

Seeds suitable under drought and Spate Irrigation

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The idea is to test seeds of crops, shrubs, grasses, and trees of one country/location to another in somewhat similar environment. These seeds are, initially, for test purpose under different climate conditions, season and circumstance. Upon progress, such activities are evaluated to further work, when proved successful, and propagate on wider scale. There are unique crop/shrub/tree seeds which have promising scope for use in staple food, commercial value, livestock, medicinal value, soil fertility improvement etc. During our recent study tour in Tanzanian spate irrigation field, we noticed popularity of black beans – lablab. This can grow in drought conditions, is leguminous and have higher prices. According to local farmers, traders from overseas come here for its purchase. Black beans need further promotion into other countries and regions under spate irrigation.

For this purpose three types of activities have been planned.

1. Different seeds from one location to another within the country. For this purpose Pakistan spate irrigation network has organised exchange visit of farmers and exchange of seeds to each other areas. In Pakistan, area farmers did explain the cultivation methods to fellow farmers of other region during exchange visits.
2. Different seeds from one country to another in the spate irrigation areas.
3. To get link between farmers network with international organization like ICRAF and World agro forestry centre for obtaining seed and propagation technology/know how in different countries under spate irrigation.

It is better to work with national research organization for initial tests of these seeds and then, upon recommendations, can be directly grown by spate farmers in different locations.

Cluster beans also known as Guar beans

This is highly leguminous in nature, fix nitrogen into roots taken from atmosphere. It is excellent crop for increasing soil fertility. Its growing season is summer (August) and crops matures in November. Crop likes sandy soils, require less water, hot weather, and suitable for drought conditions. Upon more irrigation plant grows wise and provides more leafy material and less seed. On the other hand under drought conditions, it quickly produces seed/beans. The green plant is used as green manure in irrigated areas, and good fodder for livestock, and green pods are used as vegetable too.



Guar Plant



Guar Seed/Bean

Its yield is low, i.e. about 200 kilogram per acre. However, new varieties can give yield up to 600 kg/acre. Upon threshing the crop, the hay/roughage is sold separately as it is favourite for livestock.

It has many industrial uses and marketing is easy. For details please visit www.spate-irrigation.org and see the practical note on guar.

Mustered Oil Seed

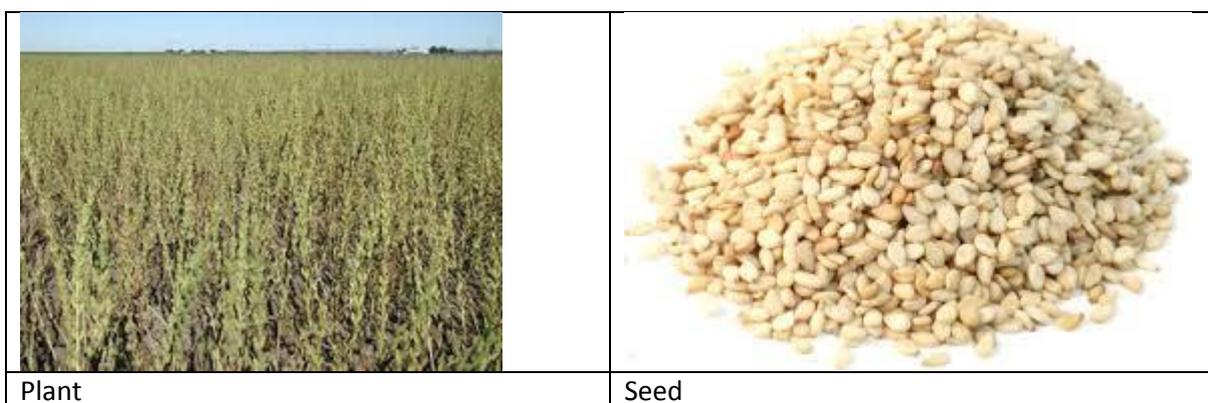
This is oil seed of short duration. It produces oil used for cooking and industrial/medicinal uses. Crops is sown in autumn (October/November and even early December and harvested in March. I required less water. Green plant is used as excellent fodder. Can survive under drought conditions.



