**Supplemental Table 1**. Stability of RNA extracted from five 2015 or 2016H cotyledons and exposed to heat or cold stresses. RNA was relatively stable during freezer storage and short-time exposure on ice resulted in only minor degradation. In contrast, 80oC treatment created a smear of RNA over the full range of molecular weights (few distinct peaks in electropherogram, (Fig 3 inset). Chlorine gas exposure degraded RNA to nucleotides (no signal in electropherogram).

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| Treatment of extracted RNA dissolved in water | RIN ± SD |
| Freshly extracted (control treatment) | 7.7 ± 0.4 |
| 0oC (on ice) for 8h | 7.0 ± 0.3 |
| 80oC for 1 h | 2.3 ± 0.1 |
| Chlorine gas for 6.5 h | 0 ± 0.0 |
| -80oC for 2 yr (2016 seeds) | 7.6 ± 0.1 |

**Supplemental Figure 1.** Effects of storage relative humidity on seed viability loss (A) and RNA integrity (B). Samples harvested in 2017 were placed at 35oC and indicated RH in 2018. Error bars around RIN values are the calculated standard deviation of slices from five different cotyledons. The number of seeds used in germination assays ranged from 20 to 30. Curves represent Avrami (A) or linear regression (B) models fitted to data, with initial values constrained to 0.98 and 7.0. The dot-dashed lines in A represent the calculation of P50 for each RH treatment and the inverted triangles on the x-axis of B mark that P50. The slopes of the regression (i.e., the rate of change of RIN) are indicated. The effect of time is significant at P < 0.001 for all treatments.

