

SEED ORCHARD

DOUGLAS FIR WASHINGTON



SPECIES

Pseudotsuga menziesii
(Mirb.) Franco

ORCHARD CODE AND NAME

PME-VG-003 WASHINGTON-VG

CATEGORY

Qualified

BREEDER

INRA (Institut National de
la Recherche Agronomique -
Orléans - France)

CHARACTERISTICS OF THE ORCHARD

- Orchard of clones (cuttings)
- Year of planting : 1984/87
- Place of planting : Lisle-sur-Tarn (Tarn - France)
- Altitude of planting : 200 meters
- Surface area : 7,63 hectares
- Number of clones : 289 (detailed list at end of page)
- Origin of clones : Washington USA
- Number of effective clones * : 252
- Number of trees : 1938
- Start of production : 2005
- Method of pollination : Free

*This indicator of genetic diversity takes cognizance of the number of representatives of different clones and, where appropriate, between genetically related clones

SUMMARY

This seed orchard is composed exclusively of provenances from the State of Washington, with a good representation of most of the seed zones. The large number of provenances and clones gives it a broader genetic base. Selection focused on the young vigour and lateness of bud burst. There was no improvement in shape compared with that of natural plantations.



SEED GENERATION

CRITERIA AND SELECTION PROCESS

Washington orchard trees were selected in the nursery at an early stage (3-year old seedlings) in a Washington provenance test that took place in Orleans. Selection focused on the lateness of bud burst and vigour (height greater than 20% above the average for 3-year old seedlings, that is, 90 cm). The plants were too young to assess the shape criteria, e.g. straightness, angle of insertion of branches, etc. ...

Cuttings were taken from the 289 selected trees, then planted in France in the Tarn.



ADVICE FOR CULTIVATION

For cultivation in France, Washington-VG is recommended for all areas that are appropriate for Douglas fir (mid-mountain, good water supply).

It's also recommended for Belgium (Walloon region) and for some German states, such as Bavaria.

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ORIGIN OF WASHINGTON ORCHARD CLONES

SEED ZONE	PLANTATION	NUMBER OF CLONES	NUMBER OF TREES	% IN NUMBER OF TREES
012	Lake Quinault	4	30	2 %
030	Wynoochee Satsop-River Drainage, Mary Knight School, Matlock, Nahwatzel Lake, Shaffer Park, Cougarsmith Road, Doty, Schaffer Grade, Hoquiam	92	576	30 %
042	Yacolt-Dole Valley, East Fork Lewis River, Crawford, La Center, Amboy Area, Vancouver I, Vancouver II	17	121	6 %
202	Arlington (Jim Lakelake Riley Road, IUFRO - 1054 -, Airport, Hights), Granite Falls, Bryant Dump, Warm Beach, Mt. Vernon	33	221	11 %
222	Camp. Govey, Mt. Walker - Pine Creek	5	29	1 %
231	Shelton-Mason Lake-Mason Rd-Carmen Road, St. Albans Camp., Dayton, Collins Lake, Dewatto Hood Canal, Matlock, Allyn Station, Collins Lake	20	140	7 %
232	Yelm	1	4	0,2 %
241	Doty-Boisfort-Camp Mc Donnalld Area	2	12	1 %
402	Baker Lake, Rockport State Park	5	36	2 %
403	Hamilton-Mt. Josephine T.Tr, Concrete-Skagit River, Hamilton Grandy Creek, Darrington-Suittale Test, Darrington Round Mountain, Darrington IUFRO (1053), Darrington Suitattle Road, Darrington IUFRO (1053), Sauk River Clear Creek, Sauk Prairie, Buck Creek, Bennetteville, Straight Et Hime Creek, North Mountain	34	238	12 %
411	Skykomish (Beckler Peak, Miller River, Foss River, Startup I, Startup II)	14	95	5 %
412	Snoqualmie-North Bend-Yolt River, Black Diamond-Green River, Federation State Park, Snoqualmie Falls	14	97	5 %
421	Electron-Pole Line Road Near Electron, Rhodes Lake-Victor Falls, Old Baldy Mountain	7	52	3 %
422	Mineral-Walker Road, Ashford-Columbia Crest School Area, Ashford II, Eatonville-Jonhson Creek Road, La Grande, Mineral	15	120	6 %
430	Cispus (Iron Creek, Kraus Ridge, Big Creek, North Fork), Kidvalley Park, Morton (Winston Creek Camp 9 Area, Randle Coal Creek), Toutle River Area, Castle Rock, Cowlitz Randle	22	138	7 %
440	Muddy River, Swift Reservoir Area	4	29	1 %
TOTAL		289	1938	100 %