For details see oil seed crops on www.spate-irrigation.org

Sesame Seed

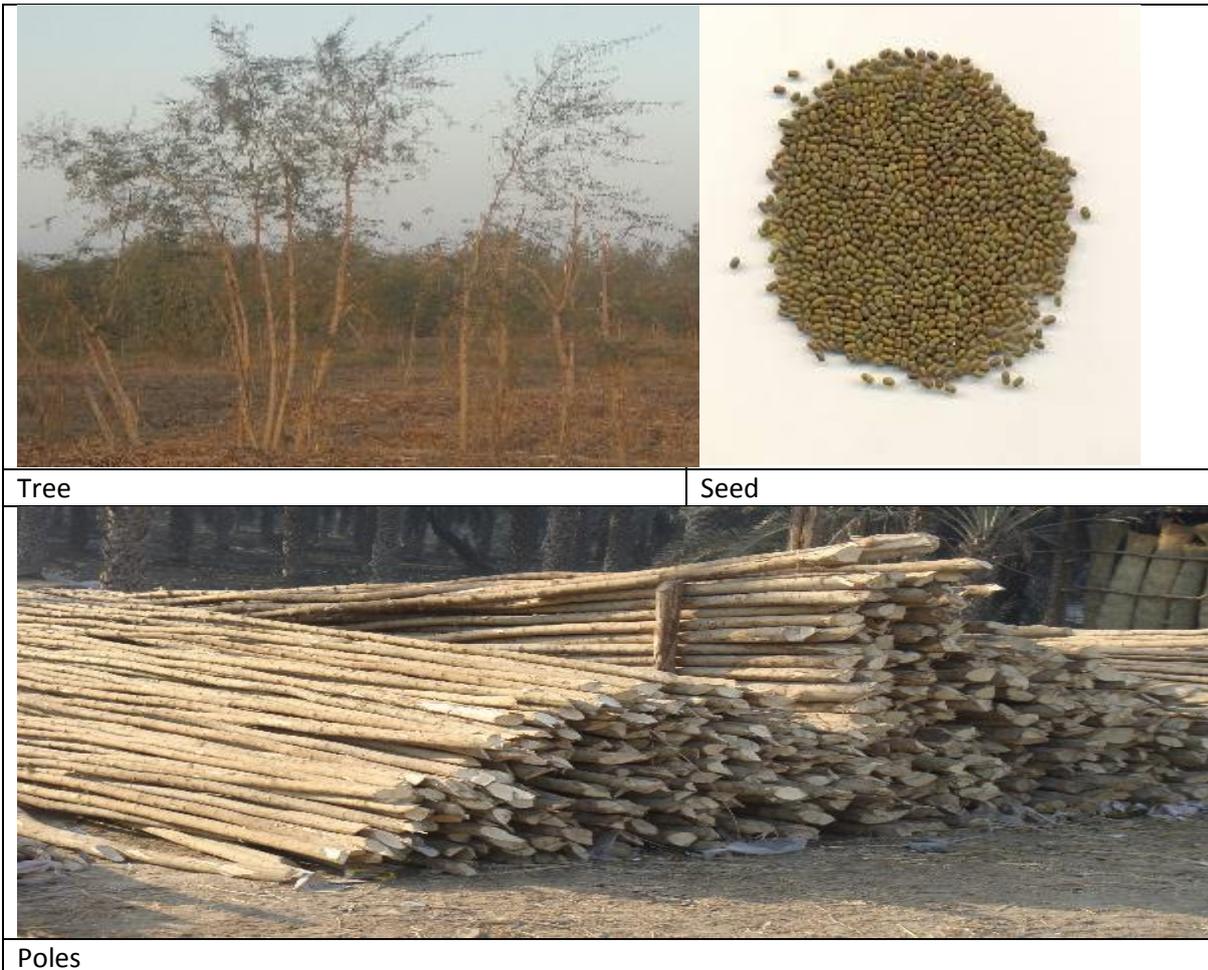
It has two varieties – black and white. It grows well in hot weather and likes drained soils. Spate irrigation fields are best for its cultivation. It is a cash crop of spate irrigation regions. Oil is extracted from seed and used for cooking and medicinal purposes. After extracting oil, its remaining cake is an important ingredient in different confectionary and bakery items.



For detail see www.spateirrigation.org

Sesbania Tree

It is multipurpose tree. It grows up to 8 meters and produces poles within 4 to 5 years for commercial purposes. Its branches are used as best fodder for livestock. It is highly leguminous and can be cultivated with other tree species to complement the fertility in soils. It grow easily in hot climate. It is also used for providing shades to some crops, vegetables and shrubs such as coffee plantation. It can grow in poor soils too.



Bakayan Tree

It is also called china berry and is deciduous tree. It is dense shade tree and can grow easily in hot climate. Requires less water, can survive in frost and not easily attacked by insects. Good tree at house hold level for shade to be used for human and livestock. Livestock don't eat it so survival rate is high. Seeds are used for medicinal purposes. Branches are used for fuel wood also.

Wild Tinda (Vegetable)

It is around gourd vegetable. It is about three inches and in round shape and has green colour. It grow wild and also planted in the field. It is grown during spring and summer and remain available throughout the year. It can survive in hard climate conditions and suitable under spate irrigation.

Under spate irrigation plant's life is for few months. Good source of minerals and vitamins. It is marketed in urban centres and gets reasonable price.



Vegetable	Plant/vine
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Spate Irrigation network Foundation intends to promote such useful crops, tree, grasses and shrubs in different regions for benefits of farmers. Moringa is another highly useful tree to be further popularised in spate irrigation areas. Moreover, a video regarding grafting of Ziziphus Jujuba improved variety is going on to propagate this highly useful fruit tree under spate perennial horticultural crops. All country chapters of spate irrigation network are strongly encourage to document and share information about such biological resources for the benefits of farmers.