

1451 Early-compact American and late-vegetative African cotton ideotypes can address the increasing diversity of cropping conditions in Africa

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In most cotton areas of Africa, sowing dates are increasingly spread out in time due to irregular rainfall. This should be addressed through genetic diversification, and we hypothesised that early varieties with a compact habit could complement the existing range of late and vegetative commercial cultivars. An experiment compared 10 cotton (*Gossypium hirsutum* L.) varieties from diverse origins under three stand densities and two sowing dates, for two years, and at two cotton-growing sites of Benin. Results show that variety performance depend upon the chance of getting a short rainy period. When the risk is high, US Mar 88-214, a compact, early variety with short flowering time, should be preferred. When there is little risk, the African-type cultivar H 279-1 should be favoured for its high flexibility, its ability to adapt to variations in environmental resources, and its long effective flowering period. Lastly, when the risk cannot easily be determined, one has to prefer the intermediate South American cultivar Guazuncho 2. This study opens new prospects for cotton genetic diversification in rainfed cotton growing areas.