

Radial growth peculiarities in Lithuania due to climatic and geohydrological factors

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Radial increment data gathered from 18 experimental plots of oak (*Quercus robur* L.) and from 25 experimental plots of pine (*Pinus sylvestris* L.) from peat bogs in Lithuania support the hypothesis that individual stands indicate disparate responses to the influence of temperature and precipitation factors.

Especially radial growth dynamics at Lithuanian tree stands are closely related to the geohydrological conditions of growth. Observed is that oaks growing even in soils of differing mechanical composition indicate a more highly similar response at $S \geq 75\%$, when the ground water is found at a similar depth, than for oaks growing in soil of the same composition, but at highly varied water depth levels.

Trees radial growth responses to the influence of temperature and precipitation are related to the geohydrological conditions at the stands too. Four categories of climate - growth responses in Lithuania oak stands have been formulated: 1) insensitive to both temperature and precipitation; 2) more sensitive to the temperature regime than to hydrology; 3) more sensitive to precipitation; and 4) sensitive to temperature as much as to precipitation.

Due to the above mentioned differences it is essential to use the rings data from as more analogic habitats as possible when compiling long - term rings series in Lithuania. It is possible to judge about geohydrological conditions by the peculiarities of radial growth dynamics. For e.g. dynamics peculiarities of pine from peat bogs is: 1) different trends and absolute averages of radial increment of the same specific periods; 2) different growth trends when no less than 10 years wet year follows dry (wet, dry, wet...); 3) different absolute averages of relation between the early and late wood of the same specific periods and others.

Key words: oak, pine, radial growth, peculiarities, environmental influences, Lithuania.