

FOREST AND ENVIRONMENT SPECIES

Complied By:

Publicity and Extension Division

Punjab Forest Department

24-Cooper Road, Lahore. Ph: (042) 99200796

SI. No.	SCIENTIFIC NAME	ENGLISH NAME	LOCAL NAME	DISTRIBUTION/DESCRIPTION	TREE/SPECIES
1	Abies pindrow Royle	Silver fir	Partal, Paludar	<p>Origin: Native to Himalayas of the Sub-Continent including Pakistan, Afghanistan and India.</p> <p>Suitability in Pakistan: It is found high elevation in Azad Kashmir, Murree Hills, Hazara, Swat, Dir and Chitral.</p> <p>Description: A large, tolerant and evergreen tree 45 to 60 m tall with a diameter 1.8 to 2.4 m. The crown extends to the ground with the branches of drooping, forming a conical crown. Leaves are needlesh 2 to 4 cm long. The tree is valuable member of the coniferous forest that grows on steep sites. It grows on a variety of deep, rich soils, formed from various parent materials. It also grows on steep, cool, northern exposures adapted to a precipitation zone of 1100 to 2500 mm/yr, prefers in humid cold temperatre climate with a temperature range of -10 to 30°C within an elevation range of 2000 to 3000m. It reproduced from seed. It grows slow. MAI of 4 to 6 m³/ha/yr has been recorded. Wood is grain, straight, even, color of wood is white, turning to light brown with age with a specific gravity of 0.48 with a calorific value of 4500 Kg and strength is light, soft.</p> <p>Uses: Construction, fuel, fodder (winter) watershed protection, packing cases and plywood.</p>	
2	Abrus precatorius L	Crab's eye	Ratti		
3	Abutilon bidentatum hochst	Abution	Pataka		

4	Abutilon indicum (L) Sweet)	Country-mallow	Peeli booti		
5	Acacia albida Del.	Australian acacia	Australian Kikar, Sudani Kikar, Sufaid Kikar	<p>Origin: Native to Tropical and Sub-Tropical of Africa.</p> <p>Suitability in Pakistan: It can be planted along the Khurram Garhi Canal and in Botanical and Research Gardens.</p> <p>Description: An evergreen, thorny, moderate-size tree, 6 to 13 m tall. An intolerant, drought resistant tree that grows on a variety of textured soils. It will tolerate saline, sodic sites if adequate soil moisture is available. It requires precipitation of 250 to 1400 mm/yr. It prefers a semi arid, sub-tropical/tropical climate within a temperature range of -15 to 45 °C, which indicates some frost hardiness and at present no disease or insects problems have been identified. It easily reproduced from seed or by vegetatves means. Pre-treatment of seed with boiling water increases germination. Average height and diameter for 20 year of old trees is 10 m and 15.7 cm respectively. It is useful for controlling erosion in gullied areas and also can be grown on saline, sodic sites for soil reclamation and biomass production. The color of sapwood is whitish gray, smooth & heartwood. The specific gravity of 0.59 and calorific value of 4910 kcal/kg. The wood is light and not very strong. It is a very useful tree in arid areas of Pakistan. Ideally situated for planting along river banks and canals. In Africa it is reported to shed its leaves in the wet seasons. Also having ability to fix nitrogren makes it a good farm forestry tree. Flowers are in bunches 3.5 to 14 cm long appears between February and April.</p> <p>Uses: Fodder, Fuel and Timber (construction, boat &</p>	

				buildings), nitrogen fixing.	
6	Acacia aneura F Muell	Australian acacia	Anoora, Noora	<p>Origin: Native to Dry Interior Regions of Australia.</p> <p>Suitability in Pakistan: It is planted in gardens and has been used in Arid Zone afforestation.</p> <p>Description: A slow growing shrub to small tree, 4 to 5 m tall with a diameter of 20 cm. It grows on a variety of soils including heavy clay that are well drained. It prefer precipitation of 250 to 750 mm. It will also grow in arid to semi arid regions with a temperature range of -5 to 40 °c, indicates some frost hardiness. At present no disease or insects problems have been identified. Leaves are phyllodes 3 to 7.5cm long by 2.5 to 7.5 mm wide. An intolerant, drought and hardy tree. Reproduced easily from seed. Seed stores for at least one year treated with insecticides and sealed in air tight drums. It is a very useful tree in arid and Semi-arid areas of Pakistan. Also having ability to fix nitrogen makes it a good farm forestry tree. The color of sapwood is dark brown with golden yellow, heavy, hard and durable. The specific gravity reported to have a MAI of 2 to 3 m³/ha/yr. Flowers are in bunches 1.5 to 2 cm long appearing in June.</p> <p>Uses: Fodder, Fuel apiculture, spears, clubs and boomerangs.</p>	
7	Acacia catechu wild	Black catechu	Khair/Katha	<p>Origin: Native to the Sub-Continent in the Western Regions of the Himalayas..</p> <p>Suitability in Pakistan: It is found in Malakand, Hazara and Rawalpindi Districts and it also can be planted in the Punjab and Sindh.</p> <p>Description: A medium sized, deciduous tree, 9 to 15 m tall with a diameter of 29 to 31 cm. The bole and</p>	

				<p>branches are armed with thorns. Leaves are compound 7 to 17 cm long. The bark is dark grayish, brown, peeling in narrow strips. An intolerant, drought hardy tree which grows best on rocku, stony, gravelly, sandy alluvium, loamy, clayey, well drained soils. It will grow on acid soils (ph 5.9) and grow on wet or swampy sites. It prefers precipitation of 500 to 2700 mm/yr and grows upto 1200 m of elevation. It also grow in a sub-humid cool to subtropical climate within a temperature range of -5 to 40°C, which indicates some frost hardiness. At present no disease or insects have been identified. Reproduced easily both from seed and by vegetative means. Seed can be stored for at lease one year treated with insecticides and sealed in air tight drums. It is relatively slow growng have an MAI of 4 to 7m³/ha/yr. In India trees of 21.6m in height and 31.2 cm diameter have been produced at 70 years. This is a valuable commercial tree. Large areas of Pakistan could be reforested with this tree as it would provide employment opportunities in the timber and extraction industry. It produces fodder and ability of nitrogen fixing and a good farm forestry tree. The sapwood is creamy white to reddish, hartwood is dull pink to reddish brown, heavy and strong. The grain is straight with a medium texture. The specific gravity of 1.0 and a calorific value 5300 kcal/kg for dry wood. Flowers are in bunches 7 to 17 cm long in yellow colours occur between May and August. Small Pods 5 to 9 cm mature between December and January.</p> <p>Uses: Fodder, Fuel, agricultueal implements, tool handles, wheel hubs and spokes, tanning, timber. apiculture, spears, clubs and boomerangs. Also have a medicinal value.</p>	
8	Acacia cyanophylla	Blue leaf acacia	Kikar		

	lindi				
9	Acacia cyclops G.Don	Australian acacia, Rooikrans	Australian Kikar	<p>Origin: Native to the South Australia. Suitability in Pakistan: It can be planted successfully in sand dunes and coastal areas of Pakistan especially growing very well in Peshawar.</p> <p>Description: A small, dense, evergreen, bushy shrubs tree, 3 to 8 m tall. Leaves are phyllodes grown in downward vertical position. The foliage is light green, smooth and shiny when young. An intolerant, drought hardy tree which grows best on on soils from calcareous and quartizitic parent materials. It is adapted to coarse sandy soils and will even gron on sand dune crests. It will tolerate salt spray, saline sites and high winds. It prefers precipitation of 200 to 800 on semi-arid, warm Mediterranean climate, with a temperature range of 5 to 30°C, which indicates some frost hardiness. At present no disease or insects have been identified. Reproduced easily both from seed. Pre-treating the seed with abrasion, acis soak or a hot water soak will increase germination. Seed is stored for long period in the soil surface. Birds will also spread this aggressive tree. It is relatively slow growng but will yield 12 kg dry biomass from a tree with a basal diameter of 10 cm. Harvestable size between 7 to 10 years.Very aggressive tree and one established in an areas it is difficult to remove. It grows well in a salty environment and has been successfully used to stabilize sand dunes.The sapwood is grayish white, havy, hard and very strong. The grain is closed. Flowers are yellow growing in showy heads and appear between April and may.</p> <p>Uses: Fodder (goats), Fuel, ornamental and apiculture.</p>	
10	Acacia farnesiana	Sweet acacia	Meetha Kikar,	<p>Origin: Native to the Tropical America.</p> <p>Suitability in Pakistan: It can be planted successfully</p>	

	(L) Wild		Vilayati Kikar	<p>in and is adapted to many areas of Pakistan upto an elevation limit of 1200 m.</p> <p>Description: An evergreen, thorny shrubs or small tree, 3 to 5 m tall. Leaves are compound 1.2 to 5.5 cm long. The foliage is green, smooth and shiny when young. A moderately intolerant tree that grows best on a variety of loose sandy soils, prefers well drained sites along water courses, tolerate saline, alkali sites. It prefers precipitation of 250 to 1200 mm/yr in semi-arid, sub-humid climate within a temperature range of -5 to 35°C, which indicates some frost hardiness. At present no disease or insects have been identified. Reproduced easily both from seed. It will seed naturally on sites where it is adapted. It is relatively slow growing but will yield 1 to 3 m³/ha/yr. This is a nitrogen fixing tree is adapted to a variety of arid sites including saline, sodic soils. An aggressive tree because it can tolerate some shade. Have a potential for farm forestry tree particularly in areas where salinity or sodicity problem. The sapwood is white, heartwood is red, quite dense, heavy, hard & strong and closed grained. Flowers are yellow growing in showy heads, fragrant mature between November and March depending on geographic location. Pods are small 4 to 7 cm.</p> <p>Uses: Fodder (goats), Fuel, perfume, nitrogen fixing, hedge, windbreak and lath production.</p>	
11	Acacia hydaspica R. Parker	Acacia	Kikar		
12	Acacia jacquemontii Benth	Desert acacia	Kikar		
13	Acacia leucophloea	Acacia	Reru		

	Wild				
14	Acacia modesta Wali	Acacia	Phulai	<p>Origin: Native to Pakistan, Afghanistan and India.</p> <p>Suitability in Pakistan: It is found below 1200 m in the foothill ranges of the Himalayas, Salt Range, Suleman Hills, Balochistan and Kirthar Range. It is also found in the plains close to these mountains.</p> <p>Description: A deciduous, thorny moderate-size tree, 3 to 9 m tall. A moderate intolerant, drought resistant tree that grows on a variety of soils, including dry shallow soils. Leaves are compound, 1.2 to 5 cm long. The bark is rough with irregular cracks. It grows in precipitation range of 250 to 1300 mm/yr. It prefers a semi-arid, sub-humid climate within a temperature range of -5 to 40 °C. It exhibits some frost hardness. At present no disease or insects problems have been identified. It is easily reproduced from seed. The seed ripens during December – January. It is relatively slow growing, but will yield 4 to 6 m³/ha/yr in 50 years. Average height and diameter for 50 year of old trees is 6 m and 23 cm respectively. Valuable tree is adapted to a variety of arid sites. Very aggressive because it can tolerate shade. It is important in the Barani region and has great potential for reforestation projects. Young plants need protection from grazing. Have a great potential as a farm forestry tree and can be easily managed with a coppice system. The grain is closed. The color is sapwood is white; heartwood is dark brown with black streaks. The specific gravity of 0.96 and calorific value of 5500 kcal/kg. The wood is durable, heavy, hard and very strong. The flowers are pale white</p>	

				<p>to pale yellow, appear between March and May.</p> <p>Uses: Fodder, fuel, agricultural implements, hedge, apiculture and gum.</p>	
15	Acacia nilotica (L) Wild ex-Delile	Arabic tree	Kikar, Babul	<p>Origin: Native to Pakistan and is found in the Sindh, Punjab, Balochistan and NWFP. It is wild as well as extensively cultivated throughout the world, usually below 600 m in elevation.</p> <p>Suitability in Pakistan: It can be planted in the plains.</p> <p>Description: An evergreen, thorny, moderate-size tree, 20 m tall. Leaves are compound, 2.5 to 7.5 cm long. Crown form varies from conical to spreading. An intolerant, drought resistant tree that grows on a variety of sites. It will tolerate saline, sodic sites if adequate soil moisture is available. It requires precipitation of 125 to 1300 mm/yr. It prefers a semi arid, sub-tropical/tropical climate within a temperature range of 1 to 45 °C. It exhibits distinct differences between sub-species as to frost hardiness and drought resistance. At present there are minor problems with seed insects. It is easily reproduced from seed. Pre-treatment of seed with boiling water increases germination. Keeping in cow dung for a week also helps in quick germination. It is relatively fast growing and will yield 4 to 15 m³/ha/yr in 20 years. Average height and diameter for 20 year of old trees is 10 m and 15.7 cm respectively. It is useful for controlling erosion in gullied areas and also can be grown on saline, sodic sites for soil reclamation and biomass production. This valuable tree is adapted to a variety of arid sites. Aggressive and is easily established. It is important in the central and southern regions of Pakistan and its wood is valued for fuel and charcoal. Young trees need protection from grazing. Have a great potential as a farm forestry tree. It is</p>	

				<p>useful for controlling erosion in gullied areas and also can be grown on saline, sodic sites for soil reclamation and biomass production. The color of sapwood is white; heartwood is pinkish white turning to reddish brown. The specific gravity of 0.75 and calorific value of 4900 kcal/kg. The wood is durable, heavy, hard and very strong. Flowers are fragrant, yellow to bright yellow growing in bunches and mature year around.</p> <p>Uses: Fodder, Fuel and Charcoal, agricultural implements, pit props, apiculture, gum, lac production, tannin, fencing, land stabilization, nitrogen fixing.</p> <p>Medicinal value: Bark for diarrhoea and dysentery.</p>	
16	Acacia senegal (L) Wild	Senegal acacia	Khor, Kumbat	<p>Origin: Native to Pakistan. Also planted extensively throughout Africa, central and South America, the Sub-Continent and other parts of the World.</p> <p>Suitability in Pakistan: It can be planted in the lower Sindh, Baluchistan & Punjab.</p> <p>Description: A small, thorny deciduous shrub, with a height upto 8m. The thorns typically occur in threes, with central ones curved. The leaves are compound 2 to 5 cm long. The bark is smooth, pale greenish gray and peels off in flakes. An intolerant, drought resistant tree that grows on a variety of very hard sites, usually below 1700 m in elevation. It will not tolerate waterlogging and requires precipitation between 200 to 800 mm/yr. It prefers an arid to semi-arid, hot sub-tropical, maritime climate with a temperature range of -4 to 48°C. It can tolerate periods of drought up to 8 to 10 months. Mature trees are susceptible to termite attack during periods of stress. Relatively slow growing with a life span of 25 to 30 years. Yields of 1 to 4 m³/ha/yr at 25 years of age, depending on the site. Reproduced both from seed and by vegetative means. It can be</p>	

