

Supplementary Material Figure S1. IDS μ Eye video camera for measuring leaflet areas. Note that the freshly-cut pieces of leaflets are constrained by a glass plate before area measurements.

Supplementary Material Table S1. True leaf area and percentage difference with the area estimated from the equation of AVROS origin (Figure 1) for separate years and over all four years.

| Palm age | True leaf area (m²) | Percentage difference with true area | | | | |
|------------------------------|---------------------------|--------------------------------------|--------|--------|--------|-----------------|
| (years after planting) | | Year 1 | Year 2 | Year 3 | Year 4 | Over four years |
| 1 | 1.24 | -3.0 | 13.9 | 56.0 | 181.1 | -4.2 |
| 2 | 3.44 | -22.9 | -3.4 | 2.3 | 42.8 | -3.1 |
| 3 | 5.33 | -24.0 | -3.2 | -5.4 | 18.0 | 1.3 |
| 4 | 7.04 | -30.6 | -11.1 | -15.5 | 0.9 | -5.8 |

Table S1 clearly shows that regression equations based on data for individual years only validly estimates true leaf area for the respective year (marked yellow). For example, applying the regression equation based on data of year 1 (third column) results in a difference between true and estimated area of -3% for 1-year-old palms, whereas for older palms the differences range between -22.9 to -30.6%. By contrast, the equation over 4 years validly estimates leaf area for *each* individual year, with a deviation from true area between 1.3 to -5.8 % (see last column).