TABLE 1.—*Summary of experimental procedures for detecting various effects of chemical mutagens using certain higher-plant test systems.*

Stage treated	Analyses used for detecting various effects: Somatic cells: Mut.	Somatic cells: Chr. Ab.	Germinal cells: Mut.	Germinal cells: Chr. Ab.	Microspores or Pollen tubes: Chr. Ab.	Pollen: Mutation: Phenotype[4]	Pollen: Mutation: Lethal	Pollen: Chr. Ab.[3]: Translocation	Species used and literature reference
Seed or seedling	(2)	(2)	P[3]	(2)	(2) (5)	(2)		(2)	*Allium*[59 90] *Arabidopsis*[38 65 84], *Avena*[39], *Hordeum*[21 22 55 57 76 108 111], *Oryza*[81 112], *Triticum*[56], *Zea*.[93]
Flowering:									
Somatic Cells[1]	(2)	(2)							*Antirrhinum*[98], *Cosmos*[31], *Dianthus*[13], *Gladiolus*[97], *Haemanthus*[69], *Lilium*[98], *Petunia*[98], *Tradescantia*[17 40 41 42 66 72 97], *Tulipa*.[97]
Meiosis			P	(2)	(2)	(2)	(2)		*Hordeum*[23], *Tradescantia*[33 89], *Trillium*[101], *Tulipa*[75], *Vicia*[64], *Zea*.[24]
Microspore					(2)			(3) (5)	*Campelia*[88], *Tradescantia*[4 25 26 89 100 105].
Pollen			P		(2)				*Hordeum*[62], *Lilium*[5], *Petunia*[5], *Tradescantia*[5 95], *Zea*[5].

[1] Mostly petals and stamen hairs.
[2] Translocations produce pollen abortion.
[3] P=progeny testing.
[4] Especially waxy locus in barley, maize and rice.
[5] Micronuclei can be counted as a fast screening method.

40-471 O - 70 - pt. 15 - 5