			<p>planted through seedlings pre-treated of seed with an over night soak in water will increase germination. The tree is adapted to a variety of arid sites and alils. Very aggressive and easily established. IOt coppices readily and under certail conditions, it become a serioys probles because it is difficult to eradicate. Have good for nitrogen fixer, erosion control on very harsh sites & very useful for farm forestry tree. The specific gravity of wood is heavy, strong with a calorific value of 3200 Kcal/kg, Colour of sapwood is yellowish, white and hreatwood is black. Grain is coarse textured. Flowers are fragrant, white to pale yellow growing in bunches and occur between August and December.</p> <p>Uses: Fodder, Fuel, gum (food, beverages), land stabilixation, nitrogen fixing, poles and agricultural implements.</p>	
--	--	--	---	--

17	Acacia seyal Del.	Australian acacia	Red kikar, Shittim	<p>Origin: Native to Africa.</p> <p>Suitability in Pakistan: It can be planted in Dera Ismail Khan and Bund Korai in NWFP. Also planted as a roadside trees extensively through the hottest areas of Pakistan.</p> <p>Description: A shrub or small tree up to 12 m tall. The crown is often flat and branching near the base. It is a deciduous tree with compound leaves. It has sharp thorns usually in pairs and straight. The bark is rough, cream to greenish yellow, or dark gray, reddish brown or black. An intolerant, drought resistant tree that grows on a variety of soils. It tolerates waterlogging and can even stand inundation for part of the year. It prefers a precipitation zone of 300 to 800 mm/yr on arid to semi-arid, hot, climate with a temperature range of 5 to 45 °C. It can tolerate long period of drought, 8 to 10 months and free from insect and disease problems. The tree is adapted to a variety of arid sites and soils. Very aggressive, easily established and can tolerate waterlogging and inundation. A good nitrogen fixer, very useful for erosion control on very harsh sites and very good farm forestry tree. Reproduced both from seed and by vegetative means. Pre-treatment of seed by nicking the seed coat, by an overnight soak in water in sulfuric acid will increase germination. The specific gravity of wood is heavy, dense & strong, Colour of sapwood is light cream to dark. Grain is close and rough. Flowers are yellow, fragrant, and appear between March</p>	
----	----------------------	----------------------	-----------------------	---	--

				and June. Uses: Fodder, Fuel, gum, land stabilisation, nitrogen fixing, poles and agricultural implements.	
18	Acacia tortilis (Forsk)	Turtle acacia, Umbrella Thorn	Waliati Kikar	<p>Origin: Native to Africa.</p> <p>Suitability in Pakistan: It can be planted in arid and semi-arid areas of Pakistan.</p> <p>Description: A fast growing small tree 4 to 15 m tall. The crown is often flat, and umbrella like supported by several stems. Foliage is feathery-like and the leaves are compound and are small 1.25 to 3.5 cm. An intolerant, drought resistant tree that grows on a variety of very hard, lowland sites that have good drainage. It favors alkali soils and will tolerate salinity. It requires a precipitation zone of 100 to 1000 mm/yr. It prefers an arid to sami-arid, hot, climate with a temperature range of 3 to 45 °c. It can tolerate periods of drought of 8 to 10 months and free from insect and disease problems. A fast growing tree. Yields of 2 to 4 m³/ha/yr, depdnding on the site have been recorded. It 12 years old plantation produced 54 tons of fuelwood from one ha. This tree is adapted to a a variety of arid sites and soils. It is best suited to well drained, alkali soils, but can create problems by sending roots into farmers fields. A very good nitrogen fixer, useful for erosion control on very harsh sites and very useful farm forestry tree. Reproduced both from seed and by vegetative means. Pre-treatment of seed by nicking the seed coat, by an overnight soak in water, or a soak in fulfuric acid will increase germination. The specific</p>	

				<p>gravity of wood is heavy, strong, dense and dry heartwood with a calorific value of 4400 Kcal/kg, Grain is coarse, spiral. Flowers are white and appear singly or in clusters in the Spring. The pods are twisted, yellowish brown and mature in early summer.</p> <p>Uses: Fodder, Fuel, gum (food, beverages), land stabilisation, nitrogen fixing, poles and agricultural implements.</p>	
19	Acer caesium Wall ex-Brandus	Maple	Trekhan	<p>Origin: Native to Pakistan, India and Nepal.</p> <p>Suitability in Pakistan: In Pakistan it is found in association with conifers at elevations between 200 to 3500 m. Specific locations are Chitral, Dir, Swat, Hazara, Murree Hills and Azad Kashmir.</p> <p>Description: A slow growing, deciduous tree 20 to 24 m tall. The crown is closed and oval shaped and stem diamters of 47 to 95 cm. Leaves are simple, alternate 3 to 5 lobed and 8 to 20 cm wide. A moderately shade tolerant tree that grows on a variety of well drained sites. It grow on fertile soils from clays to sands. It requires a precipitation zone of 750 to 1500 mm/yr. It prefers a humid cool, cold temperate climate with a temperature range of -20 to 35 °c. and an elevation range of 2000 to 3500 m. It is frost and hard. A leaf rust, tar-spot can cause severe premature defoliation. The tree is adapted to a variety of sites and soils. It is a valuable componenet of the coniferous forest sna dis being harvested without replacement. Initial growth is slow but increases with age to approdimatey 0.2 to 0.5 cm of diameter growth/yr. Reproduced both</p>	

				<p>from seed and vegetative means. The specific gravity of wood is dense, strong and tough with a calorific value of 0.63. Colour of sapwood & haartwood are creamy to pinkish white. Grain is straight, fine even textured. Flowers are small yellowish-green and appeared between March and May. The seeds are flattened, joined and each seed has a thin papery wing & matures between June and October.</p> <p>Uses: Furniture, bobbins, flooring, carving and ornamental.</p>	
20	Acer negundo L	Plains Maple	Acer		
21	Acer oblongum Wall	Himalaya n Maple, Acer	Panhgor, Kirmola	<p>Origin: Native to Pakistan, India, Nepal and South China.</p> <p>Suitability in Pakistan: It is found in a Sub-Himalayan tract, eastward from the Indus river. It is grown as an ornamental in the palins.</p> <p>Description: A slow growing, deciduous tree 12 to 15 m tall. The crown is closed, oval shaped and stem diamters of 4o to 50 cm. Leaves are simple, alternatte, oblong to lance shaped, to 18 cm long and 2 to 8 cm wide. A moderately shade tolerant tree that grows on a variety of well drained sites and porous soils. It requires a precipitation zone of 750 to 1500 mm/yr. It prefers a humid cool, to sub-tropical monsoon climate with a a temperature range of -3.5 to 40°C and an elevation range of 600 to 2000 m. It is frost hardy and no insect or disease problems. The tree is rare or hard to find in Pakistan. Because it can be used as a fodder tree and is good for shade and fuel and</p>	

				<p>have very food farm forestry. Initial growth is slow but increases with age. Average height growth for 4 years is 2m and a MAI of 2.25 m³/ha/yr. Reproduced both from seed and by vegetative means. The specific gravity of wood is dense, not strong of 0.70. Colour of sapwood is heartwood, white to grayish brown. Grain is straight interlocking, very fine textured. Flowers are small, yellowish-green and appeared between February and April. The seed are flattened, joined and each seed has a thin papery wing (double samara) and matured between May and November.</p> <p>Uses: Fodder, agricultural implements, fuel and ornamental.</p>	
22	Acer pentapomicum JL Stewart	Maple	Maple		
23	Achillea santolina L	Milfolii	Bu-mardiran Zawal		
24	Achras zapota L	Nest Berry	Checkoo		
25	Achyranthes aspera L.	The prickly chaff	Putkhanda		
26	Aconitum heterophyllum Wall	Pakistani ateas	Atis, patris		
27	Aconitum napellus L.	Monks hood	Mitha Zehr Bish		
28	Acontium	Wolfs	Mohri		

	violaceum stapf	bane			
29	Acorus calamus L.	Sweet flag	Bach, kull		
30	Adiantum capillus- veneris L.	The maidenha ir fern	Parsia-o- Shan		
31	Aegle marmelos (L) Correa	Wood apple	Bail, Katori	<p>Origin: Native to the Sub-Himalayan tract including Burma, Central and Southern India and Nepal.</p> <p>Suitibility in Pakistan: It can be planted in Pakistan.</p> <p>Description: A deciduous tree, 20-25' in height and 3 – 4' in girth. The leaves are compound are mostly trifoliate; with leaflets lance shaped, 7 to 8 cm long. It is a very intolerant tree that does not grow well in shade. It is cultivated on a large variety of sites, but does best on sandy loam soils. It is adopted to an elevation zone of 0 to 1200 mm with a precipitation range of 600 to 1000 mm/yr. It grows well within a temperature range of 9 to 40°C in dry, sub-tropical climate. Very aggressive tree that will grow wild. It coppices well. Growth is slow. It is reproduced easily both from seed and by vegetative means. The wood is light yellow or yellowish-grey, lustrous and strongly aromatic when first exposed (Specific gravity is 0.89; air-dry weight 57 lb. per c.ft). The timber is hard, strong and tough, but is not much used.</p>	

				<p>The wood is suitable for making charcoal for producer gas plants. The grain is closed, aromatic. The greenish flower-white fragrant flowers appear from May to July and the fruits ripen by December.</p> <p>Uses: Fodder, Food, small timbers, gummy mucous substance surrounding the seeds, serves as a good adhesive. Mixed with lime, it is utilized as cement and the mixtures sets firm rapidly. The stem yields a good gum.</p> <p>Medicinal value: The unripe or half-ripe fruit is regarded as astringent, digestive and stomachic. It is beneficial in cases of diarrhoea and dysentery. The ripe fruit is sweet, aromatic and cooling. It is generally used in the form of a sherbet, or marmalade.</p>	
32	Aerua tomentosa Forssk	Woody amaranth s	Boh		
33	Aesculus indica Colebr	Horse-chestnut	Bankhor	<p>Origin: Native.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description:A The wood is suitable for making charcoal for producer gas plants. The grain is closed, aromatic. The Fllowers appear from May to July and the fruits ripen by December.</p> <p>Uses: Fodder.</p>	

34	Agave americana L. HKF	Century plant	Bankevra/Kantal		
35	Agave sisalana perrine	Sisal hemp	Sisal hemp		
36	Ailanthus altissima (P.Mill Single)	Tree of Heaven	Bahishti Darkhat		
37	Albizzia julibrissin Durass	Silk tree	Gulabi Siris		
38	Albizzia lebbek Benth	Black Siris	Kala Siris	<p>Origin:Native to the Sub-Himalayan tract.</p> <p>Suitability in Pakistan: It grows in a narrow belt from Sialkot to Hazara, Bajaur, Buner and Malakand. It has been planted throughout the plains of Sindh and Punjab.</p> <p>Description: A fast growing deciduous tree 12 to 30 m tall. A moderately intolerant, tree that grows on a variety of moist sites. It favors well drained loamy soils, but will tolerate saline and sodic conditions (pH 8.7 to 9.4). It requires a summer precipitation zone of 400 to 1000 mm/yr. It prefers a sub-humid, cool, warm, sub-tropical and tropical climate with a temperature range of 4 to 40 °C and an elevation range of 0 to 1600 m. Several fungus diseases attack the leaves and pods of this tree. Indarbela quadrinotata, a bark beetle, is a serious threat to plantations and roadside plantings. Grazing can be a problem with this tree. Seedlings are susceptible to frost damage. Reproduced both</p>	

				<p>from seed and by vegetative means. Relatively fast growing. Yields of 5 m³/ha/yr, depending on the site, have been recorded over rotations of 10 to 15 years. The grain is figured, attractive, interlocked, texture medium to coarse. The color is sapwood is yellowish-white, heartwood is dark grayish-brown turning to rich dark brown on exposure. The specific gravity between 0.55 and 0.64, and a calorific value of 5100 kcal/kg. The wood is very strong, resilient. The flowers are yellow or greenish-white appear in April and May.</p> <p>Uses: Fodder, fuel, land stabilization, nitrogen fixing, poles agricultural implements, shade and apiculture.</p>	
39	Albizia procera Benth	White Siris	Sufaid Siris	<p>Origin: Native to Central and Southern India, Bangladesh and Burma.</p> <p>Suitability in Pakistan: In Pakistan it has been planted in the Punjab, Sindh and NWFP.</p> <p>Description: A fast growing deciduous tree 12 to 30 m tall. An intolerant tree that grows on a variety of moist sites. It does well in low lying, moist savannas and tolerates saline and sodic conditions. It requires a summer precipitation zone of 500 to 1000 mm/yr. It prefers a sub-humid, warm, sub-tropical climate with a temperature range of 1 to 45 °C and an elevation range of 0 to 1200 m. Grazing can be a problem with this tree. Seedlings are susceptible to frost damage. In Pakistan it has no known pests or diseases. Reproduced both from seed and by vegetative means. Yields of 10 m³/ha/yr, depending on the site, have been</p>	

				<p>recorded for rotations of 30 years. Growth in irrigated plantations has been excellent. The grain is figured, coarse. The color of sapwood is whitish, heartwood is brown with streaks of darker and lighter. The specific gravity of 0.69 and a calorific value of 4800 kcal/kg. The wood is very strong, resilient. The fragrant flowers are yellow or greenish-yellow appear in June and August.</p> <p>Uses: Fodder, fuel, land stabilization, nitrogen fixing, poles agricultural implements, shade furniture, tannin and apiculture.</p>	
40	Aleurites fordii Hemsi	Japanese Tung	Japanese tung		
41	Alhagi camelorum Fisch	Camel Thorn	Kandera Jawain		
42	Allium cepa L.	Onion	Piaz		
43	Allium sativum L	Garlic	Thoom/Lahsan		
44	Aloe vera L.	Indian Aloe	Kunwar-gandal		

45	Alstonia scholaris (L) RD Br.	Ditabark/ Devil tree	Shaitan tree	<p>Origin: Native to Sub-Continent.</p> <p>Suitability in Pakistan: In Pakistan it is planted extensively in the Punjab as an avenue tree in gardens. It is common in Lahore and Kharian Cantonment.</p> <p>Description: A large evergreen tree. An intolerant tree that does not do well in shade. It requires a precipitation zone of 600 to 1000 mm/yr. It prefers a semi-arid, hot sub-tropical climate with a temperature range of 4 to 42 °C at an elevation below 1000 m. It has no known insects or disease problems. Reproduced from seed. Growth is slow, with an annual diameter growth of 15 cm. The grain is close The color is grayish white, creamy. The wood is hard, brittle & heavy. Flowers are green to white.</p> <p>Uses: Ornamental tree.</p>	
46	Althaea rosea Cav.	Hollyhock /March Mallow	Gul-e-Khaira/Resha Khatmi		
47	Amaranthus vindis L	Amaranthus	Chalulais		
48	Amomum subulatum Roxb	Large cardamom	Barri Elaichi		
49	Amorpha fruitcosa L	The bastard indigo	Amorpha		

