
INFLUENCE OF PLANTING DATE ON YIELD COMPONENTS OF COWPEA IN CENTRAL--WEST BRAZIL

Itamar P. de Oliveira and Magda F.C. Estrela
National Research Center for Rice and Bean - CNPAF
Postbox 179 - 74000 Goiânia, GO - BRAZIL

Cowpea (*Vigna unguiculata* L. Walp) production in Brazil has traditionally occurred in the northeast and northern regions. However, in recent years there has been a considerable increase in the area planted with this crop in both central west and southern Brazil.

There are two distinct nonirrigated cropping seasons. The first season occurs during the spring between September and October after beginning the rainfall season. The second crop is planted during the months of January and February. The second cropping season is considered the most important since it permits the crop to be harvested during the dry season.

Two field experiments were conducted at the National Rice and Bean Research Center, located at Capivara Farm, using three cultivars (C_1 = Seridó - a prostrated cultivar, C_2 = IPEAN V 69 - a semi-erect line and C_3 - Manaus - a erect cultivar) and two planting dates (October and January). The climatic conditions, (Figure 1) yield and yield components (Figure 2) were recorded. A fertilizer application of 20 kg/ha as ammonium sulphate, 80 kg P_2O_5 /ha as triple superphosphate and 30 kg K_2O /ha as potassium chloride was made at the time of planting.

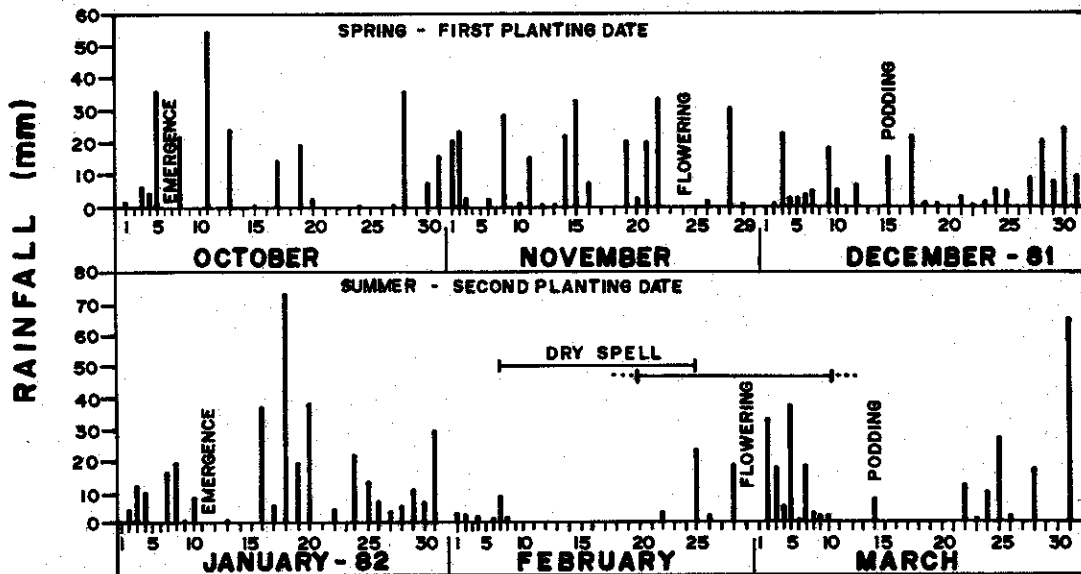


Figure 1. Rainfall distribution from October/81 to March/82 - Capivara Farm and phenological data.

