

Linkage relationships among loci controlling morphological traits in cowpea (*Vigna unguiculata* (L.) Walp.)

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Abstract:

Linkage among loci controlling various morphological traits in cowpea were determined using F₂ progenies. Data were collected on individual plants of four crosses segregating for several loci. Recombination estimates between the following pairs of loci were as follows: Sw (swollen vs normal stem base)-Fbc (cream vs green flower buds) ($41\pm 4.8\%$), Pus(purple vs green stems)-Cbr (cocoa-brown vs straw-yellow dry pods) ($31\pm 5.7\%$), Pup(purple vs green immature pods)-Cbr ($30\pm 5.7\%$), Pus-Pup ($4\pm 1.5\%$), Ndt (non-determinate vs determinate)-Pd (peduncle colour) ($26\pm 2.8\%$), Ndt-Hg (semi-erect vs erect plant type) ($26\pm 2.8\%$), Pt(purple vs green pod tips)-Bk (greyish-black vs straw-yellow dry pods) ($19\pm 2.4\%$) and Hg-Bpd (normal vs branching peduncle) ($24\pm 9.5\%$). Four linkage groups (LG) were identified in these studies. The proposed LG I contained loci Sw and Fbc; LG II loci Pus, Pup, and Cbr; LG III loci Pd, Ndt, Gh, and Bpd; and LG IV loci Pt and Bk.