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## Supplementary material

### **A laboratory-based quantification of the effect of live fuel moisture content on fire-spread rate**

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**Table S1. Laboratory experimental data of fire spread in live fuel beds with a slope angle of 20°**

| Fuel type                  | Test ref. | Fuel load<br>(kg m <sup>-2</sup> ) | Fuel depth<br>(m) | Bulk dens.<br>(kg m <sup>-3</sup> ) | Air temp.<br>(°C) | Rel. hum.<br>(%) | Fuel moist.<br>(%) | Rate of spread<br>(m min <sup>-1</sup> ) | Flame height <sup>A</sup><br>(m) | Flame angle <sup>B</sup><br>(°) |
|----------------------------|-----------|------------------------------------|-------------------|-------------------------------------|-------------------|------------------|--------------------|--|----------------------------------|---------------------------------|
| <i>Acacia dealbata</i>     | AD-CN-01  | 1.0                                | 0.50              | 2.0                                 | 15.2              | 64               | 110.8              | 0.396                                    | 0.65                             | 60                              |
|                            | AD-CN-02  | 1.0                                | 0.50              | 2.0                                 | 17.0              | 76               | 108.0              | 0.356                                    | 0.60                             | 60                              |
|                            | AD-CN-03  | 1.0                                | 0.50              | 2.0                                 | 19.3              | 44               | 14.0               | 1.304                                    | 2.00                             | 65                              |
|                            | AD-CN-04  | 1.0                                | 0.50              | 2.0                                 | 20.1              | 41               | 52.1               | 1.111                                    | 1.70                             | 65                              |
|                            | AD-CN-05  | 1.0                                | 0.50              | 2.0                                 | 17.5              | 46               | 26.1               | 1.500                                    | 1.80                             | 65                              |
|                            | AD-CN-06  | 1.0                                | 0.50              | 2.0                                 | 16.8              | 55               | 62.2               | 0.457                                    | 0.65                             | 65                              |
|                            | AD-CN-07  | 1.0                                | 0.50              | 2.0                                 | 17.5              | 50               | 58.8               | 0.323                                    | 1.40                             | 60                              |
|                            | AD-CN-08  | 1.0                                | 0.50              | 2.0                                 | 15.9              | 53               | 52.9               | 0.909                                    | 1.60                             | 65                              |
|                            | AD-CN-09  | 1.0                                | 0.50              | 2.0                                 | 17.9              | 49               | 99.0               | 0.759                                    | 1.70                             | 60                              |
|                            | AD-CN-10  | 1.0                                | 0.50              | 2.0                                 | 16.4              | 53               | 38.8               | 1.364                                    | 1.80                             | 65                              |
|                            | AD-CN-11  | 1.0                                | 0.50              | 2.0                                 | 17.7              | 50               | 72.1               | 0.366                                    | 0.70                             | 55                              |
|                            | AD-CN-12  | 1.0                                | 0.50              | 2.0                                 | 13.5              | 68               | 109.7              | 0.632                                    | 0.80                             | 55                              |
|                            | AD-CN-13  | 1.1                                | 0.55              | 2.0                                 | 17.6              | 57               | 108.2              | 0.491                                    | 0.70                             | 60                              |
|                            | AD-CN-14  | 1.1                                | 0.55              | 2.0                                 | 17.5              | 61               | 108.4              | 0.538                                    | 0.65                             | 55                              |
|                            | AD-CN-15  | 1.1                                | 0.55              | 2.0                                 | 17.8              | 55               | 12.9               | 2.000                                    | 1.90                             | 60                              |
|                            | AD-CN-16  | 1.1                                | 0.55              | 2.0                                 | 18.1              | 63               | 103.5              | 0.600                                    | 0.65                             | 55                              |
|                            | AD-CN-17  | 1.1                                | 0.55              | 2.0                                 | 12.9              | 75               | 71.5               | 0.833                                    | 1.50                             | 60                              |
| <i>Cytisus striatus</i>    | CS-CN-01  | 1.7                                | 0.55              | 3.2                                 | 21.8              | 64               | 179.3              | 0.375                                    | 0.65                             | 65                              |
|                            | CS-CN-02  | 1.7                                | 0.55              | 3.2                                 | 20.5              | 66               | 139.9              | 0.692                                    | 0.60                             | 70                              |
|                            | CS-CN-03  | 1.7                                | 0.55              | 3.2                                 | 20.3              | 55               | 49.6               | 1.176                                    | 2.40                             | 65                              |
|                            | CS-CN-04  | 1.7                                | 0.55              | 3.2                                 | 21.4              | 46               | 39.4               | 1.277                                    | 2.20                             | 65                              |
|                            | CS-CN-05  | 1.7                                | 0.55              | 3.2                                 | 19.9              | 44               | 139.2              | 0.867                                    | 0.60                             | 60                              |
|                            | CS-CN-06  | 1.7                                | 0.55              | 3.2                                 | 20.0              | 42               | 112.1              | 0.797                                    | 1.60                             | 65                              |
|                            | CS-CN-07  | 1.7                                | 0.55              | 3.2                                 | 20.4              | 41               | 42.1               | 1.395                                    | 2.20                             | 70                              |
