

**Supplementary Table 2.** Explanatory variables chosen by the best ‘the deviation from the long-term average of temperature and the deviation from the long-term average sum of precipitation’ models (+) on the basis of AIC values for the area affected by Armillaria root rot in younger (YS) and older stands (OS)

| No. | Model <sup>a</sup>                         | Growing season |         | Last growing season |         | Winter  |         | Last winter |         | Spring  |         | Last spring |         | Summer  |         | Last summer |         | Autumn  |         | Last autumn |         |
|-----|--------------------------------------------|----------------|---------|---------------------|---------|---------|---------|-------------|---------|---------|---------|-------------|---------|---------|---------|-------------|---------|---------|---------|-------------|---------|
|     |                                            | YS             | OS      | YS                  | OS      | YS      | OS      | YS          | OS      | YS      | OS      | YS          | OS      | YS      | OS      | YS          | OS      | YS      | OS      | YS          | OS      |
| 1   | Area ~ dT + dP + dT x dP + Site + (1 Year) | -              | -       | -                   | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | +           | -       | -       | -       | -           | -       |
| 2   | Area ~ dT + dP + Site + (1 Year)           | -              | -       | +                   | -       | +       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       |
| 3   | Area ~ dT + Site + (1 Year)                | -              | -       | -                   | -       | -       | -       | -           | -       | -       | -       | +           | -       | -       | -       | -           | -       | -       | +       | +           | -       |
| 4   | Area ~ dP + Site + (1 Year)                | -              | +       | -                   | -       | -       | -       | -           | -       | -       | -       | -           | -       | +       | +       | -           | -       | -       | -       | -           | +       |
| 5   | Area ~ dT + dP + (1 Year)                  | -              | -       | -                   | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       |
| 6   | Area ~ dT + dP + dT x dP + (1 Year)        | -              | -       | -                   | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       |
| 7   | Area ~ dT + (1 Year)                       | -              | -       | -                   | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       |
| 8   | Area ~ dP + (1 Year)                       | -              | -       | -                   | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       |
| 9   | Area ~ Site + (1 Year)                     | +              | -       | -                   | +       | -       | +       | +           | +       | +       | +       | -           | +       | -       | -       | -           | +       | +       | -       | -           | -       |
| 10  | Area ~ (1 Year)                            | -              | -       | -                   | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       | -       | -       | -           | -       |
| AIC |                                            | 1,997.6        | 3,681.5 | 1,994.9             | 3,683.4 | 1,994.1 | 3,683.4 | 1,997.6     | 3,683.4 | 1,997.6 | 3,683.4 | 1,990.1     | 3,683.4 | 1,996.3 | 3,681.6 | 1,997.1     | 3,683.4 | 1,997.6 | 3,682.7 | 1,993.7     | 3,683.2 |

Following seasons were considered: growing season, last growing season, winter, last winter, spring, last spring, summer, last summer, autumn, last autumn.

dT, deviation from the long-term average of temperature; dP, deviation from the long-term average sum of precipitation; Site, forest district.

AIC, Akaike information criterion; YS, younger stands ≤ 20 y; OS, older stands > 20 y.

<sup>a</sup>In each model ‘Year’ is a random factor.