50	Anacardium occidentale L	Cashew nut	Kaju	<p>Origin: Native to tropical America, from Mexico & West Indies to Brazil and Peru and grown all over the tropics.</p> <p>Suitability in Pakistan: it grown along the coasts and in the interior dry and semi-arid parts of South India.</p> <p>Description: A medium size, spreading, evergreen and much branched tree growing to a height of up to 12 m and grown on wide range of climatic and soil conditions; altitudes from sea level to 1000 m, annual rainfall 500-3500 mm and hardy and drought resistant plant. Wood is dark grey to reddish brown and weighs about 450 kg/m³. Flowers occur in dry season. Natural regeneration occurs through seed, coppice and root suckers & often grown mixed with mango or along the boundary of mango gardens.</p> <p>Uses: Timber used furniture making, boat building, packing cases and in the production of charcoal. Bark used in tanning. Juice turns black on exposure to air and provides an indelible ink. Fruit fully ripe, may be eaten raw, or preserved as jam or sweetmeat. The juice is made into a beverage (Brazil cajuado) or fermented into a wine. Fruits or seeds of the cashew are consumed whole, roasted, shelled and salted, in Madeira wine, or mixed in chocolates. Shelling the roasted fruits yields the cashew nut of commerce. Seeds yield about 45% of pale yellow, bland, edible oil, resembling almond oil, used as a preservative and water-proofing agent in insulating varnishes, in manufacture of typewriter rolls, in</p>	
----	--------------------------	------------	------	--	--

				oil- and acid-proof cements and tiles, in brake-linings, as an excellent lubricant in magneto armatures in airplanes, and for termite proofing timbers. Medicinal value: Stem exude a clear gum, Cashew gum, pharmaceuticals and as substitute for gum arabic.	
51	Ananas comosus L	Pine apple	Ananas		
52	Andropogon ischaemum L	Songorica	Palwan		
53	Anethum graveolens L	Dill Seed	Soya, Sowa		
54	Angelica glauca edgew	Angelica	Choura		
55	Anogeissus Pendula	Doakara	Dokara	<p>Origin: Native to tropical Africa, Asia, Burma and Sub-Continent.</p> <p>Suitability in Pakistan: Cultivated as an ornamental tree in the gardens.</p> <p>Description: A small gregarious tree with a short crooked bole and slender drooping branches. It is rarely more than 20' high and 2 – 3' in girth. It is essentially a tree of hot, dry regions. The timber is not durable. In seasoning and working qualities, it resembles the other species described. It is an exceptionally strong wood and is the third toughest timber in the world. The wood is very heavy and pale greenish grey in color (specific gravity is 0.96; air dry weight 62 lb. per cft). Fuel (cal. Val of moisture and ash-free heartwood, 4839 cals). It is closely comparable</p>	

				to <i>A. latifolia</i> in structure, but with smaller more numerous pores. Flowers appear in August-September. Uses: Poles and rafters, making carts, tool handles, toys, fuel.	
56	<i>Annona squamosa</i> L	Custard apple	Sharifa/Seta phal		
57	<i>Alpuda mutica</i> L.	Apluda	Chhant		
58	<i>Arachis hypogaea</i> L	Ground/Pea-nut	Moong-Phali		
59	<i>Araucaria cunninghamii</i> Hawaii	Hoope Pine	Araucaria	<p>Origin: Native to South America. Introduced in the Sub-Continent.</p> <p>Suitability in Pakistan: Cultivated in Jinnah Garden Lahore and Parks. Also grows in coastal scrub extending 100 miles inland.</p> <p>Description: It is hardy, symmetrical and bears a strikingly characteristic elegant habit. The tree reaching 150 feet in height and 15 feet in girth, branches in whorls. It carries rather scanty leaves triangular in shape, very narrow and curved, crowded on the branchlets without stalks. Male catkins 2-3 inches long, .3 inch diameter. It has a conical crown which becomes flat-topped with age. Its timber is of great commercial importance, strong and durable. Bark is very dark-brown marked by transverse wrinkles or fissures having the appearance of horizontal bands like hoops.</p> <p>Uses: Timber of this species is useful for</p>	

				Cabinet work, joinery, general construction work and plywood manufacture. Also used as ornamental tree.	
60	Areca catechu L.	Betel-nut	Sopari		
61	Arisaema wallichianum Hook	Cobra plant	Sanp buti		
62	Aristida adscensionis L.	Six weeks triple awn	Lappa, Lamba		
63	Aristida cyanatha Neez ex-Steud	Wild grass	Ranjha		
64	Aristida funiculata Trin & Tupr	Wild grass	Lamb		
65	Aristolochia gigas Lindl	Pelican flower	Batakh-Phool		
66	Artemisia maritima L.	Santonica	Jhau		
67	Arundo donax L.	Reed grass	Narri		
68	Asparagus adscendens Roxb	Wild asparagus	Sugaid musli		
69	Asparagus recemosus Wild	Asparagus	Shatavari, Shakakul		
70	Atriplex	Orache,	Korake,		

	hortensis L	Mountain Spinach	Suraka		
71	Atropa acuminata Royle	Belladonna, deadly night shade	Bantamaku		
72	Artocarpus integrifolia (Heterophyllum)	Kathal	Jack fruit	<p>Origin: Native to Western Ghat, Sub-Continent, Bengal, Burma, Malaya and Brazil & other tropical countries.</p> <p>Suitability in Pakistan: Cultivated in Karachi University Campus.</p> <p>Description: A large evergreen tropical fruit tree with a dense crown reaching a height of 50 feet or more. It is grown plentifully throughout the warmer parts of the country. For successful cultivation it requires a moist tropical climate and deep rich soil. Propagated through seed. The wood is yellow when freshly cut, but gradually turns light brown on exposure. It is of medium weight (36 lb. per c.ft) fairly strong (75 – 80% of the strength of teak), durable and not attacked by fungi or white-ants. The calorific value of moisture-free heartwood is 5,369 cal. Or 9665 B. Th.U and its ash content is 2.4%. The wood is cheap & excellent quality.</p> <p>Uses: Timber, suitable for general carpentry work, plain furniture, brush backs, inlay work, musical instruments. Unripe jack fruit is also used as a vegetable or made into pickles, while the ripe one is eaten fresh or preserved in syrup.</p>	

73	Artocarpus Lakoocha	Dahawa/ Barhal	Dahawa	<p>Origin: Native to Sub-Himalayan Tract, (upto 4000'), Kumaon eastwards to Assam, Southwards to Burma & Andaman.</p> <p>Suitibility in Pakistan: Cultivated in the Punjab.</p> <p>Description: A large and deciduous tree with a clear straight stem, generally 20-30' high and up to 8' in girth. It occurs in the Sub-Himalayan Tract up to 4000 ft. The tree is also cultivated for its edible fruits. The wood is yellowish-brown when fresh, but turns dark-brown after exposure. It is heavier than other Artocarpus woods (40 lb. per c.ft). It is fairly strong, similar to teak in transverse strength and modulus of elasticity. It is straight or interlocked grained, very coarse and even-textured. It gets injured by severe frost in Lahore.</p> <p>Uses: Constructional work (Posts, beams, rafters and scantlings), medium weight furniture & for boat building. In Assam it is chewed as a substitute for betel-nuts.</p>	
74	Avena fatua L	Wild oats/Barley	Javi		
75	Averrhoa carambola L	Carambola	Kamraj	<p>Origin: Native to Ceylon, the Moluccas, Bengal & Sub-Continent. The tree is essentially tropical and prefers a warm moist climate.</p> <p>Suitibility in Pakistan: It can be planted in Pakistan</p> <p>Description: A small handsome evergreen</p>	

				<p>tree 15-30' high. Grow faster and in rich loam soil. The tree is essentially tropical and prefers a warm moist climate. The carambola tree is slow-growing, short-trunked with a much branched, bush rounded crown. Propagation is done by seed, but budding and grafting are also possible. The wood (weight 40 lb. per c.ft.) is white (turning reddish), close grained and moderately hard. Slices cut in cross-section have the form of a star. Flowers appear during June-September and fruits during September-October and December- January.</p> <p>Uses: Construction building, furniture, Fruits make into stews, curries, puddings & tarts. Acid fruits are used for cleaning metal surfaces, especially for removing rust stains. The slightly unripe fruits are made into jam, jellies, pickles and preserves. Flowers some time made in preserves. Carambola crush can be a refreshing drink.</p>	
76	Avicennia marina	The white mangrove	Timur		
77	Azadirachta indica A.Juss	Margosa tree Lilac	Nim	<p>Origin: Native to India, Pakistan, Nepal, Afghanistan, Burma, China and Sri Lanka.</p> <p>Suitability in Pakistan: It is found in Sindh, Southern Punjab, and lower Balochistan.</p> <p>Description: A medium to large, usually evergreen tree, 12 to 25 meter tall. A moderately intolerant tree that withstands some shade at an early age. It grows on soils which vary from rich loams to nutrient deficient sites which are not saline or waterlogged and where the water table is above 18 m. It requires</p>	

				<p>precipitation zone of 300 to 1150 mm/yr and prefers on arid, hot tropical and sub-tropical climate with a temperature range of 1 to 45 °C. It is frost hardy and grass competition will prevent its establishment. It coppice easily and has few insect and disease problems. Reproduced from seed and by vegetative means. Growth rate is high. On rotations of 8 years yield of 5 to 18 m³ have been recorded. Coppice stands seem to grow faster than seedling stands. The grain is even textured, interlocking, dull to somewhat lustrous. The color is sapwood is grayish white, heartwood is red fading to reddish brown with age, darkening on exposure. The specific gravity of 0.68 and calorific value of 4990 kcal/kg. The wood is heavy, hard and resilient. Flowers are small, white and with the fragrance of honey, appear between March and April.</p> <p>Uses: Furniture, fodder, wood carving, timber, agriculture implements and tannin. Oil (from the seed) is marketed as a pesticide, vermifuge and a contraceptive.</p> <p>Medicinal value: Leaves as a febrifuge extracts as a cure of typhoid.</p>	
78	Bambusa nana Roxb	Bamboo	Nari Bans		
79	Bambusa stricta Roxb	Bamboo	Bans		
80	Bambusa vulgaris Vittata	Golden bamboo	Sunehri Bans		

81	Barringtonia acutangula L	Kyeni	Samundar Phal	<p>Origin: Native to Tropical Africa, Formosa, Polynesia, Northern Australia, Bengal, Assam and Sub-Continent. Cultivated as ornamental tree in the gardens of plains.</p> <p>Suitibility in Pakistan: It can be planted in Pakistan</p> <p>Description: A genus of evergreen trees or shrubs, including some 45 species. The tree is common in Sub-Himalayan Tracts and prefer moist situations. The wood is pinkish to reddish grey, sometimes nearly white towards the outside of the log and heartwood is not distinct. The wood is soft moderately strong and fairly durable. It seasons well but is liable to warp. It is a light wood (specific gravity is 0.58; air-dry weight 37 lb. per c.ft), easy to saw and work by hand, machine and finishing to a dull smooth surface. The calorific value of moisture-free sapwood (ash, 2.95%) is 5078 cal. Flowers deep pink and bloom in June.</p> <p>Uses: Boat building and cabinet work. Its tender leaves are edible. The bark, root and seeds are reported to be employed as fish poisons.</p> <p>Medicinal value: The powdered seeds in doses of a few grains are given to children as an expectorant and emetic. The leaves and roots are bitter tonics.</p>	
82	Bassia longifolia	Madhuca longifolia	Mohwa	<p>Origin: Native to India, Western Ghat, Burma</p>	

			<p>& Sri Lanka.</p> <p>Suitability in Pakistan: It can be planted as an avenue tree in Pakistan.</p> <p>Description: A large evergreen tree with a dense spreading crown found in Sub-Continent. Bark is grey dark brown. Mahua is ordinarily drought and frost hardy, but suffers under severe conditions. It is a strong light demander. Natural reproduction takes place by seeds which germinate early in the rainy season soon after falling. Artificial propagation may be done by direct sowing or by transplanting nursery raised seedlings. Fresh seeds should be sown during July – August and covered with soil. Fruits ripen in May – June. The sapwood is reddish white to brownish white; heartwood light to dark red or reddish brown, dull. The wood is more or less straight or shallowly interlocked-grained, coarse, even textured, very strong, hard and heavy (specific gravity is 0.95 – 0.97; weight 61 – 62 lb/cu.ft). The calorific value of sapwood is 4890 – 4978 cal., 880 to 896 B.tu., heartwood is 5005 – 5224 cal, 9010 – 9404 B.t.u. It Flowers in dense clusters, pale yellow in colour.</p> <p>Uses: Wood is used for building purposes as beams, door, window frames and especially posts, carriages, furniture, turney, sports goods, musical instruments, oil and sugar presses, ship building, boats, bridges, well construction, agricultural implements, drums, carvings, railway sleepers, good fuelwood. It is valued for seeds which yield fatty oil, known in</p>	
--	--	--	---	--

				<p>commerce as Mahua Butter, Mowra Fat, Illeppe Butter or Bassia Fat. The corollas of mahua flowers, commonly called mahua flowers, are edible and form an article of diet in villages in several parts of India. Mahua timber is used for constructional purposes. Oil is used mainly in the manufacture of soaps. The oil is sometimes used as an adulterant for ghee, for this purpose it is clarified with buttermilk. Refined oil used in the manufacture of lubricating, greases and fatty alcohols. Mahua flowers are eaten raw or cooked; largely used in the preparation of distilled liquors, vinegar, feed for livestock. Mahua berries are eaten raw or cooked, eaten by cattle, sheep, goats, monkeys and parrots.</p> <p>Medicinal value: Mahua oil has emollient properties and is used in skin diseases, rheumatism and headache. It is laxative and considered useful in habitual constipation, piles and haemorrhoids; it is also used as an emetic. Flowers are used in cooling, tonic, bronchitis, coughs, colds & anti-bacterial activity.</p>	
83	Bauhinia candicans Benth	Bauhinia	Bauhinia		
84	Bauhinia Purpurea L	Purple bauhinia	Gulabi Kachnar	<p>Origin: Native to Pakistan. This tree is found in the Sub-Himalayan tracts.</p> <p>Suitability in Pakistan: It can be planted throughout the hills and plains.</p> <p>Description: An ornamental evergreen tree with pink flowers, bushy crown and short trunk. An intolerant tree of the tropics and sub-tropics within a precipitation range of 1000 to 2160 mm. It grows within a temperature range of -1</p>	