|                            | CS-CN-08  | 1.7                                | 0.55              | 3.2                                 | 21.2              | 37               | 25.5               | 1.250                                    | 2.40                             | 65                              |
|                            | CS-CN-09  | 1.7                                | 0.55              | 3.2                                 | 14.8              | 65               | 130.3              | 0.750                                    | 0.70                             | 60                              |
|                            | CS-CN-10  | 1.7                                | 0.55              | 3.2                                 | 14.4              | 64               | 119.9              | 0.938                                    | 1.00                             | 70                              |
|                            | CS-CN-11  | 1.7                                | 0.55              | 3.2                                 | 13.3              | 64               | 104.4              | 0.667                                    | 0.75                             | 65                              |
|                            | CS-CN-12  | 1.7                                | 0.55              | 3.2                                 | 13.2              | 70               | 74.5               | 0.868                                    | 1.60                             | 65                              |
|                            | CS-CN-13  | 1.7                                | 0.55              | 3.2                                 | 13.1              | 60               | 49.1               | 0.760                                    | 1.40                             | 65                              |
| <i>Pinus pinaster</i>      | PP-CN-01  | 1.1                                | 0.55              | 2.0                                 | 21.9              | 55               | 119.3              | 0.447                                    | 0.70                             | 70                              |
|                            | PP-CN-02  | 1.1                                | 0.55              | 2.0                                 | 20.5              | 49               | 140.8              | 0.533                                    | 0.65                             | 70                              |
|                            | PP-CN-03  | 1.1                                | 0.55              | 2.0                                 | 16.4              | 51               | 115.3              | 0.441                                    | 0.70                             | 65                              |
|                            | PP-CN-04  | 1.1                                | 0.55              | 2.0                                 | 21.8              | 51               | 113.3              | 0.310                                    | 0.65                             | 70                              |
|                            | PP-CN-05  | 1.1                                | 0.55              | 2.0                                 | 18.4              | 65               | 106.3              | 0.395                                    | 0.70                             | 65                              |
|                            | PP-CN-06  | 1.1                                | 0.55              | 2.0                                 | 16.6              | 77               | 115.3              | 0.391                                    | 0.60                             | 70                              |
|                            | PP-CN-07  | 1.1                                | 0.55              | 2.0                                 | 18.5              | 56               | 88.2               | 0.977                                    | 0.70                             | 65                              |
|                            | PP-CN-08  | 1.1                                | 0.55              | 2.0                                 | 25.2              | 44               | 90.5               | 0.511                                    | 1.00                             | 65                              |
| <i>Eucalyptus globulus</i> | EG-CN-01  | 1.0                                | 0.55              | 1.9                                 | 16.3              | 64               | 115.9              | 0.769                                    | 1.60                             | 65                              |
|                            | EG-CN-02  | 1.0                                | 0.55              | 1.9                                 | 16.0              | 66               | 109.5              | 0.459                                    | 1.40                             | 65                              |
|                            | EG-CN-03  | 1.0                                | 0.55              | 1.9                                 | 17.1              | 77               | 67.2               | 0.619                                    | 1.60                             | 65                              |
|                            | EG-CN-04  | 1.0                                | 0.55              | 1.9                                 | 17.3              | 68               | 91.7               | 0.800                                    | 1.50                             | 55                              |
|                            | EG-CN-05  | 1.0                                | 0.55              | 1.9                                 | 20.7              | 52               | 97.0               | 0.822                                    | 1.60                             | 70                              |
|                            | EG-CN-06  | 1.0                                | 0.55              | 1.9                                 | 26.8              | 36               | 145.9              | 0.294                                    | 0.40                             | 70                              |
|                            | EG-CN-07  | 1.0                                | 0.55              | 1.9                                 | 25.1              | 55               | 114.5              | 0.633                                    | 1.50                             | 70                              |
|                            | EG-CN-08  | 1.0                                | 0.55              | 1.9                                 | 23.5              | 54               | 85.4               | 0.690                                    | 1.70                             | 65                              |
|                            | EG-CN-09  | 1.0                                | 0.55              | 1.9                                 | 23.4              | 62               | 97.9               | 0.632                                    | 1.60                             | 65                              |
|                            | EG-CN-10  | 1.0                                | 0.55              | 1.9                                 | 23.9              | 53               | 82.1               | 0.938                                    | 1.70                             | 65                              |
|                            | EG-CN-11  | 1.0                                | 0.55              | 1.9                                 | 23.0              | 59               | 86.6               | 0.480                                    | 1.30                             | 65                              |
|                            | EG-CN-12  | 1.0                                | 0.55              | 1.9                                 | 21.8              | 62               | 18.3               | 2.000                                    | 2.40                             | 70                              |

<sup>A</sup>Between the base of the fuel bed and the tip of the flame.<sup>B</sup>Between the flame and unburned fuel.