



**Islamic Republic of Iran
Ministry of Jihad-e-Agriculture
Agricultural Research Organization
Research Institute of Forests and Rangelands**

**INDEX
SEMINUM
2020-21
NATIONAL BOTANICAL GARDEN OF IRAN**



Ligularia persica Boiss.

**INDEX
SEMINUM
2020-21**

**NATIONAL BOTANICAL GARDEN OF IRAN
(NBGI)**

Please use the enclosed form for your order

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NATIONAL BOTANICAL GARDEN OF IRAN

The garden was founded in 1968. An area of about 150 hectares was allocated to the garden where is situated by the freeway between Tehran and Karaj at an altitude of about 1320 m .

The area is flat and slopes gently to the south. The Albourz Mountains form the background. The climate is dry with an average annual precipitation of about 240 mm falling between November and May. Temperature reaches as much as 42 – 43° C during July and August. During winter the temperature may fall to –10° C or lower. The natural vegetation of the area is dry *Artemisia sieberi* steppe .

The garden includes 22 different collections representing Iranian and exotic habitats and vegetation types .

Six lakes have been excavated, and filled with water. Three hills (the highest reaching 19 m), have been built up to represent the Albourz and Zagros Mountains, (the largest mountain chains of Iran) and Himalaya Mountain. A large rock garden with cliff walls and a waterfall has been completed as well as a special section for Iranian bulbous plants. The Horticultural Display Area has been established and planted mainly with exotic species.

Hyrcanian Forest habitat (8 hectares) and Zagros Oak Forest habitat (2.9 hectares) are well established in garden.

Another cliff wall with waterfall has been built up in Albourz Section. Furthermore a wetland area has been designed and cultivated in this section.

A river about 1 km long circulating between Caspian Lake and Reservoir Lake has been constructed. Another river runs from Albourz Waterfall into the Caspian Lake.

A section for desert plants with sand dunes, a salt lake and a wadi have been constructed .

Medicinal Plants section has been planted with native and exotic medicinal, aromatic and industrial plant species .

The fruit garden is planted using different native fruit cultivars .

Hills representing Himalaya Mountains have been constructed and partly planted .

The systematic area also has been constructed, designed according to Cronquist's system and planted according to plant families order.

The forest and walkway with some pavilions and other facilities have been prepared.

The Japanese and Chinese gardens are parts of the garden which have been completed in an area about 2.5 hectares.

Arboretum is a new section in the garden which has been established in an area of 15 hectares. The path ways and a lake of about one hectare have been constructed. The native trees and shrubs of Iran as well as exotic species are being planted in this part of the garden .

The Europe, America, Broad Leaf Evergreens, Caucasus Sections and the central part of the garden representing a Persian Garden Design and rose garden have been established .

Southern Iran Greenhouse has been constructed and planted with subtropical species of south Iran .

The Garden is open to the public and many social events including educational programs are running for students and NGO organizations.

Alliaceae

- | | | |
|---|---|-------|
| 1 | <i>Allium akaka</i> S.G. Gmel. ex Schult. & Schult.f. | 14--4 |
| 2 | <i>Allium scabriescapum</i> Boiss. | 18--1 |
| 3 | <i>Allium victorialis</i> L. | 18--4 |

Amaranthaceae

- | | | |
|---|---|-------|
| 4 | <i>Aerva javanica</i> (Burm.f.) Juss. ex Schult., Syst. Veg., ed. | 5-1 |
| 5 | <i>Aerva persica</i> (Burm.f.) Merr. | 16--1 |

Anacardiaceae

- | | | |
|---|-------------------------------|-----|
| 6 | <i>Pistacia atlantica</i> DC. | 2-4 |
|---|-------------------------------|-----|

Apiaceae

- | | | |
|----|--|-------|
| 7 | <i>Ammi visnaga</i> (L.) Lam. | 1-5 |
| 8 | <i>Apium graveolens</i> L. | 1-6 |
| 9 | <i>Cervaria cervariifolia</i> (C.A. Mey.) M. Pimen. | 2-2 |
| 10 | <i>Chaerophyllum macrospermum</i> (Willd. ex Schult.) Fisch. & | 9-2 |
| 11 | C.A. Mey. | |
| 12 | <i>Conium maculatum</i> L. | 10--1 |
| 13 | <i>Dorema ammoniacum</i> D.Don | 12--2 |
| 14 | <i>Echinophora platyloba</i> DC. | 12-3 |
| 15 | <i>Echinophora sibthorpiana</i> Guss. | 13--1 |
| 16 | <i>Eryngium billardierei</i> Heldr. ex Boiss. | 13--2 |
| 17 | <i>Eryngium caeruleum</i> M.Bieb. | 13--3 |
| 18 | <i>Ferula assa-foetida</i> L. | 13--4 |
| 19 | <i>Bilacunaria microcarpa</i> (M.Bieb.) Pimenov & V.N.Tikhom | 18--1 |
| 20 | <i>Johreniopsis stricticaulis</i> (Rech.f.) Pimenov | 18-3 |
| 21 | <i>Leutea petiolaris</i> (DC.) Pimenov. | 18--3 |
| 22 | <i>Malabaila secacul</i> (Mill.) Boiss. | 18--3 |
| 23 | <i>Oenanthe pimpinelloides</i> L | 18--4 |

