on all trees.
	10 - Many cones on all trees.

TABLE II

1954 Cone Crop - State Average by Species

Common Name	Scientific Name	Cone Crop Rating
Douglas fir (W.Oregon)	<i>Pseudotsuga taxifolia</i> var. <i>viridis</i>	4
Douglas fir (E.Oregon)	<i>Pseudotsuga taxifolia</i> var. <i>glauca</i>	6
West Coast hemlock	<i>Tsuga heterophylla</i>	7
Mountain hemlock	<i>Tsuga mertensiana</i>	8
Grand fir	<i>Abies grandis</i>	6
California red fir	<i>Abies magnifica</i>	3
White fir	<i>Abies concolor</i>	5
Pacific silver fir	<i>Abies amabilis</i>	5
Subalpine fir	<i>Abies lasiocarpa</i>	4
Noble fir	<i>Abies procera</i>	4
Ponderosa pine	<i>Pinus ponderosa</i>	5
Idaho white pine	<i>Pinus monticola</i>	4
Sugar pine	<i>Pinus lambertiana</i>	6
Shore pine	<i>Pinus contorta</i> var. <i>latifolia</i>	5
Lodgepole pine	<i>Pinus contorta</i>	7
Sitka spruce	<i>Picea sitchensis</i>	4
Engelmann spruce	<i>Picea Engelmannii</i>	8
Western red cedar	<i>Thuja plicata</i>	5
Port Orford cedar	<i>Chamaecyparis lawsoniana</i>	8
Incense cedar	<i>Libocedrus decurrens</i>	5
Alaska cedar	<i>Chamaecyparis nootkatensis</i>	3
Western larch	<i>Larix occidentalis</i>	4
Western juniper	<i>Juniperus occidentalis</i>	6

Douglas fir

The Douglas fir cone crop is extremely spotty and is running very light to light this year. The overall crop in western Oregon was rated (4) very light, with the Coast Range averaging light, and the Cascade Mountains and the Willamette Valley very light. The west side crop is confined to crown tips and upper portions of the crown. The Douglas fir cone crop in eastern Oregon is light (6), but is better than the west side and generally better than the east side crop of last year. Field observations indicate a general light crop, with frequent medium crops, and occasional heavy crops on individual trees. The crop in the Blue Mountains is better than the crop on the east slope of the Cascades. Many high cone counts on the branch tips were made here and most of the active crowns were producing cones.

The Coast Range and Cascade Mountain Douglas fir crop appears to be generally stratified at, or slightly below, the middle elevations. The higher elevation old growth Douglas fir in the Cascades, which had a fair crop last year, has only a few cones this year. The west side Cascade Mountain crop, even though small and spotty, improves (except the extreme north end of the Cascade Mountains) at elevations of 500 to 800 feet up to 1500 to 2000 feet, then drops off again. Even with crops approaching medium in places, the cones are so few in the upper and lower elevations that the general Cascade crop is poor.

The Douglas fir cone crop south and west of Crater Lake runs only 2 to 3, except in the upper Rogue River valley, where the old growth trees have some light to medium crops.

Since the crop is light again this year, considerable insect damage is prevalent in the cones, with often 8 or 10 axils per cone showing insect damage or larvae. Some cones reveal only 3, 4 or 5 seeds per longitudinal cut. Many of the cones this year are small and slightly deformed due mostly to the presence of insect larvae.

West coast hemlock

Field reports indicate an overall medium (7) cone crop on west coast hemlock. The crop in the Coast Range is slightly better than in the Cascade Mountains. The old growth trees are producing most of the crop this year. Ratings on the Coast Range crop were mostly medium, with occasional extremes of heavy and light. The Cascade west coast hemlock crop is slightly lighter and less uniform, with tendencies toward spotty crops, especially in the extreme north and extreme south.

Mountain hemlock

This species, important to our upper watersheds, has a uniform medium crop this year. Last year it was rather spotty, varying from very light to heavy. This year all the areas rated ranged from 7 to 10, with extensive areas often having heavy crops.

White fir (Abies species)

The cone crops on the various species of white fir are all below medium (except in parts of the Blue Mountains) this year, with grand, concolor and silver fir producing some cones, and red, subalpine and noble only a few. The noble fir crop is very light in the northern and central Cascades and drops almost to

none farther south. Pacific silver fir followed about the same pattern except for a few better crops to the north. Grand fir was found to have a better crop (7) in the Willamette Valley than in the Coast Range, where it varied from very light to medium, averaging only 5. Concolor fir in the Cascades has a very light crop at the higher elevations, improving considerably to light and medium at the lower elevations. Northeast of Klamath Falls the concolor fir cone crop is also very light with most checks running 2 to 3. White firs in the Blue Mountains have a fine medium cone crop this year. Several checks were made between Pendleton and LaGrande on areas where the spruce budworm has been sprayed and where good cone crops were seen on white firs, Douglas fir and Englemann spruce. Almost all of the white firs, young and old trees, had cones. The crop (rated as 8) is confined mostly to the crown tips, but the cones are very dense and compact on these upper branches. Population buildups of the spruce budworm in untreated parts of the Blue and Ochoco mountains have hampered cone production on white firs and Douglas fir, which on other adjacent areas have the possibility of a good general cone crop.

Ponderosa pine

The cone crop on Ponderosa pine is improved some over last year's crop but, with some one hundred field reports on this species compiled and averaged, only a light (5) crop is indicated. The better crops were found in the Blue Mountains and at lower elevations and near the fringes of the type in the Cascades. The crop in the central portion of the Blue Mountains south to Mt. Vernon averaged almost 7 with extremes of 3 to 9. Only slightly less was the crop around the Bend area and south to Gilchrist. The crop in the Metolius and Suttle Lake area is light. Decidedly poorer crops are found with only slight increases in elevation. Where the upper ponderosa pine type goes into transition with concolor, Douglas fir, incense cedar, etc., there are hardly any cones on the trees. Improvements in the crop are readily discernible in the vicinity of Sisters and other fringe areas.