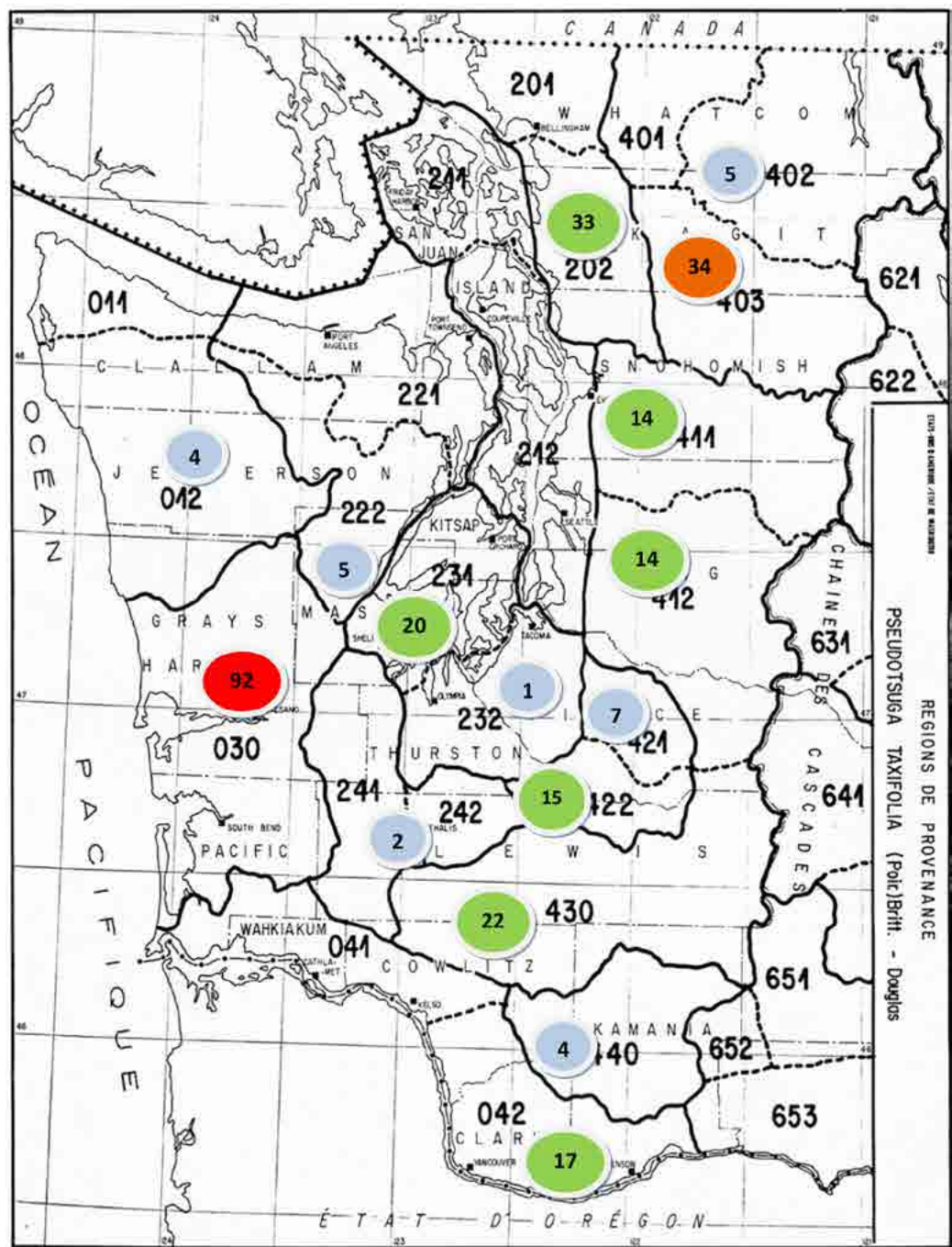
SEED GENERATION

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MAP OF ORIGIN OF WASHINGTON SEED ORCHARD CLONES

Number of clones per US Seed Zone of origin



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