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|----------------|---|-------|
| 24 | <i>Pastinaca sativa</i> L. | 18--4 |
| 25 | <i>Pimpinella affinis</i> Ledeb. | 18--4 |
| 26 | <i>Pimpinella aurea</i> DC. | 18--4 |
| 27 | <i>Pimpinella dichotoma</i> Hort ex Steud. | 18--4 |
| 28 | <i>Prangos ferulacea</i> Lindl. | 18--4 |
| 29 | <i>Prangos haussknechtii</i> Boiss. | 19--1 |
| 30 | <i>Scaligeria meifolia</i> Boiss. | 19--3 |
| 31 | <i>Smyrnium cordifolium</i> Boiss. | 19--3 |
| 32 | <i>Zosima absinthifolia</i> Link | 20--3 |
| Asclepiadaceae | | |
| 33 | <i>Cynanchum acutifolium</i> Reiche | 13--4 |
| Asparagaceae | | |
| 34 | <i>Bellevalia glauca</i> Kunth | 18--4 |
| Asteraceae | | |
| 35 | <i>Achillea collina</i> (Becker ex Rchb.f.) Heimerl | 1--3 |
| 36 | <i>Achillea eriophora</i> DC. | 1--4 |
| 37 | <i>Achillea millefolium</i> L. | 2--1 |
| 38 | <i>Achillea pannonica</i> Scheele. | 9--3 |
| 39 | <i>Achillea tenuifolia</i> Lam. | 1--4 |
| 40 | <i>Achillea vermicularis</i> Trin. | 9--4 |
| 41 | <i>Acroptilon repens</i> (L.) DC. | 9--5 |
| 42 | <i>Anthemis altissima</i> L. | 10--2 |
| 43 | <i>Anthemis tinctoria</i> L. | 10--4 |
| 44 | <i>Artemisia aucheri</i> Boiss. | 10--4 |
| 45 | <i>Artemisia scoparia</i> Waldst. & Kit. | 10--4 |
| 46 | <i>Artemisia sibirica</i> Maxim. | 10--4 |
| 47 | <i>Aster amellus</i> L. | 12--3 |
| 48 | <i>Aster diplostephioides</i> Benth. & Hook.f. | 12--4 |

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|----|---|-------|
| 49 | <i>Aster tataricus</i> Turcz. | 12--5 |
| 50 | <i>Centaurea aucheri</i> (DC.) Wagenitz. | 12--5 |
| 51 | <i>Centaurea imperialis</i> Hausskn. ex Bornm., | 12--6 |
| 52 | <i>Centaurea lanata</i> Roxb. | 13--1 |
| 53 | <i>Centaurea virgata</i> Lam. | 13--1 |
| 54 | <i>Cichorium intybus</i> L. | 13--1 |
| 55 | <i>Cirsium echinus</i> (M. Bieb.) Sch.Bip. | 13--1 |
| 56 | <i>Cnicus benedictus</i> L. | 13--1 |
| 57 | <i>Cousinia calocephala</i> Jaub. & Spach | 13--2 |
| 58 | <i>Cousinia phyllocephala</i> Bornm. & Gauba | 13--3 |
| 59 | <i>Cousinia turcomanica</i> C.Winkl. | 13--2 |
| 60 | <i>Dittrichia graveolens</i> (L.) Greuter | 13--3 |
| 61 | <i>Echinacea paradoxa</i> Britton | 14--1 |
| 62 | <i>Echinacea purpurea</i> (L.) Moench | 13--3 |
| 63 | <i>Echinops cephalotes</i> DC. | 15--1 |
| 64 | <i>Echinops cephalotes</i> DC. | 15--2 |
| 65 | <i>Echinops mosulensis</i> Rech.f. | 17--4 |
| 66 | <i>Echinops ritrodes</i> Bunge | 15--5 |
| 67 | <i>Helichrysum oligocephalum</i> DC. | 18--1 |
| 68 | <i>Heteropappus altaicus</i> Novopokrov. | 18--3 |
| 69 | <i>Inula helenium</i> L. | 18--4 |
| 70 | <i>Jurinea macrocephala</i> DC. | 18--4 |
| 71 | <i>Leontodon asperimus</i> (Willd.) Endl. | 18--4 |
| 72 | <i>Leucanthemella serotina</i> (L.) Tzvelev | 18--4 |
| 73 | <i>Picris strigosa</i> M.Bieb | 18--4 |
| 74 | <i>Pulicaria dysenterica</i> (L.) Bernh. | 18--4 |
| 75 | <i>Sanvitalia procumbens</i> Lam. | 18--4 |
| 76 | <i>Scozonera laciniata</i> L. | 18--4 |

