

Abstract

Forest cover and the water table in peat

We in Ireland are deeply involved in peatland forestry, but so far our research efforts in this field have been concerned mostly with aspects of the establishment and early growth of forest crops. As the crops develop the nature of the problems will change and it would be prudent for us to look ahead a little and see what may concern us during the periods of later development and crop regeneration.

A good example of the kind of information which we will need appeared some years ago in a publication* by Leo Heikurainen from Finland, a country where peatland forestry research has reached an advanced stage of development.

Heikurainen studied the effects of clear cutting on the ground water table in peat. His method of investigation was to observe the water table levels for two years before stand treatment and for two years after. He found that clear-cutting led to a rise of 20-40 cm in the ground water table during the growing season. The effect was much less in

winter. He also found that thinning had a similar but much weaker effect.

Heikurainen concludes that "the results obtained mean that the influence of the forest cover makes up for that of drainage. Thus, the need for maintenance of the ditches might not be so great as has been generally assumed. On the other hand, it can be observed that the final cutting to be done will rise the ground water strongly. Thus, creation of another tree generation will require repeated drainage."

*Leo Heikurainen: Hakkuun vaikutus ojitettujen soiden vesitalouteen. (Summary: On the influence of cutting on the water economy of drained peat lands) Acta Forestalia Fennica 82, 45pp, 1967.

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