				<p>to 40°C. It is drought resistant and tolerate, light frost. It does best on well drained, sandy loam or loamy soils. There are minor problems with defoliating insects. It can be regenerated by seed or vegetative methods. Although a small tree it is relatively fast growing. The grains are straight. The color is light brown. The wood is soft and light with a specific gravity of 0.57. The wood is hard and strong. Flowers are pink, lilac to purple in color bloom between September and November.</p> <p>Uses: Erosion control, fodder, food (pickle and chutney), tannin, honey.</p> <p>Medicinal value: Antidote for snake bite.</p>	
85	Bauhinia retusa Roxb	Bauhinia	Papar		
86	Bauhinia Variegata L	Mountain ebony/Camel's foot tree	Kachnar	<p>Origin: Native to Pakistan. This tree is found in the Sub-Himalayan tracts.</p> <p>Suitability in Pakistan: It can be planted throughout the hills and plains.</p> <p>Description: Bauhinia is a small deciduous tree useful mainly for fodder and firewood. Grow on a variety of sandy, loamy and gravelly soils; requires 500 mm annual rainfall to do well. Drought hardy but somewhat frost-tender. It can be regenerated by seed or by vegetative methods. An intolerant tree of the most sub-tropical temperate regions. It has a precipitation range of 1000 to 2500 mm and a temperature range of -1 to 40°C. It will tolerate light frost. It does best on well drained, sandy loam or</p>	

				<p>loamy soils. There are problems with defoliating insects. Although a small tree it is relatively fast growing. Height growth of up to a meter a year and diameter of 15 Cm in 8 years have been observed. The grain is straight. The color is grayish brown. The wood is moderately hard. The wood is strong and resilient. Flowers are large, pink to white, fragrant and bloom between March and April.</p> <p>Uses: Implements, tool handles, fodder, food (pickle and chutney), tannin, honey and ornamental plantings.</p> <p>Medicinal value: Antidote for snake bite.</p>	
87	Benincasa hispida Thunb	Ash gourd, White gourd Melon	Petha Kadu		
88	Berberis baluchistanica Ahrendt	Barberry	Zaralg		
89	Bersera serrata	Gunj/ Najore	Gunj/ Najore	<p>Origin: Native to Mexico & Sub-Continent.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A medium sized deciduous tree with a spreading flat crown, bearing numerous reddish brown berries of the size of large peas. Wood is hard and grows well on rocky soil. Plants are raised from seed. Also propagated from cuttings. Fruit is drupe trigonous ripens in July – August. Flowers white appear in April – May.</p>	
90	Berberis	Barberry	Sumbal,		

	lyceum Royle		Kashmal, Zirishk		
91	Bergenia cilliata sternb	Bergenia	Zakhaam- hayat		
92	Beta vulgaris L	Sugar beet	Chukander		
93	Betula utilis D. Don	Birch	Bhoj/Birch		
94	Bischofia javanica Blume	Bishop Wood	Underikhni	<p>Origin: Native to India and east to South China.</p> <p>Suitibility in Pakistan: it is planted in the plains and in gardens as avenues exist in Islamabad.</p> <p>Description: A large, evergreen or deciduous tree 15 to 17 m tall, fast growing species with a diameter growth of 1.3 cm/yr and an stand moderate shade and mild frosts. Reproduced mainly from seed. The leaves are compound occurring. The bark is thick and dark grey. It is dioecious tree. It requires a precipitation zone of 700 to 1500 mm/yr or more in a hot tropical monsoon climate with a temperature range of - 5 to 40°C at an elevations up to 1200 m. It coppice well, hard as teak and is equal to it in shear strength. Wood is hard and strong. The grains are straight & interlocking. Color of sapwood is light green to reddish brown, heartwood is red to dark reddish brown or chocolate brown. The specific gravity of wood</p>	

				is 0.74 and a calorific value of 5300 kcal/kg. Flowers occur in March. Uses: Wood is of good quality and largely used for constructional purposes such as bridges, house posts, rafters, for making cheap pencils, fuel wood, furniture, sleepers, pilings and ornamental.	
95	Blumea balsemifera Linn.	Blumae	Kokronda		
96	Boenninghausenia albiflora Hook	Flea Killer	Pissu mar		
97	Boerhavia diffusa L	Hog-weed	Biskhapra/its elf		
98	Bombax ceiba L	Silk Cotton tree	Simal		
99	Broswellia papyrifera Del.(Hochst)	Gum resin	Loban		
100	Borassus flabellifer	Palmyra palm	Fan-palm	Origin: Native to tropical Africa Suitability in Pakistan: It can be planted in Pakistan. Description: A tall palm attains a height of 40 – 60 ft (sometimes over 100 ft) and a girth of 3 ½ - 7'. It bears a terminal crown of 30 – 40 large fan-like leaves, 3-5 in width. It is found in many of the comparatively dry parts of Sub-Continent, Burma and Ceylon and is common	

				<p>along the coastal areas. The fruit is large and fibrous. The plant develops from self-sown seed. The timber (average weight is 49-50 lb. per c.ft. Gamble 738) is able to bear a considerable amount of cross-strain and long pieces of varying width cut from the stem. Flowers dioecious, greenish appear in February to March.</p> <p>Uses: Stem of tree used in hut construction for rafters, pillars, posts, crude bridges. Leaves are extensively used for making fans, umbrellas, baskets, mats, thatching roofs. Brooms are made from their stiff veins. Tree yields a black gum. Fresh sap of these palms, called sweet toddy or nipa, contains about 12% of sucrose used as refreshing beverage.</p>	
101	Bougainvillea glabra Choisy	Glory of garden	Bouganvillia		
102	Brachiaria ramosa (L) Stapf.	Chama pothaval	Jhanda		
103	Brassica campestris L	Mustard/Indian Colza	Sarson		
104	Brassica juncea L Czern	Indian Mustard	Rai		
105	Brassica napus L	Turnip/Indian rape	Shalgham/Toria		
106	Brassica	Black	Kali sarsoon		

	nigra (L)	mustard			
107	Brassica oleracea var botrytis L	Cauliflower	Phool-Gobhi		
108	Brassica oleracea var Capitata L	Cabbage	Bhand Gobhi		
109	Broussonetia papyrifera L	Paper Mulberry	Jangli Toot	<p>Origin: Native to Japan, South East Asia and China.</p> <p>Suitability in Pakistan: In Pakistan it is successfully planted and established both in the plains and hills.</p> <p>Description: A medium, deciduous tree, 3 to 12 m tall. A tolerant tree that does very well in shade. It grows on a variety of well drained, rich soils, but not grow well on poor sites. It requires a precipitation zone of 700 to 2000 mm/yr or more. It prefers a sub-humid warm, sub-tropical monsoon climate with a temperature range of 0 to 40 °C on elevations up to 900 m. It coppices easily and aggressively occupies shady sites. It is relatively insect and disease free. Reproduced both from seed and by vegetative means. It grows very fast, 1 m a year in height growth is not uncommon. Diameter of 15 cm has been recorded in a 5 year period. The grain is straight. The color of sapwood is grayish white, heartwood is light brown. The calorific value is 5100 Kcal/kg. The wood is light and brittle. The reddish yellow male flowers and orange - red female flowers appear in March and August.</p> <p>Uses: Fodder, bark (for pulp, tapa cloth)</p>	

				erosion control, furniture, boxes and packing crates, sports equipment and veneer and plywood.	
110	Bryophyllum pinnatum Lam	Sprout leaf plant	Pather-Chat		
111	Buddleia asiatica Lour	Buddleia	Banna		
112	Bunium persicum Boiss	Black cumin/Car away	Kala Zira		
113	Butea Frondosa	Flame of Forest	Dhak	<p>Origin: Native to tropical areas of the sub-continent.</p> <p>Suitibility in Pakistan: Found in the plains and in the foothills of Jhelum valley and Sialkot Districts.</p> <p>Description: A small or medium sized deciduous tree and commonly found in areas below 1200 meters. The tree grows best on black loamy soils, but is well adapted to saline-alkali and waterlogged sites. It is frost hardy and has a temperature range of -4 to 49°C. It prefers moist sites with precipitation greater than 600 mm/yr. The wood is susceptible to boring insects. Reproduced from seed or by vegetative means. A moderately fast growing tree. Growth of 5 m in height and 20cm in diameter have been recorded for an 8 year period. The grain is soft and porous. The color is dirty white. The specific gravity of 0.54 with a calorific value of 4900 kcal/kg. The wood is soft and not durable. The flowers appear in March to April.</p>	

				Uses: Erosion control, gum from the bark, fodder, fuel, host for the lac insect, fiber and an ornamental tree. Medicinal value: Oil from seed as anathematic.	
114	Buxus wallichiana Baill	The Box wood tree	Shamshad		
115	Caesalpinia bonducella L	Fever Nut	Karbatm Katkanja		
116	Caesalpinia pulcherrima L	Peacock flower/Bird of Paradise	Chota Gul-Moher		
117	Cajanus cajan L	Pigeon pea	Arhar		
118	Calamus erectus Roxb.	Rattan cane	Rattan Cane		
119	Calendula officinalis Linn	Merri Gold	Ganda		
120	Calligonum polygonoides L.	Calligonum	Phog		
121	Callistemon viminalis/ lanceolatus (Sm) Sweet	Bottle Brush	Bottle Brush	Origin: Native to Australia. Suitability in Pakistan: It has been successfully planted on avenues and in gardens in Pakistan. Description: A small evergreen tree with dropping branches. A highly prized ornamental as it would grow where others do not. A very	

				<p>intolerant tree that will not grow well in shade. It is cultivated on a large variety of sites and can withstand periods of drought. It prefers a semi-humid warm hot, sub-tropical winter/monsoon climate. It can survive some frost but grows best below an elevation of 2200 m. Reproduced both from seed and by vegetative means. Diameter growth rate is slow, 0.4 cm/yr. The grain is spiral, very close grained, pores small, evenly distributed. The color is gray or red. The wood is heavy. The red flowers appear in May – June.</p> <p>Uses: Ornamental and honey production.</p>	
122	Calotropis procera R. Br.	Swallow wart Mudar	Aak		
123	Camellia thea Link	Tea	Chaey		
124	Canna indica L.	Indian Shot	Hakeek		
125	Cannabis sativa L	Hemp.	Bhang		
126	Capparis aphylla Roth	Leafless caper	Karir		
127	Capparis deciduas Forsk	Capper	Karir		
128	Capparis spinosa L	Thorny caper	Kaluari		
129	Capsicum frutescens L	Chilli	Lal Mirch, Shimal Mirch		

130	Caralluma tuberculata J Fac	Chonga	Chonga		
131	Cardiosperm um Halicacabum L	Baloon- vine	Hub-e-kulkul		
132	Carica papaya edward	Papaya, Papaw	Papita	<p>Origin: Native of tropical America.</p> <p>Suitability in Pakistan: Cultivated in Pakistan.</p> <p>Description: An herbaceous tree growing to a height of 10 – 25 ft. bearing a large crown. It is at present grown practically all over the tropical and sub-tropical countries of the world particularly in Sub-Continent, Ceylon, Hawaii, Philippines, South Africa and Australia. Papaya thrives best on well-drained fertile soils. It is generally propagated by seed. Vegetative propagation by cuttings and grafting. Flowers whitish, dioecious.</p> <p>Uses: Fruit mostly used in dessert. Unripe fruits are consumed as vegetable.</p> <p>Medicinal value: Every part of the tree is said to be of medicinal value. The ripe fruit is stomachic, digestive, carminative and diuretic. Syrups and wines made from it are said to be expectorant, sedative and tonic. Milky juice of the unripe fruits is anthelmintic, particularly effective in the expulsion of lumbrici. It is also used sometimes in cosmetic to remove freckles and other blemishes from the skin. Green fruit</p>	

				is mildly laxative and diuretic and possesses ecboic properties. Many of the medicinal properties attributed to different parts of papaya are ultimately traceable to enzyme papain distributed throughout the plant, but mostly concentrated in the latex of the fruit. Digests protein is used in medicinally to aid digestion. It finds application in food, brewing, tanning and wool industries.	
133	Cassia carymbosa			<p>Origin: Native to tropical South America.</p> <p>Suitability in Pakistan: It can be planted in Pakistan. Also cultivated in Lahore</p> <p>Description: A large shrubs. Flowers pale yellow.</p>	
134	Carissa carandas L.	Karaunda	Karanda		
135	Carthamus tinctorius L.	Safflower	Kusam, Kusumba		
136	Carum copticum Linn	Bishop Wood	Ajwain		
137	Caryophyllus aromaticus L	Clove	Long		
138	Caroyta Mitis	Fish tail palm/Rab ok	Fish tial palm	<p>Origin: Native to Indonesia, Surinam & Sub-Continent.</p> <p>Suitability in Pakistan: It can be planted in the plains and gardens.</p> <p>Description: An elegant palm, 12 – 40 ft. high and 4 – 7 inches diam, contains stinging</p>	

				<p>crystals from oxalic acid in the pulp and should be handled carefully; however, the seed kernels are edible. Propagated through seeds and division of clumps. A very nice indoor plant, it tolerates heavy shade and light frosts. It does well in indoors containers.</p> <p>Uses: Fiber obtained from the base of the leave is used for stuffing mattresses and used as tinder. Kernel of the fruit is edible after eliminating the fruit wall, which contains a poisonous principle; it is used as a masticatory with betel. The scanty but strong wood is used in Dutch. In West Indies for making spinning wheels and the pith is eaten by jungle tribes. Fresh juice of the fruit is irritating to the skin. An ornamental plant.</p>	
139	Casearia tomentosa Roxb	Modi	Chilla, Bheri	<p>Origin: Native to Sub Himalayan Tract</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A shrub or a small tree. The wood is hard. Seed many embedded in a red pulp consisting of agglomerated arils. Flowers appear in March - May.</p> <p>Uses: Wood for fuel, making combs & Tea boxes. Bark is used in tanning (tannin 11%) it imparts a dark color to leather.</p> <p>Medicinal value: Used as an adulterant for Kamila powder. It is bitter to taste and is applied externally in dropsy. Fruit is diuretic and used as fish poison.</p>	
140	Cassia	Sanna	Sanna Maki		

	angustifolia Vahi				
141	Cassia artemisioides DC	Yellow Cassia	Zard Phool		
142	Cassia fistula Linn	Golden Shower	Amaltas	<p>Origin: Native to Pakistan.</p> <p>Suitability in Pakistan: Commonly found east of the Indus in the plains and continuing north into the Himalayas to an elevation of approximately 1200 meters.</p> <p>Description: A medium sized deciduous to semi-evergreen tree. A moderately shade tolerant tree that will grow on many soils types including low nutrient and shallow soils. It is found in a sub-humid cool to sub-tropical humid warm tropical climate receiving annual precipitation between 500 to 3000 mm. Its temperature range is from -5 to 45 °C, even though both seedlings and trees are susceptible to some frost damage. Approximately yields of 10 to 12 m³/ha/yr have been recorded. It is easily reproduced from seed and by vegetative means. Average diameter growth is 0.5 cm/yr. The grain is straight with medium texture. The color is yellowish red to reddish brown. The density is 0.8 gm/cm³ air dry with a calorific value of 5164 kcal/kg. The wood is very strong, hard and resilient. Bright yellow flowers appear in April and May.</p> <p>Uses: Used as Fuel, ornamental, fine furniture, agricultural implements, tool handles, support posts, cart wheels, axles & tannin.</p>	