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|---------------|--|-------|
| 77 | <i>Scorzonera tortuosissima</i> Boiss. | 18--4 |
| 78 | <i>Senecio mollis</i> Willd. | 18--4 |
| 79 | <i>Serratula cerinthifolia</i> (Sm.) Boiss. | 18--4 |
| 80 | <i>Serratula coriacea</i> Fisch. & C.A. Mey. Ex. DC. | 18--4 |
| 81 | <i>Tanacetum parthenium</i> Sch.Bip. | 18--4 |
| 82 | <i>Tanacetum polyccephalum</i> Sch.Bip. | 19--1 |
| 83 | <i>Verbesina encelioides</i> (Cav.) Benth. & Hook.f. ex A.Gray | 19--2 |
| 84 | <i>Zoegea purpurea</i> Fresen. | 19--2 |
| Berberidaceae | | |
| 85 | <i>Berberis integerrima</i> Bunge | 15--2 |
| Betulaceae | | |
| 86 | <i>Betula pendula</i> Roth | 18--4 |
| Bignoniaceae | | |
| 87 | <i>Chilopsis linearis</i> (Cav.) Sweet | 18--4 |
| Boraginaceae | | |
| 88 | <i>Anchusa italicica</i> Retz. | 9--3 |
| 89 | <i>Echium italicum</i> L. | 13--4 |
| Brassicaceae | | |
| 90 | <i>Aethionema grandiflorum</i> Boiss. & Hohen. | 13--2 |
| 91 | <i>Aubrieta deltoidea</i> (L.) DC. | 13--3 |
| 92 | <i>Fibigia eriocarpa</i> Boiss. | 13--4 |
| 93 | <i>Fortuynia garcinii</i> Shuttlew. ex Boiss. | 13--4 |
| 94 | <i>Isatis cappadocica</i> Desv. | 17--1 |
| 95 | <i>Isatis minima</i> Bunge | 18--1 |
| 96 | <i>Lepidium draba</i> L. | 18--3 |
| 97 | <i>Lepidium perfoliatum</i> L. | 18--4 |
| 98 | <i>Pseudocamelina campylopoda</i> Bornm. & Gauba ex Bornm. | 18--4 |
| 99 | <i>Thlaspi stenocarpum</i> Boiss. & Hohen. | 20--4 |

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|-----------------|--|-------|
| 100 | <i>Calycanthus occidentalis</i> Hook. & Arn. | 18--4 |
| Campanulaceae | | |
| 101 | <i>Campanula bononiensis</i> L. | 1--3 |
| 102 | <i>Campanula latifolia</i> L. | 18--4 |
| 103 | <i>Campanula rotundifolia</i> Boiss. | 18--4 |
| 104 | <i>Platycodon grandiflorus</i> A.DC. | 18--4 |
| Cannabaceae | | |
| 105 | <i>Celtis tournefortii</i> Lam. | 3--2 |
| 106 | <i>Celtis trinervia</i> Roxb. | 18--4 |
| Capparaceae | | |
| 107 | <i>Capparis parviflora</i> Boiss. | 18--4 |
| Caprifoliaceae | | |
| 108 | <i>Lonicera iberica</i> M.Bieb. | 13--5 |
| 109 | <i>Pterocephalus canus</i> Coult. ex. DC. | 15--3 |
| 110 | <i>Sambucus canadensis</i> L. | 18--4 |
| 111 | <i>Symporicarpos albus</i> (L.) S.F.Blake | 18--4 |
| 112 | <i>Viburnum lantana</i> Wall. ex D.Don | 18--4 |
| 113 | <i>Viburnum rhytidophylloides</i> Suringar | 18--4 |
| Caryophyllaceae | | |
| 114 | <i>Acanthophyllum speciosum</i> Schiman-Czeika | 1--7 |
| 115 | <i>Dianthus armeria</i> L. | 17--3 |
| 116 | <i>Dianthus carthusianorum</i> L. | 12--7 |
| 117 | <i>Dianthus haematocalyx</i> Boiss. & Heldr. | 13--3 |
| 118 | <i>Dianthus kiusiana</i> Makino | 15--2 |
| 119 | <i>Dianthus orientalis</i> Adams | 15--3 |
| 120 | <i>Dianthus plumarius</i> Gunn. ex Spreng. | 17--2 |
| 121 | <i>Dianthus sylvestris</i> Boiss. | 17--3 |

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| 122 | <i>Gypsophila libanotica</i> Boiss. | 18--4 |
| 123 | <i>Lychnis chalcedonica</i> L. | 18--4 |
| 124 | <i>Lychnis flos-cuculi</i> L. | 18--4 |
| 125 | <i>Lychnis coronaria</i> Franch. & Sav. | 18--4 |
| 126 | <i>Silene armeria</i> M.Bieb. | 18--4 |
| 127 | <i>Silene aucheriana</i> Boiss. | 18--4 |
| 128 | <i>Silene dichotoma</i> Ehrh. | 18--4 |
| 129 | <i>Silene vulgaris</i> (Moench) Garcke | 18--4 |
| 130 | <i>Spergularia diandra</i> (Guss.) Boiss. | 18--4 |
| 131 | <i>Stellaria alsinoides</i> Boiss. & Buhse | 18--4 |
| 132 | <i>Vaccaria pyramidata</i> Medik. | 18--4 |
| Celastraceae | | |
| 133 | <i>Euonymus latifolius</i> Marshall | 11--5 |
| Chenopodiaceae | | |
| 134 | <i>Atriplex griffithii</i> Moq. | 1--4 |
| 135 | <i>Chenopodium foliosum</i> Asch. | 14--3 |
| Cistaceae | | |
| 136 | <i>Helianthemum apenninum</i> Boiss. | 18--4 |
| Clusiaceae | | |
| 137 | <i>Hypericum perforatum</i> L. | 13--4 |
| Clusiaceae | | |
| 138 | <i>Hypericum scabrum</i> L. | 18--4 |
| Convolvulaceae | | |
| 139 | <i>Convolvulus tricolor</i> L. | 18--4 |
| Cornaceae | | |
| 140 | <i>Cornus australis</i> C.A. Mey. | 11--5 |
| Cupressaceae | | |
| 141 | <i>Juniperus communis</i> L. | 15--3 |

