

Supplementary Paper

Breeding and biotechnological interventions for mitigating drought in horticultural crops

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Supplementary Table 1: Drought-tolerant germplasm in horticultural crops

Sl. No.	Crop	Genotype (Variety/Type)	References
Fruits			
1	Mango	KLM37, PTA01, ALA23	Bindu et al. (2025)
2	Banana	Kaveri Saba	Pathak et al. (2022)
		<i>M. balbisiana</i> type Andaman (BB), Pisang Awak (ABB- Karpuravalli, Gauria, Ankur-II, Chinia, Bankela, Udhayam), Ash Monthan (ABB), Ney Poovan (AAA- Ney Poovan, Nattu Poovan, Njali Poovan)	Ravi (2013)
3	Citrus	Rough Lemon (Katol strain)	Dhembare et al. (2024)
		Cleopatra mandarin rootstocks, X639 and RLC-4	Morade et al. (2025)
4	Grapes	Dogridge (<i>Vitis champinii</i>)	Pathak et al. (2022)
5	Cherry	Mahaleb CDR-1	Wan et al. (2021)
6	Peach × Almond hybrids	‘TT’ rootstock	Fallah et al. (2025)
7	Strawberry	Brilliance, Festival, Sweet Charlie, Arnavutköy	Attar et al. (2025)
Vegetables			
8	Tomato	EC-520061, IIHR 14-1, IIHR 146-2, IIHR 383, IIHR 553, IIHR 555, K-14, EC-130042, EC-104395, Sel-28, PI-205009, EC-65992, <i>S. esculentum</i> var. <i>cerasiforme</i> , <i>S. hirsutum</i> , <i>S. cheesmanii</i> , <i>S. chilense</i> , <i>S. habrochaites</i> , <i>S. sitiens</i>	Rai et al. (2011)
		Arka Vikas, RF- 4A	Singh (2010)
		FQ119	Ma et al. (2025)
9	Potato	Kufri Thar-3	Pathak et al. (2022)
		Long 10, D1595-7, Lin 18, Tong 31, D16105-14	Li et al. (2025)
10	Eggplant	<i>S. acculiatissimum</i> , <i>S. incanum</i> and <i>S. macrocarpon</i> , KS-224 and IIHR-766	Anonymous, ICAR-IIHR (2025)
		<i>S. sysimbriifolium</i> , <i>S. torvum</i>	Anonymous, ICAR (2024)
		<i>S. incanum</i> INC1 × <i>S. melongena</i> MEL1	González-Orenga et al. (2023)
		Interspecific hybrids of <i>S. melongena</i> × <i>S. insanum</i> (MEL1 × INS2, MEL4 × INS3), <i>S. anguivi</i> MEL6 × ANG1, and <i>S. dasyphyllum</i> MEL6 × DAS1, <i>S. sysimbriifolium</i> (SIS1)	Kouassi et al. (2021)
		<i>S. elaeagnifolium</i>	Fita et al. (2015)



