

## Cultivars and their wild relatives of Navasari and Valsad district

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There are about 2,00,000 plant taxa distributed in wide range of habitats of these only few are cultivated. The cultivated plant fulfills most of the basic requirements of the living beings. Very few cultivated plants are consumed as food. It seems that all these plants must have been wild once upon a time before the initiation of the human civilization that originated on the banks of the rivers and gradually adapted, flourished and acquainted into the steady settlement. The requirement of food was achieved by domestication of pets and cultivation by sowing of food giving plants. Further developments must probably have followed the under mentioned course.

- Human selection pressure
- Selection of different plant parts as a source of food,
- The requirements other than food viz., fibers, medicines, shelter, fodder, etc.,
- The conservation of genome of selected taxa.

The earlier relatives of the then cultivars were wild and were left to natural selection pressures, both natural and anthropogenic. Wild relatives in the course of evolution and all the present day wild plants can be designated, as successful products of the process of evolution. The wild equivalents of the cultivars have to face the different environmental factors as compared to those faced by the cultivars throughout the ages. The wild plants were and are still susceptible to floods, heavy sedimentation, drought, changing in climate, etc. The cultivars on the other hand are well protected by the techniques developed by the human being. The human intelligence moderates the natural effects of the natural environmental factors.

During the entire process of agricultural revolution – natural hybridization, segregation of characters, thoughtful human selection like early maturing, late maturing, differential productivity, drought resistance, disease resistance etc. have played the important role. Present day cultivars are the result of sum total of the aforesaid phenomena.

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**Cultivated plants and their possible wild relatives**

Crop plants	Wild relatives / cultivars
<b>Cereals and millets</b>	
<i>Oryza sativa</i>	<i>Oryza nivara</i>
<i>Pennisetum americanum</i>	<i>Pennisetum purpureum</i>
<i>Sorghum bicolor</i>	<i>Sorghum halepense</i>
<i>Saccharum officinarum</i>	<i>Saccharum spontaneum</i>
<i>Zea mays</i>	<i>Coix lachryma-jobi</i>
<i>Eleusine coracana</i>	<i>Eleusine indica</i>
<b>Pulses and leguminous crops</b>	
<i>Vigna dalzelliana</i>	<i>Vigna aconitifolia</i> , <i>V. umbellata</i> and <i>V. khandalensis</i> .
<i>Vigna radiate</i>	<i>Vigna trilobata</i> and <i>V. radiata</i> var. <i>sublobata</i>
<i>Clitorea ternetea</i>	<i>Clitorea biflora</i>
<i>Cicer arietinum</i>	<i>Vigna mungo</i> var. <i>silvestris</i>
<i>Cajanus cajan</i>	<i>Atylosia sericea</i>
<i>Bauhinia purpurea</i>	<i>Bauhinia variegata</i>
<i>Medicago sativa</i>	<i>Medicago polymorpha</i>
<i>Pisum sativum</i>	<i>Lathyrus sativus</i>
<i>Trigonella foenum-graecum</i>	<i>Trigonella corniculata</i>
<b>Fruit crops</b>	
<i>Musa paradisiacal</i>	<i>Ensete superbum</i>
<i>Morus alba</i>	<i>Morus indica</i>
<i>Murraya paniculata</i>	<i>Murraya koeningii</i>
<i>Syzygium cumini</i>	<i>S. heyneanum</i>
<i>Zizyphus mauritiana</i>	<i>Z. oenoplia</i> , <i>Z. rugosa</i> and <i>Z. xylocarpus</i>
<i>Carrisa conjesta</i>	<i>C. spinarum</i>
<i>Manilkara hexandra</i>	<i>Mimusops elengi</i>
<i>Citrullus lanatus</i>	<i>Citrullus colocynthis</i>
<b>Vegetables</b>	
<i>Abelmoschus esculentus</i>	<i>Abelmoschus manihot</i>
<i>Allium cepa</i>	<i>Dipcadi serotinum</i>
<i>Amaranthus caudatus</i>	<i>Amaranthus hybridus</i> , <i>Amaranthus spinosus</i> , <i>Amaranthus tricolor</i> , <i>Amaranthus viridis</i> , <i>Amaranthus lividus</i>
<i>Capsicum annum</i>	<i>Capsicum frutescens</i>
<i>Curcuma longa</i>	<i>Curcuma amada</i> , <i>C. inodora</i> , <i>C. pseudomontana</i>
<i>Cucumis melo</i>	<i>Cucumis setosus</i>
<i>Luffa acutangula</i>	var. <i>Luffa acutangula</i> var. <i>amara acutangula</i>

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