Dipsacaceae

- | | | |
|-----|---|-------|
| 142 | <i>Dipsacus laciniatus</i> Falk | 18--4 |
| 143 | <i>Scabiosa columbaria</i> Willk. ex Willk. & Lange | 18--4 |

Elaeagnaceae

- | | | |
|-----|--------------------------------|-------|
| 144 | <i>Hippophae rhamnoides</i> L. | 18--4 |
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Ephedraceae

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| 145 | <i>Ephedra foliata</i> Boiss. ex C.A. Mey. | 4--1 |
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Fabaceae

- | | | |
|-----|--|-------|
| | <i>Acacia salicina</i> Lindl. | 1--2 |
| 147 | <i>Coronilla varia</i> L. | 3--1 |
| 148 | <i>Ebenus stellata</i> Boiss. | 8--2 |
| 149 | <i>Lathyrus latifolius</i> L. | 18--4 |
| 150 | <i>Sophora japonica</i> L. | 18--4 |
| 151 | <i>Alhagi maurorum</i> Medik. | 13--1 |
| 152 | <i>Cercis chinensis</i> Bunge | 18--4 |
| 153 | <i>Cercis siliquastrum</i> L. | 18--4 |
| 154 | <i>Halimodendron halodendron</i> (Pall.) Druce | 18--4 |
| 155 | <i>Wisteria sinensis</i> (Sims) Sweet | 18--4 |

Hyacinthaceae

- | | | |
|-----|--|-------|
| 156 | <i>Muscari neglectum</i> Guss. ex Ten. | 18--4 |
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Ixioliriaceae

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|-----|---|-------|
| 157 | <i>Ixiolirion tataricum</i> (Pall.) Herb. & Traub | 18--4 |
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Lamiaceae

- | | | |
|-----|---|-------|
| 158 | <i>Eremostachys laciniata</i> Aitch. | 1--4 |
| 159 | <i>Lallemantia canescens</i> (L.) Fisch. & C.A.Mey. | 2--3 |
| 160 | <i>Marrubium anisodon</i> K.Koch | 6--1 |
| 161 | <i>Marrubium astracanicum</i> Jacq. | 10--3 |
| 162 | <i>Marrubium cuneatum</i> [Soland.] | 10--4 |

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|-----|--|-------|
| 163 | <i>Marrubium vulgare</i> L. | 10--4 |
| 164 | <i>Monarda citriodora</i> Cerv. ex Lag. | 11--2 |
| 165 | <i>Monarda fistulosa</i> Hook. | 12--3 |
| 166 | <i>Monarda punctata</i> L. | 12--7 |
| 167 | <i>Nepeta crispa</i> Willd. | 13--1 |
| 168 | <i>Nepeta fissa</i> Benth. | 13--3 |
| 169 | <i>Nepeta macrosiphon</i> Boiss. | 13--3 |
| 170 | <i>Origanum strobilaceum</i> Mobayen & Ghahr. | 13--3 |
| 171 | <i>Origanum vulgare</i> L. subsp. <i>gracile</i> (K.Koch) Ietsw. | 13--7 |
| 172 | <i>Otostegia aucheri</i> Boiss. | 15--3 |
| 173 | <i>Perovskia atriplicifolia</i> Benth. | 15--3 |
| 174 | <i>Phlomis cancellata</i> Bunge. | 15--4 |
| 175 | <i>Phlomis bruguieri</i> Desf. | 16--1 |
| 176 | <i>Phlomis cancellata</i> Bunge | 16--2 |
| 177 | <i>Phlomis maximowizii</i> Regel | 15--5 |
| 178 | <i>Phlomis tuberosa</i> L. | 18--4 |
| 179 | <i>Salvia aethiopis</i> L. | 18--4 |
| 180 | <i>Salvia argentea</i> L. | 18--4 |
| 181 | <i>Salvia cadmica</i> Boiss. | 18--4 |
| 182 | <i>Salvia coccinea</i> Juss. ex Murray. | 18--4 |
| 183 | <i>Salvia kopetdagensis</i> Kudr. | 18--4 |
| 184 | <i>Salvia macrosiphon</i> Boiss. | 18--4 |
| 185 | <i>Salvia napifolia</i> Jacq. | 18--4 |
| 186 | <i>Salvia nemorosa</i> L. | 18--4 |
| 187 | <i>Salvia pratensis</i> L. | 18--4 |
| 188 | <i>Salvia reuteriana</i> Boiss. | 18--4 |
| 189 | <i>Salvia roemeriana</i> Torr. | 18--4 |
| 190 | <i>Salvia santolinifolia</i> Boiss. | 18--4 |

