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Ponderosa Pine Family Growth Comparisons in the Central Great Plains of Kansas

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ABSTRACT

Ponderosa pine (*Pinus ponderosa* Laws.) has been planted widely in the Great Plains. Recommendations based on a 1968 study were to use material from south central South Dakota and north central Nebraska. A second test to further delineate seed sources (provenance/families) in this region was established in 1986. This paper reports results for survival, height, diameter, and D2H measurements in Kansas at 15 years. Results identify a wide range of suitable families within the Great Plains region. A majority of the tested sources performed well especially those from central Nebraska. Those sources from eastern Montana and western Nebraska performed poorly where environmental or geographic conditions were the poorest, thus verifying the original recommendations.

KEYWORDS

 Ponderosa Pine, *Pinus Ponderosa*, Provenance, Seed Sources, Tree Selection, Growth Characteristics.

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References

- [1] Baer, N., & Collins, P. (1979). Ten-year performance of a ponderosa pine provenance study in eastern South Dakota. South Dakota State University. Agricultural Experiment Station. TB-52, Brookings, 6.
- [2] Callaham, R. Z., & Hasel, A. A. (1961). *Pinus ponderosa* height growth of wind-pollinated progenies. *Silvae Genetica*, 10, 32-42.
- [3] Critchfield, W. B., & Little, Jr. E. (1966). Geographic distribution of the pines of the world. USDA. Miscellaneous Publication, 99, 97.
- [4] Flint, H. L. (1983). Landscape Plants for eastern North America (p. 677). New York: John Wiley & Sons.
- [5] Deneke, F. J., & Read, R. A. (1957). Early survival and growth of ponderosa pine provenances in East-Central Kansas. USDA Forest Service, Research Note RM-297, 4pp.
- [6] Hamilton, D. A., & Rehfeldt, G. E. (1994). Using individual tree growth projection models to estimate stand-level gains attributable to genetically improved stock. *Forest Ecology and Management*, 68, 189-207. doi:10.1016/0378-1127(94)90045-0
- [7] Hanover, J. W. (1963). Geographic variation in ponderosa pine leader growth. *Forest Science*, 9, 86-95.
- [8] Lambeth, C. C. (1980). Juvenile-mature correlations in Pineaceae and implications of early selection. *Forest Science*, 26, 571-580.
- [9] Koop, R. F., Geyer, W. A., & Argent, R. M. (1987). Evaluation of ponderosa pine seed sources for the eastern Great Plains. *Journal Arboriculture*, 13, 139-144.

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- [10] Read, R. (1983). Ten-year performance of ponderosa pine provenances in the Great Plains of North America. USDA Forest Service Research Paper 250, 17.
- [11] Meier Martinez, A., Mondino, V., & Gallo, L. (2004). Criteria for the selection of plus trees of ponderosa pine (*Pinus ponderosa*) and Oregon pine (*Pseudotsugamenziesii*) for the establishment of seed orchards in the Andean Patagonia Region of Argentina. *Scapya Forestal*, 33, 2-9.
- [12] Mirov, N. T., Dufield, J. W., & Liddicoet, A. R. (1952). Altitudinal races of *Pinus ponderosa*—A 12-year progress report. *Journal of Forestry*, 50, 825-831.
- [13] SAS Institute Inc. (2004). SAS 2002-2003 SAS/STAT User's guide. Version 9.1. Cary NC: SAS Institute Inc.
- [14] Schaffer, P. R., & Baer, W. (1985). Ponderosa pine provenance for windbreaks in eastern South Dakota. *Journal of Forestry*, 2, 105-107.
- [15] Schaffer, P. R., & Baer, N. W. (1992). Stability of ponderosa pine provenance: results after 21 years in eastern South Dakota. *Northern Journal of Forestry*, 9, 102-107.
- [16] Squillace, A. E., & Silen, R. (1962). Racial variation in ponderosa pine. *Forest Science Monograph*, 2, 27.