



STATE FOREST NOTES

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CALIFORNIA CONE CROP FOR 1969^{1/}

Annual cone crop data are compiled from reporting forms completed by California Division of Forestry and U. S. Forest Service, Region 5, personnel. One report form is requested from Division field units for each State Forest and forested county, and from each Ranger District of the Forest Service.



^{1/} This report was compiled and summarized by C. J. Eden, Forester II, Davis Headquarters Nursery.

Cone Reporting System

Fowells and Schubert^{2/} have shown that most cones are borne on dominant and co-dominant trees. In 1960 the Pacific Southwest Forest and Range Experiment Station and Region 5 of the Forest Service devised a rating system based on ocular estimates of cones on indicator trees (dominants over 12 inches d.b.h.). The five following classes are used:

1. None — no cones on any seed tree.
2. Very light — few cones on less than one-fourth of the seed trees.
3. Light — few cones on more than one-fourth of the seed trees.
4. Medium — many cones on one-fourth to one-half of the seed trees.
5. Heavy — many cones on more than one-half of the seed trees.

Cone Collection Areas

Cone crops are reported from fourteen zones and five subzones. Originally thirteen zones were delineated^{3/}, but subsequently a revision was made to include all areas of the State in a zone or subzone. An attached map outlines the zones and subzones. Larger scale (1:1,000,000) maps may be obtained free of charge from the office of the State Forester, Resources Building, 1416 Ninth Street, Sacramento, California 95814.

Reporting of the 1969 Crop

Cone crop surveys were made primarily the first part of July. One hundred-thirty four report forms were submitted. A summary of the information indicates a very light cone crop for the year (table 1). The only heavy crop reported was California juniper in San Bernardino County. Medium crops occur only in the following species and zones: incense-cedar, Zone V; Monterey pine, Zones XIII and XIII A; pinyon pine, Zone IX; and Port-Orford-cedar, Zone XI.

Several reports were received indicating a slow maturing of cones. On the Klamath National Forest, it was reported, cone and seed insects may destroy the entire red and white fir crop in Oak Knolls and Salmon River districts. Insect larvae were reported in the ponderosa and sugar pine cones examined on Pineridge Ranger District of Sierra National Forest.

^{2/} Fowells, H. A. and G. H. Schubert 1956. Seed crops of forest trees in the pine region of California. U. S. Dept. Agr. Tech. Bul. 1150. 48 pp. illus.

^{3/} Fowells, H. A. 1946. Forest tree seed collection zones in California. U. S. Forest Service. California Forest and Range Exp. Sta. For. Res. Notes 51. 5 pp. illus.

Table 1. Summary of California cone crops for 1969, by species, seed zone, and area.

Major Species	Seed Zone	Average Rating ^{a/}	County, or State or National Forest - Zone Rating ^{b/}	
<u>Abies concolor</u> (white fir)	I	1.9	Lassen (3)	
	II	2.1	Tahoe NF, Butte (3)	
	III	2.7	Latour SF (4), Tahoe NF (3.3), Butte (3)	
	IV	2.0		
	V	2.6	Mariposa, Fresno, Tulare (3)	
	Over-all	VII	4.0	Tahoe NF (4)
	Rating 2.3	VIII	3.0	Sierra NF (3)
		IX	1.8	San Diego (Julian) (3)
		X	2.6	Six Rivers NF, Tehama-Glenn, Humboldt-Del Norte (3)
		XI	1.8	
	<u>Abies magnifica</u> (red fir)	I	1.8	
II		1.5		
III		2.1	Latour SF (4), Tahoe NF (3)	
V		2.0		
Over-all		VII	3.5	Tahoe NF (3.5)
Rating 2.2		VIII	2.3	Fresno (3)
		X	2.7	Tehama-Glenn, Humboldt-Del Norte (3)
		XI	1.8	
<u>Libocedrus decurrens</u> (incense-cedar)	I	4.0	Lassen (4)	
	II	2.0	Shasta-Trinity (3)	
	III	2.2	Latour SF (3)	
	IV	2.2	Sierra NF (4)	
	Over-all	V	4.0	Sierra NF (4)
	Rating 2.2	IX	1.9	San Diego (Julian) (3)
		X	2.3	Shasta-Trinity NF (4)
		XA	1.0	
		XI	2.0	Humboldt-Del Norte (3)
	<u>Pinus coulteri</u> (Coulter pine)	IX	2.8	San Diego, San Bernardino (4)
XIIIA		2.5	San Benito-Monterey (3)	
Over-all				
Rating 2.7				

(See footnotes at end of table.)

Table 1. (Cont'd.)