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|--------------|--|-------|
| 191 | <i>Salvia scabiosifolia</i> Lam. | 18--4 |
| 192 | <i>Salvia verticillata</i> L. | 18--4 |
| 193 | <i>Stachys byzantina</i> K.Koch | 18--4 |
| 194 | <i>Stachys pubescens</i> Ten. | 18--4 |
| 195 | <i>Stachys turcomanica</i> Trautv. | 18--4 |
| 196 | <i>Teucrium orientale</i> L. | 18--4 |
| 197 | <i>Teucrium polium</i> L. | 18--4 |
| 198 | <i>Teucrium stocksianum</i> Boiss. | 18--4 |
| 199 | <i>Thymbra spicata</i> L. | 18--4 |
| 200 | <i>Thymus fallax</i> Fisch. & C.A.Mey. | 18--4 |
| 201 | <i>Thymus serpyllum</i> L. | 18--4 |
| 202 | <i>Ziziphora clinopodioides</i> Lam. | 18--4 |
| 203 | <i>Ziziphora tenuior</i> L. | 18--4 |
| Liliaceae | | |
| 204 | <i>Tulipa biflora</i> Pall. | 20--1 |
| 205 | <i>Tulipa clusiana</i> Shepherd ex Schult.f. | 18--4 |
| Linaceae | | |
| 206 | <i>Linum perenne</i> L. | 13--1 |
| 207 | <i>Linum rubrum</i> Raf. | 18--4 |
| Lythraceae | | |
| 208 | <i>Lagerstroemia indica</i> L. | 18--4 |
| Malvaceae | | |
| 209 | <i>Alcea kopetdagensis</i> Iljin | 12--1 |
| 210 | <i>Hibiscus manihot</i> L. | 18--4 |
| Moraceae | | |
| 211 | <i>Broussonetia papyrifera</i> (L.) Vent. | 18--4 |
| Nitrariaceae | | |
| 212 | <i>Nitraria schoberi</i> L. | 20--2 |

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|----------------|---|-------|
| Oleaceae | | |
| 213 | <i>Fraxinus ornus</i> L. | 18--4 |
| 214 | <i>Jasminum fruticans</i> L. | 18--4 |
| Papaveraceae | | |
| 215 | <i>Papaver dubium</i> L. | 7--1 |
| Phytolaccaceae | | |
| 216 | <i>Phytolacca americana</i> L | 18--4 |
| Plantaginaceae | | |
| 217 | <i>Plantago lanceolata</i> L. | 13--3 |
| 218 | <i>Plantago lanceolata</i> L. | 13--4 |
| Plumbaginaceae | | |
| 219 | <i>Goniolimon eximium</i> Boiss. | 13--1 |
| 220 | <i>Limonium minutum</i> (L.) Fourr. | 18--4 |
| 221 | <i>Plumbago europaea</i> L. | 18--4 |
| Poaceae | | |
| 222 | <i>Echinaria capitata</i> (L.) Desf. | 12--3 |
| 223 | <i>Melica persica</i> Kunth | 12--3 |
| 224 | <i>Pennisetum orientale</i> L. C. Rich. | 12--7 |
| 225 | <i>Phleum phleoides</i> H.Karst. | 15--5 |
| Polemoniaceae | | |
| 226 | <i>Phlox drummondii</i> Hook. | 18--4 |
| Polygalaceae | | |
| 227 | <i>Polygala irregularis</i> Boiss. | 8--2 |
| 228 | <i>Atraphaxis spinosa</i> L. | 8--1 |
| 229 | <i>Pteropyrum aucheri</i> Jaub. & Spach | 13--1 |
| 230 | <i>Rheum ribes</i> L. | 13--3 |
| 231 | <i>Rumex pulcher</i> L. | 13--3 |
| 232 | <i>Rumex vesicarius</i> L. | 16--1 |

Ranunculaceae

- | | | |
|-----|--|-------|
| 233 | <i>Aquilegia alpina</i> L. | 18--4 |
| 234 | <i>Aquilegia bernardii</i> Gren. & Gord. | 18--4 |
| 235 | <i>Aquilegia californica</i> Hartw. | 13--1 |
| 236 | <i>Aquilegia chrysanthra</i> A.Gray | 18--4 |
| 237 | <i>Aquilegia formosa</i> Fisch. ex DC. | 18--4 |
| 238 | <i>Aquilegia formosa</i> Fisch. ex DC. | 18--4 |
| 239 | <i>Aquilegia fragrans</i> Benth. | 18--4 |
| 240 | <i>Aquilegia vulgaris</i> L. | 18--4 |
| 241 | <i>Clematis orientalis</i> L. | 18--4 |
| 242 | <i>Nigella damascena</i> L. | 18--4 |