				Medicinal value : Seed pod pulp as a purgative.	
143	Cassia Glauca Lam	Cassia	Zard Phool		
	Cassia Nodasa	Cassia	Cassia	<p>Origin: Cultivated in Eastern Himalaya, Chittagong, Malayan, Penensula, Bomeo.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A deciduous tree. Planted as an ornamental tree. Flowers appear in May-June.</p>	
144	Cassia Occidentalis L	Coffee Sanna	Chasku		
145	Casuarina equisetifolia L	Beef wood tree	Casuarina		
146	Cedrela serrata Royle	The Hill Toon	Drawi		
147	Cedrela Toona Roxb.	Toon	Tun	<p>Origin: This tree is native to the lower Himalayas including Pakistan and Nepal.</p> <p>Suitability in Pakistan: It is found in the plains east of the Indus River. Has extensively been planted in Islamabad as avenue tree.</p> <p>Description: A medium sized, deciduous tree, 18 to 21 m tall. A moderate tolerant tree that can stand some shade at an early age; however it becomes more intolerant to shade with age. It grows on a variety of well drained soils, in valleys and ravines. It requires a precipitation zone of 1125 to 4000 mm/yr or more. It prefers a sub-humid sub=tropical</p>	

				<p>climate with a temperature range of -5 to 40 °C. It is not frost hardy as a seedling but older trees are quite frost hardy and it coppices easily. The shoot borer <i>Hypsipyla</i> can be a serious problem. Reproduced both from seed and by vegetative means. Seed has a low percent of viability and does not store well. The growth rates are high. Trees 14 m tall with a diameters of 20 cm are grown in 16 years. The grain is straight, somewhat uneven textured. The color of sapwood is pinkish to grayish white. Heartwood is light red aging to reddish brown. The specific gravity of 0.57 and calorific value of 5100 kcal/kg. The wood is light, moderately hard and resilient. Flowers are small, white appear in March to May.</p> <p>Uses: Furniture, Fodder, Ornamental, timber, shade and construction.</p> <p>Medicinal value: Bark for dysentery</p>	
148	<i>Cedrus deodara</i> G.Don	Cedar	Deodar		
149	<i>Celosa oristate</i> L	Cooks comb	Kukur Phul		
150	<i>Celtis australis</i> L / <i>eriocarpa</i>	Hack berry tree, Neetle Wood	Batkarar	<p>Origin: Native to Pakistan, India and Nepal.</p> <p>Suitability in Pakistan: In Pakistan it is common on both sides of the Indus. Natural and cultivated stands and individuals are not uncommon throughout central Pakistan. Very common in Islamabad as avenue tree and can be treated in Irrigated Plantations.</p>	

				<p>Description: A moderately fast growing, medium to large sized, deciduous tree. A moderately intolerant tree that will stand some shade. It grows on a variety of sites and soils including both dry rocky site to swamps. It is adapted to a precipitation zone of 750 to 1225 mm/yr. It has a temperature range of -20 to 40°C and is frost hardy. It prefers a sub-humid, cool to semi-arid, warm sub-tropical winter/monsoon climate, usually at the elevations of 400 to 1800 m. It appears to be disease and insect free. Reproduced from cuttings, coppice and seed. Seeds have high viability. Diameter growth of 0.6 cm/yr has been observed. The grain is straight and uneven textured. The color is yellowish white to pale yellow with dark irregular streaks. The specific gravity of 0.60 and the strength of wood is hard, strong and elastic. The small, pale yellow or greenish flowers may be perfect (both sexes) or imperfect (one sex) on the same tree. They occur on the new shoots before the new leaves appear. Flowers appear between February and May and its fruit matures between April and September.</p> <p>Uses: Making Tool handles, agriculture implements, fodder and food (fruit).</p>	
151	Cenchrus biflorus Roxb	Cenchrus grass	Bhurt		
152	Cenchrus ciliaris L	Foxtail/Blue Buffalo Grass	Anjan/Dhaman grass		
153	Cenchrus	Cenchrus	Bara		

	penisetiformis Hochst	grass	Dhaman, Sitti Grass		
154	Centaurea behen Lam.	White Behen Knapweed	Sufaid Bhaman		
155	Centaurea moschata L	The bride/sweet sultan	Metha Sultan Misala		
156	Centella asiatica L	Pennywort	Brahmiboti		
157	Ceratonia siliqua	Carob tree	Sada Sabaz		
158	Cenops tagal perr	Cenops	Kirriri		
159	Cestrum diurnum L	King of day	Din Ka Raja		
160	Cestrum nocturnum L	Queen of night	Rat Ki Rani		
161	Cheiranthus cheiri L	Wall flower	Cherri		
162	Chenopodium album L	White goosefoot	Bathoo		
163	Chrysanthemum indicum Linn	Chrysanthemum	Gul-e-Daoudi		
164	Chrysalidocarpus lutescens	Madagascar Palm	Areca Palm, Golden Cane palm	Origin: Native to Madagascar. Suitability in Pakistan: It can be planted in	

				<p>the gardens and plains.</p> <p>Description: A golden cane palm which can grow up to 20 ft (6 m) tall. It is very common in tropical landscapes around the world and is the most popular 'house plant' palm. It is very adaptable palm either indoors or out. Yellow flowers are borne in branches about 3 ft (1 m) long that emerge from the top of the stem.</p> <p>Uses: An ornamental tree.</p>	
165	Chrysopogon aucheri Boiss	Love thorn	Chorkanda		
166	Chrysopogon serrulatus Trin	Grass	Har, Saba Mogra		
167	Chukrasia tabularis Adr	Chittogon g wood	Lal devdari		
168	Chorisa insigni	Buda	Buda	<p>Origin: Native to Southern Brazil, Argentina.</p> <p>Suitibility in Pakistan: It can be planted in Pakistan</p> <p>Description: A deciduous tree, up to 60 feet tall (18m), 30 feet bottle shaped trunk, up to 6 feet in diameter (1.8 m); palmate leave. Propagation through seeds. White lily-like flowers in the fall and winter, up to 2.4 inches in dia or more. Pear shaped fruits containing a silky floss coming out of the seeds.</p>	
169	Cicer arietinum L	Gram	Chana		

170	Cichorium intybus L	Chocory	Kasni		
171	Cinnamomum camphora Grat	Camphor tree	Kafoor	<p>Origin: Native to Japan, China, Formosa & Sub-Continent.</p> <p>Suitibility in Pakistan: Cultivated in Hazara Distt, Abbottabad, Lahore & Karachi gardens and all part of other countries with an annual rainfall of 40.</p> <p>Description: A large handsome evergreen tree either as an ornamental or as a source of camphor. Fruit is ripen in October. In its natural habitat it attains a height of 100 ft. and girth of 6 – 8 ft. Camphor is formed in the oil cells distributed in all parts of the tree. It thrives best at elevations of 4500 – 6000 ft. provided the temperature does not fall below 15°F. For successful cultivation its needed fertile, well drained, full sun or light shade & sandy loam sites. Camphor plants can be raised from seed, layers, branch cuttings, root cuttings and root suckers. Propagation by seed is the normal practice. Its wood is yellowish brown in color with a strong persistent camphoraceous odour. It is moderately hard. It is too expensive for use as timber.</p> <p>Uses: Timber, wood chips and camphor used in the preparation of the expensive perfumes, sassafras and heliotropine. Volatile oil is distilled from leaves and suitable for soap making.</p>	

				<p>Medicinal value: All parts of the tree contain camphor (used in medicines), which is obtained by distillation of wood. It is weak antiseptic. In small doses respiration is stimulated, the effect being most marked when respiration is depressed by ether, morphine or similar drugs. Camphor is esteemed as an analeptic in various cardiac depressions and has been used in the treatment of myocardities. It has a calmative influence in hysteria and nervousness and is used in the treatment of serious diarrhoea. The dosage is 2 – 5 grains. Camphor is extensively employed in external applications as a counter-irritant in the treatment of muscular strains, rheumatic conditions and inflammations.</p>	
172	Cinnamomum tamala Ham.	Bay leaf	Taiz paat		
173	Cinnamomum tamala Ham.	Cinnamon	Dal Chini		
174	Citrullus colocynthis L	Bitter apple	Tumba, Hantal		
175	Citrullus fistulosus Stocks	Citrullus	Tenda		
176	Citrullus vulgaris Linn	Water-melon	Tarbooz		
177	Citrus aurantifolia Swingle	Sour lime	Kaghzi nimbo		
178	Citrus	Orange	Narangi		

	arantium L				
179	Citrus grandis L	Pummelo	Chakotra		
180	Citrus limetta Risso	Sweet lime	Meetha		
181	Citrus limon Bois	Citron	Galgai		
182	Citrus medica Linn	Lime	Khata		
183	Citrus paradisi Macfad	Grap fruit	Chakotra		
184	Citrus reticulata L	Orange	Sangtra/Kinn o		
185	Citrus sinensis L	Swee Orange	Malta		
186	Clematis montana Freda	Clematis	Her, Dharar Buti		
187	Clerodendron inermis L Gaerten	Hedge plant	Karo		
188	Clitoria ternate L	Butterfly pea	Nilibel/Gokran		
189	Cocos nucifera L	Coco-nut	Narial		
190	Coffea	Coffee	Coffee		

	arabica L	Sanna			
191	Colchicum luteum Baker	Golden cyllarium	Suranjan-e-talkh		
192	Colocasia esculenta L Schott	Coco Yam	Kachaloo		
193	Colocasis indica Lour Kunth	Arum	Arbi		
194	Commiphora mukul (Hook ex Stocks)	Guggul Gum, Bdellium	Gugal		
195	Conium maculatum L.	Poison hemiock	Zahar-e-Suqrat		
196	Conocarpus lanceolatus Wild	Ethiopian teak	Cono		
197	Coryolvlus arvensis L.	Deers foot, Bind weed	Karari, Hiran Khuri		
198	Coptis teeta Wall.	Coptis	Mohmera		
199	Corchorus depressus Linn.	Mountain Jute	Pahari-Patson		
200	Cordia Myxa L	Sepistan	Lasuri	Origin: Native to Sub-Continent. Suitability in Pakistan: In Pakistan it occurs in sub-Himalayan tract from Rawalpindi	

				<p>eastward. It is also found in the salt Range.</p> <p>Description: A medium sized deciduous tree. An intolerant tree that does not do well in shade. It grows on a variety of soils where moisture is available, in micro sites like nullas, gullies, pockets on hills where moisture will accumulate, near waterways, and in depressions. It requires a precipitation zone of 300 to 600 mm/yr or more. It prefers a dry sub-tropical to a dry temperate climate with a temperature range of 2 to 42 °C at elevations up to 1500 m. It is frost and drought hardy. It has no known insects or disease problems of significant importance. Reproduced from seed. It is a very fast growing tree. The grain is variable, texture is fine to medium. The color is grayish brown, reddish brown on exposure, luster variable. The calorific value of 4900 kcal/kg. The wood is hard, moderately strong. The white, yellowish brown flowers appear in March to April.</p> <p>Uses: Fuel, fruit, implements and erosion control.</p> <p>Medicinal value: Fruit for cough diseases of the chest.</p>	
201	Cordia obliqua Wild	Sepistan	Bara Lasurra	As per above	
202	Coriandrum satigum L	Coriander	Dhania		
203	Coriaria nepalensis Wall	Blue berries	Balel		

204	Contoneaster bacillaris Wall	Cotoneaster	Luni		
205	Crataegus oxyacantha L.	Crataegus	Gawalbudia		
206	Crocus sativus L.	Meadow crocus	Zafran/ Saffron		
207	Crotalaria burhia Buch	Crotalaria	Khipp		
208	Crotalaria juncea L	Sunn hemp	San		
209	Croton tiglium L	Jaipal	Jafal		
210	Cryptostegia grandiflora Roxb.	Madagascar climber	Vilaiti vascundi		
211	Cucumis flexuosus L	Cucumis	Tarbooz		
212	Cucumis melo L	Melon	Kharbooza		
213	Cucumis momordica Roxb.	Wild/snap melon	Phut		
214	Cucumis prophetarum L	Wuld cucumber	Chihbar		
215	Cucumis sativus L.	Cucumber	Khera		

216	Cucumis utilissima L	Cylindrica I ground	Kakrri		
217	Cucurbita maxima Duch.	Pumpkin, Gourd, Winter squash	Halva Kadu/Peetha		
218	Cucurbita moschata Duch.	Sweet gourd	Halva Kadu		
219	Cuminum cyminum L	White cumin	Sufaid Zera		
220	Cupressus arizonia bull	Cupressu s	Saru		
221	Cupaniopsis anacardiode s	Sapindac ea	Jahanvi	<p>Origin: Native to Australia, usually in the warmer parts of the world.</p> <p>Suitability in Pakistan: Cultivated in Lahore.</p> <p>Description: A medium size tree. The tree is planted as an ornamental tree in garden. Flowers appear in April-May.</p>	
222	Cupressus semperviren s L.	Graveyar d or pyramidal cypress	Saru		
223	Cupressus torulosa D Don.	Himalaya n cypress	Devidiar, Deodar		
224	Curcuma angustifolia Roxb.	Mango Ginger	Amba Haldi		
225	Curcuma domestica L.	Tumeric	Haldi		

226	Cuscuta reflexa Roxb.	Dodder	Akasbel		
227	Cymopsis tetragonoloba L	Cluster bean	Guwara		
228	Cycas revoluta	Sago palm, Cycos	Kangi Palm	<p>Origin: Native to Japan and China. Cultivated in the Sub-Continent.</p> <p>Suitability in Pakistan: Commonly grown in gardens in the plains.</p> <p>Description: A small evergreen trees with the appearance of palms. Trunk 6 feet high. Living fossils.</p> <p>Medicinal value: The plant is said to be tonic, it promotes expectoration.</p>	
229	Cydonia vulgaris pers	Quince	Behi-dana		
230	Cymbopogon citratus D.C.	Lemmon Grass	Lemon Grass		
231	Cymbopogon commutatus steud	Grass	Sarggarh		
232	Cymbopogon distans (Nees) JF Watson	Bru-Grass	Bru-Grass		
233	Cymbopogon jawarancusa L	Common scented grass	Khavi, Kathori		
234	Cymbopogon martinii	Palmarosa, Rusa	Rosha, Rauns		

