Supplementary material for

Short- and long-term effects of surface fires on heat stress protein content in Scots pine needles

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The weighted average for each breed is calculated using the formula:

$$K_{wa} = (P_1 \times K_1 + P_2 \times K_2 + P_3 \times K_3 + P_4 \times K_4 + P_5 \times K_5) \div 100$$

K_{wa}, weighted average of the state of each tree species,

P_i, share of each trees state categories as a percentage,

K_i, index of the tree status category on the category scale (1, healthy, i.e. without signs of weakening; 2, weakened; 3, greatly weakened; 4, drying out; 5, fresh dead wood; 6, old dead wood).

The weighted average for the planting is calculated by the formula:

$$K_{pl} = (H_1 \times K_1 + H_2 \times K_2 + H_i \times K_{wai}) \div 10$$

K_{pl}, weighted average of plantation condition,

H_i, the share of the breed in the composition of the stand,

K_{wai}, weighted average of the condition of each breed.

If the value of the weighted average of the planting does not exceed: 1.5, then it is classified as healthy; 2.5, to the weakened; 3.5, to severely weakened; 4.5, to dying; >4.5, to the dead.

Reference

Federal Forestry Agency (2015) Guide to planning, organisation and maintaining of inspections of forest pathology. Order of Federal Forestry Agency of 15 May 2015, number 159, p. 20. Available at http://www.forestforum.ru/info/laws/lp_159.pdf [In Russian]