**2018 Aspen Vigor/Resistance Study**

Clay Morrow and Sam Jaeger

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| **Study portion** | **Measurement (per ramet)** | **Unit** | **purpose/endpoint** |
| Resistance: Calibration | Wet mass of 30 individual L3' GM | mg | wet-dry larval mass calibration curve |
|  | Dry mass of 30 individual L3' GM | mg | wet-dry larval mass calibration curve |
| Resistance: Pre-feeding | Aggregate wet mass of 10 L3' GM | mg | mean initial larval mass; biomass estimated via calibration curve |
|  | Aggregate area of 10 NE-quadrant leaves | cm2 | mean initial area for SLA |
|  | Aggregate dry mass of 10 NE-quadrant leaves | mg | mean initial biomass for SLA |
|  | Aggregate foliar chemistry of 10 NE-quadrant leaves | % dry mass X | mean initial phytochemistry |
|  | Date and time of larval deployment | d-M-Y; 24:00 | start time of trial; used to assess performance/time |
| Resistance: Post-feeding | Individual dry mass of ≤ 10 L3 GM | mg | final larval biomass; used to assess performance (final-initial) |
|  | Aggregate area of ≥ 5 control branch leaves | cm2 | final mean area (control) for SLA |
|  | Aggregate area of ≥ 5 experimental branch leaves | cm2 | final mean area (experimental) for SLA |
|  | Aggregate dry mass of ≥ 5 control branch leaves | mg | final mean biomass (control) for SLA |
|  | Aggregate dry mass of ≥ 5 experimental branch leaves | mg | final mean biomass (experimental) for SLA |
|  | Aggregate foliar chemistry of ≥ 5 control branch leaves | % dry mass X | final mean phytochemistry (control) |
|  | Aggregate foliar chemistry of ≥ 5 experimental branch leaves | % dry mass X | final mean phytochemistry (experimental) |
|  | Date and time of larval removal | d-M-Y; 24:00 | end time of trial; used to assess performance/time (end-start) |
| Choice: Calibration | Aggregate wet mass of 5 leaves/genet | mg | wet-dry leaf mass calibration curve |
|  | Aggregate dry mass of 5 leaves/genet | mg | wet-dry leaf mass calibration curve |
|  | Aggregate foliar chemistry of 5 leaves/genet | % dry mass X | mean initial phytochemistry; used to assess defense and nutrition |
|  | Wet mass of 30 individual L3 GM | mg | wet-dry larval mass calibration curve |
|  | Dry mass of 30 individual L3 GM | mg | wet-dry larval mass calibration curve |
| Choice: Pre-feeding | Individual wet masses of 2 L3 GM/combination | mg | initial larval mass; biomass estimated via calibration curve |
|  | Wet mass of each leaf/genet | mg | initial leaf mass; biomass estimated via calibration curve |
|  | Date and time of trial start | d-M-Y; 24:00 | start time of trial; used to assess consumption/time and performance/time |
| Choice: Post-feeding | Individual wet masses of 2 L3 GM/combination | mg | final larval mass |
|  | Individual dry masses of 2 L3 GM/combination | mg | final larval biomass; used to assess performance (final-initial) |
|  | Dry mass of each leaf/genet | mg | final leaf biomass; used to assess preference (biomass lost A - biomass lost B) |
|  | Date and time of trial completion | d-M-Y; 24:00 | end time of trial; used to assess consumption/time and performance/time (end-start) |