Resedaceae

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|-----|-----------------------------------|-------|
| 243 | <i>Ochradenus baccatus</i> Delile | 13--1 |
| 244 | <i>Reseda lutea</i> L. | 16--2 |

Rhamnaceae

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| 245 | <i>Frangula alnus</i> Mill. | 18--4 |
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Rosaceae

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| 246 | <i>Cotoneaster affinis</i> DC. | 1--1 |
| 247 | <i>Cotoneaster allochrous</i> Pojark. | 1--3 |
| 248 | <i>Cotoneaster morulus</i> Pojark. | 1--1 |
| 249 | <i>Cotoneaster nummularioides</i> Pojark. | 9--1 |
| 250 | <i>Cotoneaster nummularius</i> Fisch. & C.A.Mey. | 11--1 |
| 251 | <i>Crataegus atrosanguinea</i> Pojark. | 18--4 |
| 252 | <i>Crataegus azarolus</i> L. | 11--3 |
| 253 | <i>Crataegus melanocarpa</i> Bory & Chaub. | 18--4 |
| 254 | <i>Crataegus meyeri</i> Pojark. | 11--4 |
| 255 | <i>Crataegus oxyacantha</i> L. | 11--5 |
| 256 | <i>Crataegus pinnatifida</i> Bunge. | 18--4 |

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| 257 | <i>Geum hispidum</i> Auct.Germ. ex Scheutz | 18--4 |
| 258 | <i>Pyrus boissieriana</i> Buhse | 18--4 |
| 259 | <i>Rosa canina</i> L. | 18--4 |
| 260 | <i>Sorbus boissieri</i> C.K.Schneid. | 18--4 |
| Rubiaceae | | |
| 261 | <i>Gaillonia aucheri</i> (Guill.) Jaub. & Spach | 16--1 |
| Rutaceae | | |
| 262 | <i>Haplophyllum acutifolium</i> (DC.) G.Don | 13--2 |
| 263 | <i>Ruta graveolens</i> L. | 18--4 |
| Sapindaceae | | |
| 264 | <i>Xanthoceras sorbifolium</i> Bunge. | 18--4 |
| Scrophulariaceae | | |
| 265 | <i>Digitalis lutea</i> Sm. | 10--3 |
| 266 | <i>Digitalis micrantha</i> Roth | 10--4 |
| 267 | <i>Digitalis parviflora</i> Jacq. | 13--3 |
| 268 | <i>Digitalis parviflora</i> Jacq. | 18--4 |
| 269 | <i>Misopates orontium</i> (L.) Raf. | 18--4 |
| 270 | <i>Penstemon digitalis</i> Nutt. | 18--4 |
| 271 | <i>Scrophularia frigida</i> Boiss. | 18--4 |
| 272 | <i>Scrophularia striata</i> Boiss. | 18--4 |
| 273 | <i>Verbascum agrimoniiifolium</i> (K.Koch) Hub.-Mor. | 18--4 |
| 274 | <i>Veronica spicata</i> L. | 18--4 |
| 275 | <i>Hyoscyamus niger</i> L. | 13--3 |
| Sterculiaceae | | |
| 276 | <i>Firmiana simplex</i> W.Wight | 18--4 |
| Tamaricaceae | | |
| 277 | <i>Reaumuria alternifolia</i> Britten | 14--2 |

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| 278 | <i>Reaumuria alternifolia</i> Britten | 18--2 |
| Tiliaceae | | |
| 279 | <i>Tilia cordata</i> Mill. | 18--4 |
| Valerianaceae | | |
| 280 | <i>Valeriana officinalis</i> L. | 18--4 |
| Verbenaceae | | |
| 281 | <i>Verbena hispida</i> Ruiz & Pav. | 18--4 |
| 282 | <i>Verbena stricta</i> Vent. | 18--4 |
| Zygophyllaceae | | |
| 283 | <i>Peganum harmala</i> L. | 14--3 |
| 284 | <i>Zygophyllum atriplicoides</i> Fisch. & C.A.Mey. | 15--1 |
| 285 | <i>Zygophyllum eurypterum</i> Boiss. & Buhse | 18--4 |

Seed Collection Sites:

