

Table 1 Representative marigold cultivars developed through different breeding approaches and their major applications

Breeding approach	Representative cultivars	Main breeding objectives	Major advantages/applications
Hybridization	Arka Agni, Arka Bangara-2, Arka Ambara	Increased flower yield, larger flower size, improved uniformity	Commercial hybrid production
Selection breeding	Pusa Narangi Gaiinda, Pusa Basanti Gaiinda	Flower color, yield stability, plant type improvement	Open-pollinated cultivar development
Mutation breeding	Pusa Centenary	Creation of novel variation	Development of unique flower traits
Male sterility-based breeding	IIHR/IARI male sterile lines	Efficient hybrid seed production	Reduced emasculation labor