Major Species	Seed Zone	Average Rating ^{a/}	County, or State or National Forest - Zone Rating ^{b/}	
<u>Pinus jeffreyi</u> (Jeffrey pine)	I	1.8		
	II	2.0		
	III	2.2	Tahoe NF, Latour SF, Shasta-Trinity (3)	
	Over-all	IV	1.5	
	Rating 1.9	V	2.0	Madera (3)
		VI	1.0	
		VII	2.0	Tahoe NF (3)
		VIII	2.5	
		IX	2.2	San Diego (3)
		X	1.7	
		XI	1.7	
<u>Pinus lambertiana</u> (sugar pine)	I	2.0	Lassen (3)	
	II	2.1	Placer (3)	
	III	2.5	Latour SF (3.5)	
	IV	1.7		
	V	2.0	Calaveras (3)	
	Over-all	VIII	2.0	
	Rating 2.1	IX	2.1	San Diego (Julian) (3)
		X	2.0	Tehama-Glenn (3)
		XA	2.0	
		XI	2.3	Tehama-Glenn (4)
		XIII	3.0	Mendocino (3)
<u>Pinus ponderosa</u> (ponderosa pine)	I	1.6		
	II	2.3	Tahoe NF, Placer (3)	
	III	2.1	Latour SF (4)	
	IV	2.1	Tulare (3)	
	Over-all	V	1.6	
	Rating 1.9	IX	2.2	
		X	2.1	Mendocino (3)
		XA	1.5	
		XI	1.8	
		XIIIA	2.0	Santa Cruz (3)
<u>Pinus radiata</u> (Monterey pine)	IXA	3.0	San Luis Obispo (3)	
	XII	3.0	Humboldt-Del Norte (plantations) (3)	
	Over-all	XIII	4.0	Santa Cruz (4)
	Rating 3.5	XIIIA	4.0	San Benito-Monterey (4)

(See footnotes at end of table.)

Table 1. (Cont'd.)

Major Species	Seed Zone	Average Rating ^{a/}	County, or State or National Forest - Zone Rating ^{b/}	
<u>Pseudotsuga menziesii</u> (Douglas-fir)	I	2.3	Shasta-Trinity NF, Lassen (3) Butte (4) Tahoe NF, Butte (3)	
	II	2.4		
	III	2.6		
	IV	1.5		
	V	2.0		
	Over-all	X	2.3	Tehama-Glenn (3)
	Rating 2.1	XA	2.0	
		XI	2.0	
		XII	2.0	
		XIII	2.8	Santa Cruz, Jackson SF, Mendocino (3)
		XIIIA	2.0	
<u>Sequoia sempervirens</u> (coast redwood)	XI	3.0	Humboldt-Del Norte (3)	
	XII	3.0	Humboldt-Del Norte (3)	
	Over-all	XIII	3.0	Santa Cruz, San Mateo, Jackson SF, Mendocino (3) Napa, Marin, Sonoma (3)
	Rating 3.0	XIIIA	3.0	
<u>Sequoia gigantea</u> (Sierra redwood)	V	3.0	Tulare (3)	
Minor Species	Seed Zone	Average Rating ^{a/}	County, or State or National Forest - Zone Rating ^{b/}	
<u>Abies bracteata</u> (Santa Lucia fir)	XIIIA	2.0		
<u>Abies grandis</u> (grand fir)	XII	3.0	Humboldt-Del Norte (3)	
<u>Chamaecyparis lawsoniana</u> (Port-Orford-cedar)	XI	4.0	Six Rivers NF (4)	
<u>Juniperus californica</u> (California juniper)	IX	3.5	San Bernardino (5)	

(See footnotes at end of table.)

Table 1. (Cont'd.)

Minor Species	Seed Zone	Average Rating ^{a/}	County, or State or National Forest - Zone Rating ^{b/}
<u>Picea sitchensis</u> (Sitka spruce)	XII	3.5	Humboldt-Del Norte (3.5)
<u>Pinus attenuata</u> (knobcone pine)	XI	3.0	Six Rivers NF (3)
<u>Pinus contorta</u> var. <u>contorta</u> (beach pine)	XII XIII	3.0 3.0	Humboldt-Del Norte (3) Jackson SF (3)
Over-all Rating 3.0			
<u>Pinus contorta</u> var. <u>latifolia</u> (lodgepole pine)	III VIII	2.7 2.2	El Dorado NF, Latour SF (3) Mariposa (3)
Over-all Rating 2.4	IX XI	2.0 3.0	Six Rivers NF (3)
<u>Pinus edulis</u> (pinyon pine)	IX	4.0	San Bernardino (4)
<u>Pinus monophylla</u> (singleleaf pinyon pine)	IX	2.5	Mono-Inyo (3)
<u>Pinus monticola</u> (western white pine)	II XI	2.2 2.0	Latour SF (3.5)
Over-all Rating 2.1			
<u>Pinus muricata</u> (Bishop pine)	XII XIII	3.0 3.0	Humboldt-Del Norte (3) Jackson SF, Sonoma (3)
Over-all Rating 3.0	XIIIA	3.0	Marin (3)
<u>Pinus quadrifolia</u> (Parry pinyon pine)	IX	1.0	

(See footnotes at end of table.)

Table 1 (Cont'd.)

Minor Species	Seed Zone	Average Rating ^{a/}	County, or State or National Forest - Zone Rating ^{b/}
<u>Pinus sabiniana</u> (Digger pine)	XA	2.0	Tehama-Glenn (3)
	XI	2.7	
Over-all Rating 2.3	XIIIA	2.0	
<u>Pinus torreyana</u> (Torrey pine)	IX	2.0	
<u>Pseudotsuga macrocarpa</u> (bigcone Douglas-fir)	IX	2.7	Los Padres NF, San Bernardino (4) San Diego (3)
<u>Tsuga heterophylla</u> (western hemlock)	XI	3.5	Humboldt-Del Norte (3.5)
Over-all Rating 3.3	XII	3.0	Humboldt-Del Norte (3.0)

^{a/} Based on numerical scale of crop rating system.

^{b/} Only counties, State or National Forests with report of 3 or higher rating are shown.