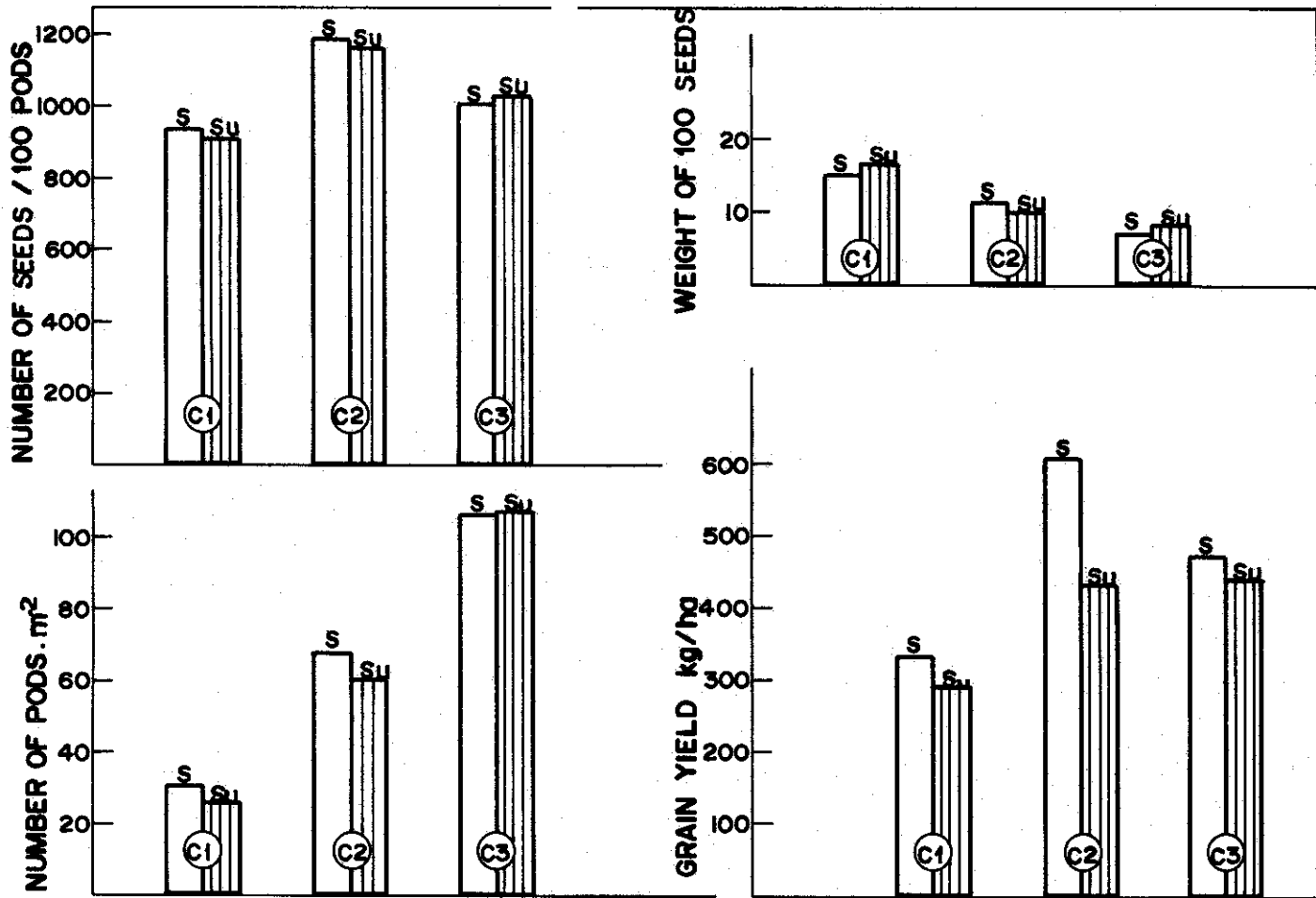


Figure 2. Number of seeds/100 pods, number of pods. m⁻², grain yield (kg/ha) and 100 seeds weight during the spring (S) and summer (Su) seasons.

Yield, 100 seed weight, number of seeds/100 pods and the number of pods. m⁻² varied considerably for different cultivars in the two seasons. For yield components the C₁ (Seridó) and the C₂ (IPEAN V-69) cultivars showed better results during the spring than in summer even though the 100 seed weight of the C₃ (Manaus) cultivar showed nearly the same results in both the spring and summer seasons.

Higher yields are associated with rainfall distribution which was found to be much better during the first season than during summer.

The yield obtained during the second planting date was very low due to the flowering period occurring during the dry spell.