The cone crop on ponderosa pine in the Umpqua drainage runs none to very light but improves some in the Rogue River drainage. Also very light is the ponderosa pine crop east of Mt. Hood, improving only slightly at the type fringe to the east. The Ochoco Mountains have a decidedly poorer crop (very light) than the Blue Mountains to the northeast.

South and east of Crater Lake the ponderosa pine cone crop is up to average for the general crop this year, with better crops seen on lower Spencer Creek, the ponderosa pine fringe south of Silver Lake and good spotty crops on the south boundary of the Deschutes National Forest between Horse Ranch and U. S. Highway 97.

Idaho white pine

The average crop in Idaho white pine ranges between very light (3) and light (6), with a very light crop on the west side and on the summit of the Cascade Mountains. The crop improves considerably from light (5) to medium (8) on the eastern slope. The best crop seen was on the summit trail in the vicinity of Square Lake off the Santiam Pass highway.

Sugar pine

Some areas have a very good crop of cones this year; the better areas are in the vicinity of the old Sun Pass highway, in upper Spencer Creek west of Klamath Falls, and in the Gilchrist-Crescent area. Thrifty old growth trees with good crowns have the best crops, with some trees having three to six cones clustered over most of the crown area and on almost all of the branch tips. The young age classes have a fair crop, distributed over most of the crown area, with one and two cones per branch tip. The sugar pine crop, like western white pine, is better on the east slope of the Cascades and Rogue River drainage, with lighter crops in the headwaters of the Willamette and Umpqua drainages.

This is the best cone crop seen on sugar pine for several years, which has run none to very light since about 1950.

Shore pine

This species is bearing a light crop this year, with field ratings indicating a better crop on the north coast where good flowering was observed last year. The cone crop is much improved over that of last year, when all crop checks were rated as 2. The north coast crop was mostly medium grading into light on the central coast and into very light farther south.

Lodgepole pine

The cone crop on this species is improved over last year's light crop, with a general medium crop throughout its range. Only in two or three instances did a check rate below medium while some ranged into heavy. The crop was slightly lighter at the higher elevations in the Cascade Mountains and in areas to the east of Crater Lake but improved to the north. The crop on lodgepole pine in the Blue Mountains of eastern Oregon was average to slightly above the average statewide crop for this year.

Sitka spruce

Sitka spruce has a very light cone crop this year, with only a few of the twenty-five field checks rated above very light. Only a few cones were seen and those were confined to the tips of the crowns. The area near Astoria, which usually has an above-the-average crop, is one of the lighter areas. The only fair crops seen were between Tillamook and Otis and on occasional trees scattered throughout the range of Sitka spruce in the state.

Englemann spruce

Englemann spruce has a good cone crop, both in the Cascade and Blue Mountains. Averaged ratings from twelve check points indicate a medium crop. Actually, most of the crop is better than this, ranging from medium to heavy in most areas but with lighter local crops observed in the Cascades at the high elevations and on mountain passes. This caused a drop in the average of all the observations. There are cones on almost all the trees from dense tip crops to dense quarter-crown crops.

Western red cedar

The western red cedar cone crop is on the light side again this year, with an overall 5 (light) crop. Medium crops were observed in but two Cascade areas, one at middle elevations on the North Santiam drainage and on the lower McKenzie River; all other areas had crops bordering on the very light. Generally, the poorest crops were at the higher elevations and at the lower west side elevations north of the North Santiam drainage. The Willamette Valley crop is very light, improving into medium and light in the lower McKenzie and middle fork of Willamette drainages respectively. More medium crops were seen in the Coast Range and coastal areas than anywhere else, where six out of eighteen checks indicated scattered medium crops. The remainder ranged from no crop through very light to light. Most of the western red cedar crop is found on the upper crowns of open grown old growth trees. As usually occurs in dense unthinned stands only a few trees were found bearing cones.

Port Orford cedar

All observations and field checks point to a fair crop on Port Orford cedar. There have been heavier and more uniform crops but the average fruiting was about the same as last year. Field reports ranged from light to heavy, with an average crop

of 8 (medium). Crop variations were the general rule with occasional heavy crops on a few trees, only to drop to "thin" light crops on others.

Incense cedar

Some improvement in the incense cedar crop is noted this year, with a 5 (light) crop expected. Field reports indicate light to medium crops and occasionally heavy crops on individual trees in central Oregon, Sun Pass and Lake of the Woods areas and the upper Willamette River drainage. Most of the good crops are on areas with old growth trees. All other areas have poor crops, ranging from 2 to 5.

Alaska cedar

The Alaska cedar cone crop is considerably lighter this year with a 3 (very light) crop. Observations near Government Camp and upper Breitenbush River tributaries indicate only a few scattered cones on 25% of the trees. There was a fair crop last year.

Western larch

The cone crop on western larch is spotty, ranging from 2 on the east slope of the Cascades in central Oregon and near Mt. Hood to 7 and 8 in the Blue Mountains. Reports indicate some poor crops also in the Blue and Ochoce Mountains. The best crops seen were along U. S. Highway 30 between Meacham and Hilgard junction, and also farther west along the Starkey road to Ukiah. The overall crop was rated at 4.

Western juniper

With all field reports on this species averaged, the western juniper berry crop is expected to be light to medium, with an average rating of 6. Heavy crops were seen on occasional trees between check points but most crops checked were not rated above medium (7, 8) and hardly any fell below light (5, 6).