Effect of agronomic practices on growth and leaf yield in spider plant (*Gynandropsis gynandra*)

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**Background and objectives**

Spider plant (*Gynandropsis gynandra* (L.) Briq.) is a neglected leafy vegetable with high nutritional and medicinal value. However, its production is constrained by poor germination and inadequate agronomic practices. Introducing the species in urban and peri-urban agriculture in West Africa requires development of appropriate cultivation techniques. To address these issues, we assessed the effects of seedlings age at transplanting, planting spacing and cutting frequency on growth and yield in *Gynandropsis gynandra* in Benin.

**Materials and methods**

- Factorial combination of:
  - two seedling ages: 2 weeks and 3 weeks after sowing
  - three planting spacing: 15 cm x 15 cm, 20 cm x 20 cm and 20 cm x 30 cm
  - three cutting frequencies: 1 week, 2 weeks and 3 weeks after the first harvest
- Randomized complete blocks with two replicates
- Growth and yield data collected and analysed using analysis of variance and generalized linear models.

**Results**

- **Figure 1.** Number of leaves per plant according to seedling age
- **Figure 2.** Variation in number of leaves (A) and leaf yield (B) according to planting spacing
- **Figure 3.** Spider plant plot three weeks after transplanting
- **Figure 4.** Spider plant plot one week after cutting
- **Figure 5.** Leaf yield according to cutting frequency
- **Figure 6.** Evolution of leaf area (A) and dry matter content (B) over successive harvests

**Conclusions**

- Higher leaf production for 3 weeks old seedlings compared with 2 weeks old seedlings
- Decreasing planting spacing significantly decreased the number of leaves per plant but significantly increased the leaf yield up to 29 t/ha.
- Cutting plants every two weeks resulted in higher leaf yield
- The leaf area significantly decreased over harvests while the dry matter content increased.

**References**


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