	(Roxb) JF Watson	grass			
235	Cynodon dactylon (L) Pers	Lawn- grass/ Bermuda grass	Khabal/Chab er		
236	Cyperus rotundus L	Cyperus grass, Nutgram	Cyprus		
237	Dactylocteni um aegyptium L Wild	Egyptian Finger grass	Madhana		
238	Dahlia pinnata Cay	Garden dahlia	Dhalia		
239	Dalbergia latifolia Roxb.	Blackwoo d shisham	Kala Shisham	<p>Origin: Native to the Sub-Continent along sub-Himalayan tract.</p> <p>Suitability in Pakistan: It is successfully planted in many areas of Pakistan, India and other parts of the world. It is common along rivers banks and streams.</p> <p>Description: A medium size to large, deciduous tree. It is one of the most important trees in Asia. It occurs in dry sub-tropical, dry temperate climate and does best on well drained sandy to sandy loam soils but will tolerate saline soils. It has an elevation range of 900 to 1500 m if precipitation is between 300 to 2000 mm. It is frost hardy and has a temperature range of 0 to 50 °C. A very intolerant tree, susceptible to root diseases in irrigated plantations and attacks by a number of leaf fungi. Young trees are heavily grazed and browsed. Reproduced both from seed or by</p>	

				<p>vegetative means. In Irrigated Plantations growth of 11m in height and 20 cm in diameter have been recorded during a 15 year period. MAI of 7.7. m³/ha/yr is achieved over a 20 year rotation. The grain is interlocked with a medium to coarse texture. The color of sapwood white to pale brown. Heartwood is golden brown to dark brown. The wood is heavy with a specific gravity of 0.85 and calorific value of 5000 kcal/kg. The wood is hard, strong and resilient. Flowers occur in groups and are small, dull white to yellowish white to pinkish, appears in March - May.</p> <p>Uses: Fodder, furniture, fuel and charcoal, railway carriages, sporting goods, farm implements and shade.</p> <p>Medicinal value: Roots and bark have some medicinal.</p>	
240	Dalbergia sissoo Roxb	Sissoo/Ro sewood	Shisham, Talhi	As per above.	
241	Daphne oleoides Schreb	Daphne	Ratilal		
242	Datura alba Nees	Thorne apple	Dhatura		
243	Datura metel Auct.	Thorne apple	Dhatura		
244	Daucus carota L	Carrot	Gager		
245	Debregeasia hypoleuca	Debregeasia	Sindwar		

	Hochst.				
247					
250	Delphinium ajacis L	Larkspur	Delphinium		
251	Dendrochlamus strictus Roxb	Male Bamboo	Bans		
252	Desmostachya biinnata L	Dog-grass	Dub grass		
253	Delonix regia	Gul Mohar, Gold Mohar	Gul Mohar, Gold Mohar	<p>Origin: Native to Malagasy and has been planted in Asia and Africa.</p> <p>Suitability in Pakistan: It is commonly planted as ornamental tree in Karachi, Hyderabad and Lahore.</p> <p>Description: A small to medium sized fast growing tree that attains height of 12 to 15 m with diameters of 30 to 35 cm. It is an intolerant, but is sensitive to frost especially when young. Reproduced from seed. The tree grows on almost any well drained soil. The seeds are large, yellowish and mottled. The grain is straight. The color is whitish gray. The wood is durable. Flowers are 10 cm across, bright scarlet appear in May and June.</p> <p>Uses: Ornamental and Shade tree.</p>	
254	Dianthus caryophyllus L	Pink flower, carnation	Gul-e-Mushtari		
255	Dichanthium	Marvel	Palwan		

	annulatum Forsk	grass			
256	Dichanthium foveolatum Delile	Grass	Ghandal		
	Dioscorea deltoidea Wall	Wild yam	Knis		
257	Diospyros embroyopteri s	Gaub	Gab	<p>Origin: Native to Sub-Continent.</p> <p>Suitability in Pakistan: It can be planted in gardens in the plains.</p> <p>Description: A moderate size evergreen tree with short, straight often fluted trunk and spreading branches in shady wet places and near streams. The tree is a shade bearer. For artificial reproduction, fresh seeds are sown in nursery beds, 4 inches apart, in lines 9 inches apart. The beds are shaded and watered in dry weather. Seedlings appear in 2-3 weeks and transplanting is carried out during rainy season. Seedlings are sensitive to frost and drought. Dry situations exposed to the sun should be avoided and care should be taken while transplanting to see that the long taproot is not injured. The wood of Gab persimmon is greyish in color, close-grained, moderately hard and heavy (weight 48 – 49 lb/cu.ft). It is sometimes employed for building construction and in boat making. Gives a dense shade but grows rather slowly. Flowers appear in May June.</p> <p>Uses: Building construction, boat making, Pulped fruit is used as a preservative for fishing nets and as glue for book binding; boiled with</p>	

				<p>or without powdered charcoal, caulking seams or paving bottoms of boats. The leaves are used for wrapping bidis.</p> <p>Medicinal value: An infusion of the fruit is used as gargle in aphthae and sore throat. The juice forms a useful application for wounds and ulcers. The bark and oil extracted from the seeds is used for dysentery and diarrhea. The ether extract of the fruits possesses anti-bacterial activity against <i>Escherichia coli</i>.</p>	
258	<i>Diospyros kaki</i> Thunb.	Indian persimmon tree	Amlok, Japani Amlok		
259	<i>Diospyros lotus</i> L.	Persimmon	Jangli Amlok		
260	<i>Diospyros melanoxylon</i> Roxb.	Indian Cigar	Beri Pata		
261	<i>Dodonaea viscosa</i> L.	Hopseed bush/ <i>Dodonaea</i>	Sanatha		
262	<i>Dolichos lablab</i> Lablab niger	Country bean	Sem-phali		
263	<i>Echinochloa colona</i> L.	Jungli rice	Sawank/Sanwak		
264	<i>Eclipta prostrata</i> L.	Eclipta	Bhangra		
265	<i>Ehretia serrata</i>	Brown Ceder	Puna		

	Roxb.				
266	<i>Ehretia acuminata</i> R. Br.	Bual petthin	Puna		
267	<i>Ehretia aspera</i> Wild	Adak, Addula	Sakar		
268	<i>Ehretia laevis</i> Roxb.	Koda, Chamror	Sakar, Chamror		
269	<i>Elaeagnus hortensis/angustifolia</i> L.	Russian Olive	Roosi-Zaitoon		
270	<i>Elettaria cardamomum</i> L.	Cardamom	Choti-Elaichi		
271	<i>Eleusine flagellifera</i> Nees	Goose grass	Chhimbar		
272	<i>Ephedra intermedia</i> Schrenk	Ephedra	Asmania		
273	<i>Ephedra nebrodensis</i> Tineo	Ephedra	Naree oman		
274	<i>Eragrostis cordifolia</i> L	Japanese love grass	Pachhar-Gah		
275	<i>Eragrostis oliosa</i> L.	Love grass	Chota Sanwak		
276	<i>Eragrostis tenella</i> L.	Godder grass	Bhar Bhuri		

277	Eriobotrys Japonica Lindl	Loquat	Lokat		
278	Eriophorum comosum Wall	Wriphorum	Gorbaggarr		
279	Eruca sativa Mill	Bitter Mustard	Tara mera		
280	Erythrina suberosa Roxb/blackei Hort	Coral tree/ Coral Flower	Gule-e-Nishtar, Dauldhak	<p>Origin: Native to Sub-Continent.</p> <p>Suitability in Pakistan: In Pakistan it is distributed in the Punjab west of the Ravi River.</p> <p>Description: A medium size tree, 12 to 15 m in height. This intolerant tree grows on sandy loams soils in a moist sub-tropical climate where precipitation exceeds 800 mm/yr at an elevation up to 800 m. It has a temperature range of 2 to 40 °C. Reproduced from seed or by vegetative means. A fast growing tree that attains diameters of one m in 40 years. Because of its fast growth and nitrogen fixing properties it would be considered a good farm forestry tree. It is highly regarded as a landscape improvement tree. The grain of wood is smooth, straight, soft and durable, but fibrous and tough. The color is light. The wood is light and has a calorific value of 4800 Kcal/kg. The flowers appear in February, are deep red.</p> <p>Uses: Fuel, Nitrogen fixing, ornamental.</p> <p>Medicinal value: Bark as a febrifuge.</p>	
281					

282	Eucalyptus camaldulensi s Dehnh	Red-gum	Sufaida	<p>Origin: Native to Australia. Widely planted in arid areas throughout the world.</p> <p>Suitability in Pakistan: It is successfully planted throughout the plains and in the hills.</p> <p>Description: A large evergreen tree up to 40 meter tall. A very intolerant tree that grows on a variety of soil. It does well pm saline, sodic and waterlogged sites. It is adapted to precipitation zone of 200 to 1250 mm/yr or more. It prefers a semi-arid, warm hot, sub-tropical winter/monsoon rain climate with a temperature range of -5 to 40 °C at elevations up to 1400 m. It coppices well and can be grown in mixed stands. It is frost hardy and can tolerate hot droughty conditions if irrigated or if there is a shallow water table. Young tree may be attacked by termites, but with age it is pest free. Reproduced both from seed and by vegetative means. It grows very fast. Height growth rates of 0.3 m/month for young stands have been reported. MAI of 10 to 25 m³/ha/yr is not uncommon. It is an excellent farm forestry tree ideally suited for planting on saline, sodic and waterlogged farm sites. The grain is twisted and interlocked, medium coarse, uneven texture. The color of sapwood is light gray, heartwood is reddish brown. The specific gravity of 0.71 and a calorific value of 4900 kcal/kg. The wood is hard, elastic and resilient. The flowers bloom usually between May and June.</p> <p>Uses: Fuel, carriages, charcoal, furniture,</p>	
-----	---------------------------------------	---------	---------	--	--

				leaves oil used as repellent, shelterbelt, apiculture, pulp and fiber board.	
283	Eucalyptus citriodora Hook	Lemon scented gum	Lachi	<p>Origin: Native to Australia. It is widely planted in arid areas throughout the world.</p> <p>Suitability in Pakistan: It is successfully planted throughout the plains and in the hills.</p> <p>Description: A large evergreen tree up to 40 meter tall. A very intolerant tree that grows on a variety of soil including poor gravelly soils as long as they are well drained. It is adapted to precipitation zone of 600 to 900 mm/yr or more, but can tolerate a dry seasons of 5 to 6 months. It prefers a semi-arid, warm hot, sub-tropical winter/monsoon, climate with a temperature range of -5 to 40 °C at elevations up to 2000 m. It can withstand a light frost, it coppices easily and can be grown in mixed stands. Young tree may be attacked by termites, but with age it is pest free. Reproduced both from seed and by vegetative means. It grows very fast. Height growth rates of 0.3 m/month for young stands have been reported. MAI of 10 to 15 m³/ha/yr on an 8 year rotation has also been recorded. It is an excellent farm forestry tree. The grain is twisted and interlocked, medium coarse, uneven texture. The color of sapwood is light gray, heartwood is reddish brown. The specific gravity of 0.78 and a calorific value of 4800 kcal/kg. The wood is hard, elastic and resilient. The flowers usually bloom between February and March.</p> <p>Uses: Fuel, Charcoal, Furniture, perfume (leaves), shelterbelt, apiculture, pulp, fiber</p>	

				board and tool handles.	
284	Eucalyptus tereticornis Sm.	Red gum	Lachi	As per above	
285	Eucalyptus torelliana F. Muell	Red-gum	Lachi	As per above	
286	Eugenia jambolana Lam	Black berry	Jaman		
287	Eulaliopsis binata Retz.	Grass	Bhabbar		
288	Euonymus japonicus Thunb	Sindle shrub	Tuli		
289	Euphorbia hirta L.	Spurge, Euphorbia	Dodhak		
290	Euphorbia cotinifolia	Carribea n copper plant	Red Jahuri	<p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: This is a woody plant with red wine colored leaves and not a succulent as most euphorbs. An ornamental tree.</p>	
291	Euphorbia ryleana Boiss	Triangular Spurge	Danda-thor		
292	Fagonia bruguieri	Fagonia	Damahan		
293	Fagonia critica Deepa	Prickly clover	Dammasa		
294	Fagopyrum esculentum	Buck wheat	Baru		

	L.				
295	Ferula foetida Bunge	Asafoetida	Hing		
296	Ficus carica L.	Fig.	Injeer		
297	Ficus bengalensis Linn	Banyan	Bargard tree	<p>Origin: Native to Sub-Himalayan region and Sub-Continent.</p> <p>Suitability in Pakistan: Cultivated in gardens and roadsides for shade.</p> <p>Description: A very large tree with spreading branches attaining a height of 100 feet, aerial roots many, some developing into accessory trunks. It develops from seeds dropped by birds on old walls or on other trees. Easily propagated from cuttings. It is hardy and drought-resistant, it withstands mild frost. The wood (weight 36 lb/cu. feet) is grey or grayish white and moderately hard. It is not considered to be of much value as timber. Flowers appear in February-March.</p> <p>Uses: Wood of aerial roots is stronger and more elastic and used for tent, poles, cart yokes, banghy poles, carrying shafts. Also durable under water and used for well curbs</p> <p>Medicinal value: Various parts of the plant are considered medicinal. The milky juice is externally applied for pains and bruises and as an anodyne in rheumatism and lumbago. It is also used as a remedy for toothache. Leaves are heated and applied as poultice to abscesses. Bark is astringent and used in</p>	

				dysentery, diarrhoea and diabetes. An infusion of the young buds is useful in diarrhoea and dysentery. Seeds are considered cooling and tonic. Young tips of hanging roots are given for obstinate vomiting.	
298	Ficus elastica Roxb.	Indian Rubber	Rubber tree	<p>Origin: Native to Sub-Himalayas, Nepal Eastwards to Assam, Khasi hills and Burma ascending to 3,000 ft, sometimes to 5,000 ft.</p> <p>Suitability in Pakistan: Cultivated as an ornamental tree in the Plains.</p> <p>Description: A large handsome evergreen tree with a dense crown of dark green foliage and spreading branches, attaining height up to 120 feet when full grown; aerial roots numerous. Tree known as a shade tree. Propagated either by seeds or by cuttings and layers. Propagation by transplanting nursery raised, seedlings are preferred as plants so grown are found to be more hardy and to produce aerial roots prolifically. Bark is grayish or reddish brown, fairly smooth. Fruits are greenish yellow to red when ripe. The tree is the most important indigenous rubber tree of India. Its plantations were established on a fairly large scale in Assam. The wood (weight 43 lb./cu.ft) is white or light brown in color. Flowers bloom in April-May.</p> <p>Uses: Stem, aerial roots of large size and main branches are used as a tapped for latex. Shade, rubber, fuel.</p>	
299	Ficus bglomerata Roxb.	Indian rubber	Gular		