- 1-1.Alborz. Chalous road, Arange Village, 1840 m. N 35°.55'.401", E 051°.04'.370".
- 1-2.Alborz. Karaj to chalous road. Afrer Asara. 1740 m. N. 36°.02'.24.7", E 51°.11'.16.5".
- 1-3.Alborz. Karaj to chalous road. Afrer Nesa. 2200 m. N. 36°.06'.11.6", E 51°.18'.56.8".
- 1-4.Alborz. Karaj to chalous road. Azadbar village. 2477 m. N. 36°.08'.16.3", E 51°.14'.25.2".
- 1-5.Alborz. Karaj-Chalus road, 1 km after Nesa toward Gachsar, 2179 m. N. 36°.05'.31.9", E 51°18'52.3".
- 1-6.Alborz. Taleghan. 1840 m. N. 36°.09'.43.4", E 50°.44'.40.7".
- 1-7.Alborz. Taleghan. 2200 m. N. 36°.06'.581", E 50°.39'.25.5".
- 2-1. East Azarbajian, Marand to Tabriz, Tariyamishou, 1823 m. N 38°.20'.174", E 45°.47'.549".
- 2-2. East Azarbajian, Tabriz to Maraghe, Solouk Village, 1716 m. N 37°.32'.494", E 46°.50'.444".
- 2-3. East Azerbaijan , Tabriz. 80 km. frome Kalibar to Tabriz, 1733 m. N 38°.47'.324", E 47°.03'.578".
- 2-4. East Azerbaijan Province, Arasbaran. Boghalamoон station.
- 3-1. Fars, Firuzabad, road of Farashband to Kazeroun, 770 m. N 28°.49'.310", E 52°.06'.508".
- 3-2. Fars, Road of Shiraz to Abadeh, 2000 m. N 30°.04'.504", E 53°.09'.574".
- 4-1. Gilan, Road of Loshan to Tarom Sofla, 323 m. N 36°.38'.350", E 49°.27'.286".
- 5-1. Hormozgan. Qeshm iland, Namak cave. 149 m N. 26.654855, E. 55.460626 .
- 6-1. Ilam,aivan,emamzade abdolah Altitudes,1370-1400 m. N. 33°.46'.25.1", E 46°.19'.21.7".
- 7-1. Isfahan, Qamsar, Jonian, 1920 m. N 33°.41'.58", E 051°.27'.23".
- 8-1. Kerman. Kiyanshah to Zarand, 33Km to Kiyanshah. 2248 m. N. 31°.02'28.0", E 56°.33'.31.1".
- 8-2. Kerman. Rafsanjan to Zarand. 2125 m. N. 30°.36'35.9", E 56°.14'.23.5".
- 9-1. Kermanshah, Dalahu, Gahvareh, Tutshami, 1595 m, N 34°.21'.43", E 046°.20'.25".
- 9-. Kermanshah, Kerend to Dalahu Road, 1736 m.
- 9-3. Kermanshah, Songhor to Kamyaran, km 60 Kyunanat, 2100 m. N 34°.48'.079", E 47°.02'.910".
- 9-4. Kermanshah. Kamyaran to Sanandaj, 1790-1800 m. N 34°.53'.312", E 46°.56'.573".

- 9-5. Kermanshah. Kamyaran, after Shirvane Village, 1826 m. N $34^{\circ}47'08''$, E $47^{\circ}04'574''$.
- 10-1. Lorestan. Khramabad to Poldokhtar road. Mlavi canyon. 1750 m. N. $33^{\circ}44'383''$, E $49^{\circ}22'769''$.
- 10-2. Lorestan.25th Km Doroud to Azna road. 1922 m. N. $35^{\circ}25'482''$, E $48^{\circ}54'315''$.
- 10-3. Lorestan.25th Km doroud to Oshtorankouh mountain road. North mountain slope Tiun Village. 2212 m. N. $33^{\circ}25'636''$, E $48^{\circ}52'076''$.
- 10-4. Lorestan.Khoramabad. Bishe. Chenar Village & Cheshme pariyan Village. 1634 m. N. $33^{\circ}27'846''$, E $48^{\circ}22'468''$.
- 11-1. Mazandaran. Between gjj & Zanus. Uper than emamzade. 1300 to 1400 m.
- 11-2. Mazandaran.Chalush Road. Pole Khab, 1955 m. N $36^{\circ}00'43.6''$, E $51^{\circ}08'48.9''$.
- 11-3. Mazandaran.Noushahr. Kojour, Lashak Valley, 500 m. N $36^{\circ}32'264''$, E $01^{\circ}60'636''$.
- 11-4. Mazandaran.Noushahr. Kojur, Zanoos Valley, 2052m. N $36^{\circ}32'205''$, E $51^{\circ}60'66''$.
- 11-5. Mazandaran.Noushahr. Kojur, Zanoos Valley. 250 m. N $36^{\circ}30'66''$, E $51^{\circ}52'85''$.
- 12-1. North Khorasan Province. Bojnurd to Rāz befor Gol Tappeh. 1057 m. N $37^{\circ}05'37''$, E $59^{\circ}57'08''$.
- 12-2. North Khorasan Province. Esfarāyen. Qanbar Baghi. 1740 m. N $36^{\circ}44'12''$, E $58^{\circ}02'17''$.
- 12-3. North Khorasan. Bojnurd. Charkharvar Village. 1070 m. N. $33^{\circ}29'31''$, E $57^{\circ}17'53''$.
- 12-4. North Khorasan. Bojnurd. Esfidan Village. 1570 m. N. $37^{\circ}25'46''$, E $57^{\circ}10'14''$.
- 12-5. North Khorasan. Bojnurd. Gharkhoad national park. 1250 m. N. $37^{\circ}29'51''$, E $56^{\circ}21'42''$.
- 12-6. North Khorasan. Bojnurd. Kohkamar Village. 1150 m. N. $37^{\circ}27'23''$, E $57^{\circ}17'22''$.
- 12-7. North Khorasan. Bojnurd. Sisab. 1300 m. N. $37^{\circ}25'11''$, E $57^{\circ}39'20''$.
- 13-1. Qazvin, Buin Zahra, Abyek, 1600 m. N $35^{\circ}39'55''$, E $50^{\circ}08'02''$
- 13-2. Qazvin, Qazvin to Abyek, Between Qazvin to Abyek old road and Highway. 1200 m. N $36^{\circ}03'49''$, E $50^{\circ}23'15''$
- 13-3. Qazvin, Qazvin to Abyek, Jazame village 1360 m. N $36^{\circ}06'42''$, E $50^{\circ}26'20''$
- 13-4. Qazvin, Qazvin to Abyek, uper Jazame village 1400 m. N $36^{\circ}07'28''$, E $50^{\circ}28'47''$
- 13-5. Qazvin. Abgarm to Sagharan and Arteshabad, 1670 m. N $35^{\circ}42'406''$, E $49^{\circ}19'566''$
- 13-6. Qazvin. Ghazvin to Zereshk village road. Barjin village, 1560 m. N $36^{\circ}21'17.6''$, E $50^{\circ}04'29.3''$
- 13-7. Qazvin.Alamot. Pichbon, 300 m.

