

Shorea macroptera

Collecting partner

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Collection date

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Seed source

Pasoh Forest Reserve, Negeri Sembilan

Initial trials

Fruit weight 1.79g
Seed weight 1.43g
Initial germination 96%
Initial moisture content (before extraction) 56.3%
Initial moisture content (after extraction) 54%

Component

| <i>Component</i> | <i>Fruit</i> | <i>Whole seed</i> | <i>Seed coat</i> | <i>Embryo</i> | <i>Storage tissue/ cotyledons</i> |
|-----------------------------|--------------|-------------------|------------------|---------------|---------------------------------------|
| <i>Moisture content (%)</i> | 54.3 | 53.9 | 51.4 | 73.1 | 52.7 |

Desiccation trial

| | | | | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|
| <i>Target moisture content(TMC; %)</i> | 35 | 30 | 25 | 23 | 20 | 15 |
| <i>Actual Moisture content (%)</i> | 34.4 | 29.4 | 26.1 | 23.1 | 18.6 | 13.2 |
| <i>Germination (%)</i> | 84 | 80 | 56 | 50 | 34 | 26 |
| <i>Moisture content of control (%)</i> | 48.3 | 48.5 | 54.2 | 51.8 | 48.6 | 51.1 |
| <i>Germination of control (%)</i> | 92 | 92 | 94 | 92 | 88 | 90 |

Storage trial

| <i>Storage duration (weeks)</i> | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <i>Mc (%) after storage at 25°C, initial mc = 40%</i> | 40 | 39 | 36 | 34 | 28 | 23 | 18 | 12 | 9 | 5 |
| <i>Germination (%)</i> | 86 | 80 | 76 | 70 | 66 | 58 | 32 | 20 | 0 | 0 |
| <i>Mc (%) after storage at 25°C, initial mc = 35%</i> | 34 | 32 | 31 | 29 | 27 | 24 | 19 | 15 | 10 | 7 |
| <i>Germination (%)</i> | 78 | 74 | 70 | 64 | 60 | 56 | 34 | 18 | 0 | 0 |
| <i>Mc (%) after storage at 16°C, initial mc = 40%</i> | 39 | 38 | 36 | 33 | 31 | 28 | 24 | 21 | 16 | 11 |
| <i>Germination (%)</i> | 88 | 88 | 74 | 72 | 68 | 64 | 60 | 48 | 28 | 14 |
| <i>Mc (%) after storage at 16°C, initial mc = 35%</i> | 36 | 34 | 33 | 30 | 28 | 26 | 23 | 21 | 17 | 13 |
| <i>Germination (%)</i> | 82 | 80 | 76 | 70 | 66 | 62 | 56 | 50 | 24 | 18 |

Comments and conclusions

A rapid decline in germination was noticed when the seeds were dried down to moisture content below 23%. The critical moisture content should be between 20 to 23%.

After 16 weeks of storage, germination drops below 50%. No seed were viable after 20 weeks of storage at 25 °C at both 40 and 35% moisture content. However, a small percentage of the seeds were still viable after 20 weeks of storage at 16 °C.