300	Ficus infectoria/ lacor auct.	Fig.	Palakan/Plak	<p>Origin: Native to South Asia, Polynesia & Sub-Continent.</p> <p>Suitability in Pakistan: It can be planted in plains and lower hills.</p> <p>Description: A large spreading tree. An excellent evergreen shade tree. It is commonly planted as an avenue and ornamental tree. It is a good shade tree for coffee, the fallen leaves supplying heavy mulch. The tree is one of the recorded hosts of the Indian lac insect. The bark yields a fiber. Young shoots are eaten in curries. The wood (weight 35 lb/cu.ft) is grey and moderately hard. Flowers all the year round.</p> <p>Uses: Wood and bark is suitable for paper pulp, charcoal. Leaves of the tree are used as fodder for cattle and elephants. The fruit is edible.</p> <p>Medicinal value: A decoction of the bark is used as a gargle and as a wash for ulcers.</p>	
301	Ficus Thaii				
302	Ficus Hawaii				
303	Ficus palmata Forssk	Indian Rubber	Phagwara		
304	Ficus religiosa L.	Peepal	Peepal	<p>Origin: Native to Sub-Himalayas.</p> <p>Suitability in Pakistan: It can be planted throughout the plains.</p> <p>Description: A large deciduous tree that is leafless for a short period during hot seasons. A very intolerant tree that is cultivated on a</p>	

				<p>large variety of sites, but does best on sandy clay soils. It is adapted to an elevation zone of 0 to 1200 m with a precipitation range of 800 to 1000 mm/yr. It grows well within a temperature range of 0 to 40 °C in a semi-arid, warm, sub-tropical climate. Reproduced both from seed and by vegetative means. It coppices well. Seeds are very small and are sometimes spread in bird droppings. The growth rate of this tree is fast. Height growth of 1 m/yr has been reported. The tree has value as an avenue tree and is planted along water courses. The grain is spiral. The color is whitish gray. The wood is soft. Flowers appear in April and May.</p> <p>Uses: Ornamental, fodder, food (figs), small timber.</p> <p>Medicinal value: Have a medicinal value. Spiritual tree for Buddhists.</p>	
305	Firmiana platanifolia	Choclote tree	Choclote tree	<p>Origin: Native to China, Japan and Formosa.</p> <p>Suitability in Pakistan: It can be planted in the plains.</p> <p>Description: A Moderate size deciduous tree with rounded crown. The leaves are large and give an appearance of maple leaves. Grows very fast and if good soil and watering is provided, attains a height of 2 feet in one year. Frequently planted as shade tree. White flowers appear in May and June.</p>	
306	Flacourtia indica Burm.F. Merr	Flacourtia	Kakoh		

307	Foeniculum vulgare P. Mill	Fennel	Sounf		
308	Fragaria vesca L.	Strawberry	Strawberry		
309	Fragaria vesca L.	Strawberry	Strewberry		
310	Fraxinus exccelsior L	Ash	Sum		
311	Fraxinus xanthoxyloides (G.Don) DC.	Ash	Hanuz	<p>Origin: Native to Sub-Himalayan and Sub-Continent.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A shrub or a small tree of the temperate at 3,000 – 9,000 feet. The wood of this plant is hard and close-grained. The bark is smooth, grey in young trees, becoming dark and deeply cracked in older trees. Flowers appear in April-May.</p> <p>Uses: Wood used for making agricultural implements, tool handles, walking sticks, fuel and fodder.</p>	
312	Fumaria parviflora Lam	Fumitory	Shahtra/Patp apra		
313	Geranium wallichianum D. Don.	Geranium	Ratanjot		

314	Gleditschia triacanthos L.	Honey locust	Dozakh	<p>Origin: Native to the United States of America, but has been successfully planted in Africa, Australia, New Zeland, South America, Pakistan and other countries of the world.</p> <p>Suitability in Pakistan: It is found as a roadside tree, in gardens and in the plains of Punjab and NWFP.</p> <p>Description: A large deciduous tree with a spreading crown. An intolerant, deep rooted tree that is adapted to semi-arid, warm to hot sub-tropical climates that are characterized by winter monsoons. Under cultivation the tree can survive on varied sites including both alkaline and acid soils. It grows best on deep alluvial soils of limestone origin and in precipitation regimes of 500 to 1500 mm/yr. It is frost hardy and occurs in a temperature range of -2 to 35°C. Reproduced both from seed and vegetative means. MAI in the central plains of the United States is recorded as 4.6 m³/yr over a period of 18 to 35 years. Height growth is approximately 0.5 m/yr. The grain is course, color is dark. The wood is strong. Flowers are greenish; appear in May and June.</p> <p>Uses: Posts and supports, furniture, shade, apiculture and fodder (pods contains 29% sugar).</p>	
315	Glycyrrhiza glabra linn.	Licorice Liquorice	Mulathi		

316	Gmelina arborea Roxb	Gray teak	Gumnar, Yemane	<p>Origin: Native to the moist forests of India, southeast Asia and Southern China.</p> <p>Suitability in Pakistan: In Pakistan there may be a natural stands in Mirpur and Azad Kashmir. It has been successfully cultivated in the plains and in irrigated plantations. It appears to be well established in parts of Sindh.</p> <p>Description: A medium to large size deciduous tree. It reaches to a height of 20 to 30 m with average diameters of 60 cm. Large trees may have clear boles of 6 to 9 m. In its natural range of distribution it grows satisfactorily on sites having a rainfall from 750 mm to 4500 mm (Troup 1921).Some provenances can tolerate drought up to 6-7 months. In its natural habitat the maximum shade temperature varies from 38 – 48° C. High temperatures up to 52°C are reported to have been tolerated by the species but it is severely injured by frost in altitudes above 1000 m. The reddish brown or yellow flowers are borne when the trees are leafless. Flowers appear in February to April, and its fruit matures between May and June. It can be reproduced both from seed and vegetatively. Seeds lose their viability after a year of storage. A relative fast growing tree with reported volume yields 25 to 35m³/ha/yr on rotations of 5 to 8 years. The grain is straight, interlocked, medium coarse textured. The colour is light yellow to brown. The specific gravity is 0.48 and calorific value 4763 Kcal/Kg and the wood</p>	
-----	----------------------------	-----------	-------------------	---	--

				<p>is hard, strong and elastic.</p> <p>Uses: The wood is straw-colored and used in furniture, cabinet work, paneling, carts, boxes, boat building, agricultural implements, turnery, toys, artificial limbs, guns, rifles, musical instruments, construction, particle board, match sticks, pulp, pit props, fodder, cordage, apiculture and fruit. Also suitable for high class plywood.</p> <p>Medicinal value: Fruits, flowers, leaves, root and bark used in native medicine for treatment of cough, headache, stomachache, laxative, nerve tonic and blood diseases.</p>	
317	Gossypium herbaceum L.	Cotton	Kappas		
318	Grevillea robusta Cunn.	Silver Oak	Reshmi Oak	<p>Origin: Native to Australia and is successfully cultivated in many parts of the world.</p> <p>Suitability in Pakistan: It can be planted along roads, gardens, hills and plains.</p> <p>Description: A medium to large, deciduous fast growing tree 12 to 20 meter tall. An intolerant tree that grows on a variety of sites including acidic soils. It will not do well on wet or waterlogged sites. It is adapted to a precipitation of 600 to 1500 mm/yr in a temperature range of -10 to 40 °C. It can withstand drought period of 2 to 6 months and is moderately frost hardy. It prefers a warm temperate to sub-tropical temperate climate within an elevation range of 0 to 2300 m. No disease or pest problems have been observed</p>	

				<p>in Pakistan. Reproduced from seed. MAI of 15.5 m³/ha/yr has been reported in plantations on a 14 year rotation. The grain is fine. The color of sapwood is grayish white and heartwood bright reddish brown. The specific gravity is 0.57. The wood is moderately hard, heavy and strong. Flowers very showy yellow to orange, bloom in February to April.</p> <p>Uses: Fuel, wood products, furniture, apiculture and ornamental.</p>	
319	<i>Grewia asiatica</i> L.	Phalse	Phalsa		
320	<i>Grewia laevigata</i> Vahl.	Bhil, Chikken	Kaori		
321	<i>Grewia optiva</i>	Grewia	Dhaman, Bhimal		
322	<i>Grewia populifolia</i> Vahl.	Grewia	Gunger/Mewa		
323	<i>Gymnosporia Montana</i> Roth	Celastrus	Bailkal (hindi)		
324	<i>Gymnosporia royleana</i> Wall	Gymnosporia	Pataki/Kanda		
325	<i>Haloxylon recurvum</i> Bunge Ex-Boiss	Barilla	Khar		

326	Hamalya Patens	Scarlet ear-rings	Surkh Bunday	<p>Origin: Native to Tropical America.</p> <p>Suitability in Pakistan: It is commonly grown in gardens.</p> <p>Description: A large evergreen shrub. Leaves in whorls of 3-4, 2-6 by 1.5-2.5 inches elliptic-oblong or oblong-ovovate, shortly acuminate, base narrowed puberulous on both sides especially on the nerves, lateral nerves 6-8 pairs, arcuate, prominent beneath; petioles. 5-1 inch long-stipules subulata. Flowers nearly 1 inch long, scarlet, in terminal pedunculate panicles, consisting of a whorl of 3-4 branches. Calyx tube campanulate, puberulous; teeth erect. Stamens 5, inserted below the middle of the corolla tube anthers linear, very long, reaching almost to the top of the corolla tube. Ovary 5 celled. Flowering almost all the year round. An ornamental plant</p>	
327	Hamiltonia suaveolens Roxb	Bain Champa	Gusan		
328	Hedra helix L.	The Ivy	Ban Batori		
329	Helianthus annus L.	Sunflower	Suraj-mukhi		
330	Helicteres isora Linn.	East Indian Screw tree	Maror-Phali		

331	Heliotropium europaeum L.	Turnsole	Gidar- tambacoo		
332	Heterophrag ma adenophyllu m Seem	Heterophr agma	Beri-Patta	<p>Origin: Native to the eastern Himalayas through Burma to the northern parts of Malya.</p> <p>Suitability in Pakistan: It is planted as an ornamental tree in Pakistan.</p> <p>Description: A moderate size deciduous tree. An in-tolerant tree that requires full sunlight to develop to a mature tree. It grows well in moist situations on deep soils that are well drained. It requires a precipitation zone of at least 800 mm/yr. It prefers a sub-humid, tropical climate with a temperature range of 0 to 40 °C. It has known insect or pest problems. Reproduced from seed. The seed is viable only when fresh. It grows approximately 1 m in height every 2 years. Because of its large flowers it has some value as a landscape/ ornamental tree. The grain is straight and very fine even textured. The color of sapwood is light yellow and the heartwood is orange yellow with occasional dark streaks. The calorific value of 4800 kcal/kg. The wood is hard, strong resilient. Flowers are large, brownish yellow appear in November.</p> <p>Uses: Furniture, Fuel and as an Ornamental tree.</p>	
333	Heterophrag ma contortus L	Spear grass	Sarwala		

334	Hibiscus cannabinus Linn	Hemp	San-kukra		
335	Hibiscus esculentus Linn	Lady finger	Bhindi		
336	Hibiscus mutabilis L.	Cotton-Rose	Gul-e-Ajalib		
337	Hibiscus rosa sinensis L.	Shoe flower	China rose	<p>Origin: Native to China & Sub-Continent.</p> <p>Suitability in Pakistan: It can be planted in Pakistan in the Gardens.</p> <p>Description: An evergreen woody, glabrous, showy shrub 5 – 8 ft. high. It is grown as an ornamental plant in gardens throughout Sub-Continent and often planted as a hedge or fence plant. It can be planted with advantage in group planting of shrubs for beautifying parks and grassy plots. The plant thrives in any type of soil, but good results are obtained in well prepared, manured and irrigated soils. Propagated by cuttings, preferably from mature wood of current growth. It blossoms almost throughout the year. Flowers are normally red, but there are many varieties varying from crimson to pale-salmon, either single or double appear in April-September.</p> <p>Uses: Flowers are reported to be eaten, raw or pickled in China and Philippines. Crushed flowers yield a dark-purplish dye which was formerly employed for blackening shoes. In China and other countries the dye is used for coloring hair, eyebrows, foods and liquors.</p>	

				Medicinal value: Flowers are considered demulcent, emollient, refrigerant, aphrodisiac and emmenagogue. They are made into a paste and applied to swellings and boils. A decoction of the flowers is given in bronchial catarrh. They are fried in ghee and given in menorrhagia. The leaves are emollient, aperients, anodyne and laxative. A decoction of the leaves is used as a lotion in fevers. The root is used in indigenous medicines.	
338	Hibiscus syriacus L.	Rose of Sharon	Hibiscus		
339	Hibiscus vitifolius L.	Yellow flower	Bankapani		
340	Hippophae rhamnoides L.	Sea Buckthorn	Sea Buckthorn		
341	Hiptage madabiota Gaertn	Hiptage	Kampti		
342	Holarrhena antidysenterica Wall	Dysentery rosebary	Inderjau kura		
343	Hordeum vulgare L	Barley	Joe		
344	Hyoscyamus niger L.	Henbane	Ajwain-ekhurasani		
345	Hypericum chinese L.	Hypericum	Mehnid		
346	Iberis amara L.	Candyruft	Chandni		

347	<i>Imperata cylindrica</i> L.	Sword/Blady Grass	Siru/Ulu		
348	<i>Indigofera oblongifolia</i> Forssk	Nilam	Kainthi		
349	<i>Indigofera tinctoria</i> L.	Dyer's indigo	Hubb-e-Neil Kunth		
350	<i>Ipomoea batatas</i> L.	Sweet Potato	Shaker Kandi		
351	<i>Ipomoea crassicaulis</i> Benth	Ipomoea	Wilaiti Ak		
352	<i>Ipomoea palmata</i> Forssk	Railway creeper	Ishiq-e-Pecha		
353	<i>Iris florentina</i> Linn	Tulip/ Iris	Gul-e-Soson.		
354	<i>Iris Germanica</i> L.	German Iris/Tulip	Gul-e-laila		
355	<i>Iris sisyrinchium</i> L.	Tulip/ Iris	Tulip		
356	<i>Isailema laxum</i> Hack	Masei	Chhat		
357	<i>Jacaranda mimosaefolia</i> D. Don	Jacaranda	Nila Gul-Mohar		