- 14-1. Qom, Kahak, Vashnog region, 8 km a Vashnog to Qom, 1936 m. N $34^{\circ}27'01.6773''$, E $051^{\circ}00'10.5147''$.
- 14-2. Qom, near Namak Lake, 810 m. N $35^{\circ}03'53''$, E $50^{\circ}56'22''$.
- 14-3. Qom, near Namak Lake, 860 m. N $34^{\circ}55'05''$, E $50^{\circ}53'51''$.
- 14-4. Qom, Salafchegan, km 3 Salafchegan to Qom road, 1354 m. N $34^{\circ}41'866785''$, E $050^{\circ}49'376601''$.
- 15-1. Semnan. Garmsar. Bon-e Kuh. 1109 m. N. $35^{\circ}18'28''$, E $52^{\circ}26'25''$.
- 15-2. Semnan. Parvar. 1902 m. N. $35^{\circ}59'21''$, E $33^{\circ}29'08''$.
- 15-3. Semnan. Rudbarak. 2484 m. N. $36^{\circ}02'40''$, E $53^{\circ}36'16''$.
- 15-4. Semnan. Shahmirzad. Shahmirzat to Foulad Mahalleh. 2195 m. N. $35^{\circ}49'37''$, E $53^{\circ}25'13''$.
- 15-5. Semnan. Shahrood. Khoshyeylāq. 1250 m. N. $37^{\circ}29'51''$, E $56^{\circ}21'42''$.
- 16-1. Sistan & Baluchestan. Iranshahr to Khash, 105 km to Khash. 840 m. N. $27^{\circ}32'32.6''$, E $60^{\circ}48'14.7''$.
- 16-2. Sistan & Baluchestan. Khash to Iranshahr, 86 km to Iranshahr. 1341 m. N. $27^{\circ}53'41.3''$, E $60^{\circ}48'01.4''$.
- 17-1. South Khorasan Province, boshruyeh to ferdus. 1060 m. N $33^{\circ}34'34''$, E $52^{\circ}43'48''$.
- 17-2. South Khorasan Province. Bamroud. 1328 m. N $33^{\circ}44'10''$, E $56^{\circ}23'20''$.
- 17-3. South Khorasan Province. Boshrouyeh. between Osfok & Deh-e Mohammad. 1211 m. N $34^{\circ}00'30''$, E $57^{\circ}09'49''$
- 17-4. South Khorasan Province. Nehbandan to Chahdashi. 1099 m. N $32^{\circ}29'51''$, E $59^{\circ}49'58''$
- 18-1. Tehran, Damavand, Kilan, Tamison, 1800 m. N $35^{\circ}33'527''$, E $52^{\circ}10'598''$.
- 18-2. Tehran, Damavand, Mountain, Daliran, 2250 m. N $35^{\circ}53'211''$, E $52^{\circ}06'135''$.
- 18-3. Tehran, Damavand, Tar lake from hover, 2585 m. N $35^{\circ}42'533''$, E $52^{\circ}17'595''$.
- 18-4. Tehran. Cultivated in National Botanical Garden of Iran. 1320 m. N. $35^{\circ}44'251''$, E $51^{\circ}10'242''$.
- 19-1. West Azerbaijan, Aghbolagh to Oshnavieh, 1712 m. N $37^{\circ}11'119''$, E $45^{\circ}07'599''$.
- 19-2. West Azerbaijan, Salmas to Abgarm, Khan Takhti village, 1445 m. N $37^{\circ}32'494''$, E $45^{\circ}07'073''$.
- 19-3. West Azerbaijan, Urumieh, Zeve, 1500 m. N $37^{\circ}15'061''$, E $44^{\circ}54'161''$
- 20-1. Yazd, Bafq.

20-2. Yazd, Reserch departman of desert plant of sadooghi,1261 m. N $31^{\circ}49'46.98''$, E $54^{\circ}21'54.73''$.

20-3. Yazd. Arsanjan. Barfkhan way.

20-4. Yazd. Taft to Fdehbala, 3 Km after Tft. 1560 m. N. $31^{\circ}43'39.1''$, E $54^{\circ}12'53.8''$.



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