11	Capsicum	<i>C. chinense</i> , <i>C. baccatum</i> var. <i>pendulum</i> , <i>C. eximium</i>	Singh (2010)
		<i>C. chinense</i>	Nareesh et al. (2017)
12	Chilli	Arka Lohit, IIHR - Sel.-132, <i>C. chinense</i> , <i>C. baccatum</i> var. <i>pendulum</i> , <i>C. eximium</i> IC-119231, ST 13837, EC 362917	Singh (2010)
		Chilli Hot Queen, Advanta-509, Divya, HM-78, Hot Queen, High Fly 2, Kot Sultan IHR4517	Poobalan et al. (2020)
			Ali et al. (2025)
13	Okra	VRO 128, VRO 160	Anonymous, IIHR (2025)
		GH170, V1060831, GH174, V1060874, GH106	Kumar et al. (2025)
		Arka Abhay, Parbanikranti	Asante et al. (2024)
		LS05, LS06, LS07, LS08	Babu et al. (2024)
14	Bottle gourd	BG-64, BG-141, BG-49	Mkhabela et al. (2023)
15	Cucumber	IC-429942, IC-398523	Anonymous, ICAR-IIHR (2025)
		GC-21, WBC-23-2, DARL-106, DC-210, WBC-23-1, DC-83, DC-92-2, DGC-22	Anonymous, ICAR-IIHR (2025)
16	<i>Cucumis</i> spp.	<i>Cucumis melo</i> var. <i>Momordica</i> , VRSM-58; <i>Cucumis pubescens</i> , INGR-98013 (AHK-119); <i>Cucumis melo</i> var. <i>callosus</i> , AHK- 200, SKY/DR/RS-101; <i>Cucumis melo</i> var. <i>chat</i> , Arya; <i>Cucumis melo</i> , SC- 15	Das et al. (2024)
			Pandey et al. (2011)
17	Turkish melon	Kav-248	Torun & Sarl (2025)
18	Cowpea	EC-30590, EC-37988, EC-390241, EC-15296, EC-472283, Gomti	Bahadur et al. (2017)
19	Onion	Acc. 1656, Acc. 1658, W-009, W-085	Gedam et al. (2021)
20	Cassava	Sree Athulya, Sree Vijaya	Sreelakshmi & Menon (2019)
21	Sweet Potato	Dhenkanal local-2, 84 × 14, SB21/57, Howrah, S-783	Hanume et al. (2024)
Flower crops			
22	Chrysanthemum	Coimbatore Semi-double, Gauri, Silk Brocade, Cherabu Pusa Shwet Nannong xuefeng	Anonymous, ICAR- DFR (2023)
			Anonymous, ICAR-IARI (2024)
			Sun et al. (2013)
23	Marigold	<i>T. erecta</i> , <i>T. tenuifolia</i> cv. Luna Gold African marigold - Punjab Gaiinda No. 1, BRMG-113 and Arka Shubha; French marigold - Fr./R-2, Pusa Utsav and Gulzafari Yellow	Cicevan et al. (2016)
			IARI (2024)
24	Rose	<i>Rosa fortuniana</i> , <i>R. rugosa</i>	Zarif et al. (2025)
Spices			
25	Turmeric	IISR Pragati, SL 5, Suguna, Suvarna	Nazmin Banu & Krishnamurthy (2023)
26	Black pepper	Panniyur-5 IC598869, IC 598890	Ravindran & Babu (2025)
			Prakash et al. (2023)
27	Coriander	RCr-20, RCr-436, RCr-446, CS-6, Sadhana, Swathi, Sindhu, Co-1, Co-2, Co-3, Co(CR)-4, Azad Dhanian-1 RCr-446, RCr-41, RCr-435, RCr-728	Aishwath & Lal (2016)
			Hosamath et al. (2025)

28	Cumin	RZ-19, RZ-209, RZ-223, GC-3, GC-4	Aishwath & Lal (2016)
29	Fennel	RF-125, GF-1, GF-2	
30	Fenugreek	RMt-305, CO-2, Rajendra-Kranti, Hisar Suvarna, Hisar Madhavi, Hisar Mukta	
31	Ajowan	RPA-68, Ajmer-AA-1, Ajmer -AA-2, Lamsel-1	
32	Dill	Ajmer-AD-2, Guj. Dill-2	
Plantation crops			
33	Coconut	Chowghat Orange Dwarf (COD) × Andaman Ordinary Tal, Malayan Yellow Dwarf (MYD) × West Coast Tall (WCT)	Sudha et al. (2025)
		Kalpa Sankara	Nagaraja et al. (2022)
		West coast tall (WCT), Lakshadweep ordinary (LCT), Chowghat Orange Dwarf (COD) × Laccadive Ordinary Tall (LCT)	Kumar (2004)
34	Coffee	H419-3-3-7-16-11, H516-2-1-1-7-2	Silva et al. (2022)
		Ca74112, Ca74110	Chekol et al. (2023)
35	Tea	clone 100, Bazri, clone 399	Rahimi et al. (2019)
		BJ2, KP 6/31, DT2, T78, BJ19, GP19, T. valley 1, HK 2336, CB 27, MB110, DT1, LG17	Saikia et al. (2015)
		TV-23 (Stock 19/22/7)	Gupta et al. (2012)
36	Rubber	RRII 430	Thomas et al. (2014)
37	Oil palm	PSU-106, PSU-206	Duangpan et al. (2018)