358	Jacaranda ovalifolia	Jacaranda	Gul-e-Neelam	<p>Origin: Native to central and South America.</p> <p>Suitability in Pakistan: Planted as an ornamental in Pakistan.</p> <p>Description: A small sized deciduous tree, evergreen at lower elevations. An intolerant tree that requires full sunlight, that requires well drained soils and precipitation zone of at least 800 mm/yr. It prefers a sub-humid, tropical climate with a temperature range of 5 to 40°C but is frost hardy. It is susceptible to mealy bug infestations. It grows approximately 1m in height every year. Reproduced from seed. The grain is twisted. The colour is creamish. The calorific value of 4700 Kcal/kg. The wood is hard and resilient.</p> <p>Uses: Fuel and ornamental</p>	
359	Jasminum grandiflorum L	Jasmine	Chambeli		
360	Jasminum humile L.	Jasmine	Pili chambeli		
361	Jasminum officinale Linn.	Jasmine	Motia/Champ a		
362	Jasminum sambao Linn.	Jasmine	Gule Yasmin		

363	Jatropha curcas L.	Fiddle leaved	Jamal ghoti	<p>Origin: Native to Mexico & Central America & introduced to Africa, Asia (India) now cultivated in World Wide.India,.</p> <p>Suitability in Pakistan: In Pakistan it can be planted in the gardens, Parks along streets in the cities & plains.</p> <p>Description: Jatropha curcas is a small tree or shrub with smooth gray bark, which exudes whitish colored, watery, latex when cut. The trees are deciduous, shedding the leaves in the dry season. It grows between three and five meters in height, but can attain a height of up to eight or ten meters under favourable conditions. Annual rainfall of 300-1000 mm. It occurs mainly at lower altitudes (0-500 m) in areas with average annual temperatures well above 20°C but can grow at higher altitudes and tolerates slight frost. It grows on well-drained soils with good aeration and is well adapted to marginal soils with low nutrient content. It is a drought-resistant perennial, growing well in marginal/poor soil and can easily grow relatively quickly and lives, producing seeds for 50 years during December to March. It is a wonder plant produces seeds with an oil content of 37%. The oil can be combusted as fuel without being refined. It burns with clear smoke-free flame, tested successfully as fuel for simple diesel engine. Jatropha is also suitable for preventing soil erosion and shifting of sand dunes. It can thrive on the poorest stony soil. The by-products are press cake a good organic fertilizer, oil contains. The large green to pale-green leaves, alternate to sub-opposite, three-to five-lobed with a spiral phyllotaxis. Fruits produced in winter season when the shrub is leafless, or it may produce several crops during the year if soil moisture is good and temperatures are sufficiently high. Seed become mature when the capsule changes from green to yellow, after two to four months. Flowering appears during the wet season and two flowering peaks are often seen throughout the year. The flowers are pollinated by insects especially honey bees. The seeds mature about three months after flowering. Early growth is fast and with good rainfall conditions nursery plants may bear fruits after the first rainy season, direct sown plants after the second rainy season. Altitude: 0-500 m, Mean annual temperature: 20-28 deg. C, Mean annual rainfall: 300-1000 mm or more. Medicinal: It used in the diseases like cancer, piles, snakebite, paralysis, dropsy etc.</p>	<p>Treee</p>  <p>Leave</p>  <p>Flower</p>  <p>Seed</p> 
-----	--------------------	---------------	-------------	---	--

364	Juglans regia L.	Walnut	Akhrot	<p>Origin: Native to India, Pakistan, Nepal, Afghanistan, upper Burma, China and Japan. It is cultivated in many parts of the world because of its nuts.</p> <p>Suitability in Pakistan: In Pakistan it is found in Northern Areas, Dir, Swat, Hazara, Murree Hills and Azad Kashmir. It is also planted in gardens and along streets in cities.</p> <p>Description: A large deciduous tree 15- 30 meter tall. A moderately tolerant tree that grows on deep, rich, moist soils, but prefers moist, shady sites. Its precipitation zone is 750 to 1500 mm/yr or more in a humid, cool, temperate climate with a temperature range of -10 to 35 °C at elevations between 1000 and 3300 m. It coppices at an early age. The tree is attacked by various fruit and wood borers and is susceptible to leafy mistletoe. Diameters of 1 m in 60 years have been recorded. Generally reproduced from seed. The grain is straight and very fine even-textured. The color of sapwood is grayish white, heartwood is grayish brown with darker streaks. The color is quite variable. The specific gravity of 0.61. The wood is heavy, hard & resilient. Flowers appear between February and April.</p> <p>Uses: Fruit, gun stocks, furniture, fodder, wood carving and burls.</p> <p>Medicinal value: Bark as an anthelmintic, leaves as an astringent, fruit to cure rheumatism.</p>	
365	Juniperus communis L.	Common Juniper	Bhentri		
366	Juniperus excelsa L.	Pencil cedar	Ubusht, sanober		
367	Justica vasica L.	Malabar nut tree	Bhalkar/Barg-e-bansa		

368	Kigelia pinnata L.	Sausage tree/Kigelia	Gul-e-Fanoos	<p>Origin: Indigenous to tropical Africa, Kenya & Nigeria.</p> <p>Suitability in Pakistan: Cultivated in Jhelum District and Lahore.</p> <p>Description: A savannah tree with a rounded crown and low-hanging branches. The bark is grey, smooth, flaking in thin round patches in old trees. A medium sized spreading tree of rapid growth, with short trunk and long distorted branches, cultivated in many parts of India as an ornamental and roadside tree. The plant thrives in deep open soils in cool situations, particularly on the margins of tanks, but becomes stunted where the subsoil is hard or infertile. It is easily propagated by seeds during rains. Vegetative propagation by cuttings has been attempted, cuttings treated with an aqueous solution (20 P.P.m) of B-indolyl acetic acid for 12 hours take root readily. Planting in pits, 40 – 50 ft. apart has been suggested. Heavy pruning is necessary to keep the tree straight. The wood is soft. (wt. 44 lb/cu.ft) hard, whitish or yellow & good quality. Flowers appear in May-August.</p> <p>Uses: The wood is used for planning, making boxes & drought canoes in Africa, but long pieces are difficult to obtain. Roasted seed of the plant are reported to be eaten in times of scarcity. The dry fruit may be used for the preparation of active carbon.</p> <p>Medicinal value: The fruit is used in Africa as dressing for ulcers and for syphilis and rheumatism; it has purgative properties. The bark is used in rheumatism, dysentery and venereal diseases.</p>	
369	Kochia indica Wight	Kochia	Bull		
370	Kochia	Burning	Kochia		

	scoperia L.	bush			
371	Koeireuteria paniculata Laxm	Golden rain tree	Sunehru Burkha		
372	Kydia calycina Roxb.	Kubinde	Pullian		
373	Lablap purpureptus sweet	Country bean	Sem phalli		
374	Lectuna sative	Lettuce	Salad		
375	Lagenaria siceraria	Bottle gourd	Kadu/Louki		
376	Lagerstroemi a alba	Crape myrtle	Savni, Gul-e- Dasta		
377	Lagerstroemi a flos-regina	Crape myrtle	Jharul		
378	Lagerstroemi a indica L.	Magic tree/Chin a crape	Gul-e-Dasta	<p>Origin: Native to China. Commonly cultivated in the Sub-Continent.</p> <p>Suitability in Pakistan: Cultivated as an ornamental tree in Rawalpindi area and Gardens.</p> <p>Description: A handsome deciduous shrub or a small tree. The wood (weight 42 lb/cu.ft) is white or brownish and hard. An ornamental tree. Its beautiful flowers appear in May-August.</p> <p>Uses: Charcoal made from it used for thickening lacquer in Japan. The Atlas silk-worm moth feeds on the plant.</p>	

				Medicinal value: Bark is considered stimulant and febrifuge. Bark, leaves and flowers are said to be used in Indo-China as purgative and hydragogue. The roots are astringent and used as gargle. The seeds contain a narcotic principle.	
379	Lagerstroemia tomentosa	Lagerstroemia	Lagerstroemia	Origin: Distributed chiefly from South East Asia to Australia Suitability in Pakistan: It can be planted in the plains. Description: A deciduous tree or shrub. Seeds winged at the top. 3 species are cultivated in Pakistan. Propagated by suckers or cuttings. Flowering in May and August. The flowers are bright pink, dark crimson, bluish, purplish and white. An ornamental tree.	
380	Lallemania royleana Benth	Black beylus	Tukhm malanga		
381	Lantana indica/cameria Roxb.	Lantana	Panch-Phool		
382	Lasiurus scindicus Hem	Grass	Gorkah		
383	Lathyrus odoratus L.	Sweet pea	Phool matter		
384	Lavatera cashmarica camb.	Lavatera	Resh Khatmi		
385	Lawsonia inermis L.	Henna Samphire	Mehndi		
386	Lens culinaris Medik	Lentil	Dal-Masoor		

387	Lepidium sativum L.	Garden cress	Hallon		
388	Leucaena leucocephala Lam	Subabul	Iple Iple	<p>Origin: Native to Mexico. It has been successfully planted throughout tropical parts of the world.</p> <p>Suitability in Pakistan: In Pakistan it is cultivated in the plains and foothill areas.</p> <p>Description: A fast growing, evergreen shrub or small tree 5 to 20 meter tall and highly productive. This aggressive, tolerant tree grows on a variety of sites. It is quite adaptable, growing on steep hill sides with shallow soils and marginal mountains gravelly and sandy soils. It will also grow on saline and acid soils (pH. 6.5 and above) It requires a summer precipitation zone of 500 to 1000 mm/yr. It prefers a moist tropical climate with a temperature range of 2 to 45 °C at elevation up to 500 m. Grazing can be a problem. Seedlings tolerant light frost. No known pests or diseases have been reported in Pakistan. However a defoliator, psylid spp. is creating serious problems with Leucaena in other parts of the world. Reproduced both from seed and by vegetative means. It is fast growing and highly productive. Yields of 30 m³/ha/yr have been recorded for rotations of 10 years. Growth in irrigated plantations has been excellent. The grain is straight with medium fine texture. The color of sapwood is whitish, heartwood is yellow-brown. The specific gravity is 0.56 and a calorific value is 4600 kcal/kg. The wood is strong, resilient. Flowers are small, white, look like “powderpuffs” and occur between June and November.</p> <p>Uses: Fodder, fuel, nitrogen fixing, poles & construction, agricultural implements, apiculture, furniture and soil stabilization.</p>	
389	Ligustrum iucidum WT	Glossory privet	Legustrum		

390	Lilium bulbiferum L	Lily	Gul-e-Laila		

391	Limonia acidissima L.	Wood apple	Kathal bail	<p>Origin: Native to Sub-Continent, Ceylon & Deccan.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A small deciduous tree with short, erect, cylindrical stem 30-40 ft. high and 2 – 4 ft. in girth. It occurs wild or cultivated up to an elevation of 1500 feet in dry situations. Propagated by seeds or by cuttings and layering. The wood is yellowish grey to grayish white, hard and heavy (specific gravity is 0.83). Flowers green in loose clusters appear in April-May.</p> <p>Uses: Wood is used for house building, naves of wheels and oil crushers, pattern wood, for shoe lasts, pen holders, rulers and similar articles, agricultural implements and ornamental carving. The pulp of the ripe fruit is eaten as such or with sugar & making sherbet. Tree lopped for fodder. Trunk and branches of the trees exudes a gum resembling gum Arabic in properties.</p> <p>Medicinal value: Fruit is considered tonic, refreshing, cardiacal, astringent (when ripe), antiscorbutic and alexipharmic, bael in the treatment of diarrhea and dysentery. Pulp is used for affections of the gum and throat.</p>	
392	Linum usitatissimu m L.	Linseed	Alsi		

393	<i>Litsea sebifera</i> Pers	Meda, Mah	Maidasak		
394	<i>Livistonia chinensis</i> L.	Chinese Fan Palm	China Palm	<p>Origin: Native to China and Japan. Commonly cultivated in gardens in Sub-Continent.</p> <p>Suitability in Pakistan: It can be plants in the gardens in Pakistan.</p> <p>Description: A fairly tall palm 6 – 9 m. high. This palm is perhaps the commonest and the most ornamental fan palm grown in Sub-Continent gardens well throughout Sub-Continent. It can be easily propagated by seeds which are produced in great abundance. Fruit olive-shaped.</p> <p>Uses: Leaves of the palm are used for making fans, Fibrous sheets of leaf stalks are made into ropes.</p>	
395	<i>Lolium multiflorum</i> Lam.	Rye-grass	Rye		
396	<i>Lonicera Japonica</i> Thunb	Honey scuckle	Phatt		
397	<i>Lonicera quinquelocularis</i> Hardw	Honey scuckle	Phut		
398	<i>Loranthus longiflorus</i> Desr	Loranthus , Plavithil	Banda, Karukh		

399	Luffa acutangula (L) Roxb	Sponge gourd	Kali Tori		
400	Luffa acutangula (L)	Sponge gourd	Kali Tori		
401	Luffa cylindrica (L) Roem	Bath Sponge	Ghia-tori		
402	Lycopersicon esculentum L	Tomato	Tamater		
403	Machilus duthiei King	Wild	Jangli Butti		
404	Machilus odoratissima Ness	Machlus	Chan		
405	Maclura pomifera (Raf) Schneid	Maclura	Maclura		
406	Magnolia champaca L	Bull-bay	Champa	<p>Origin: Native to Northern America. Cultivated in the Sub-Continent gardens.</p> <p>Suitability in Pakistan: It can be planted in Lahore-Islamabad.</p> <p>Description: A handsome evergreen pyramidal tree up to 24 m high. It does well up to an altitude of 2100 m. Bark smooth grey, leaves large. Most parts of the plant contain volatile oils. It is the source of considerable lumber in America, known in the trade as</p>	

				<p>Magnolia. It is greenish grey in color and has the consistency of tulipifera. A prized tree in the country. White fragrant flowers appear in May.</p> <p>Uses: Wood is suitable for the production of unbleached pulps. Oil is suitable for use in soaps and lotions.</p> <p>Medicinal value: Bark of the tree is considered as stimulant, aromatic and tonic. It is reported to be used for treatment of malaria and rheumatism.</p>	
407	Magnolia grandiflora L	Bull-bay	Barra champa	As per above	
408	Mallotus phillippinensis Lam	Rottlera/ Monkey face tree	Kamila		
409	Maiva sylvestris L.	Cotton-like large mallow	Gul-e-Khairi		
410	Mangifera indica L.	Mango	Aam	<p>Origin: Native to Pakistan, India, Nepal and Bhutan. It is cultivated in many tropical parts of the world.</p> <p>Suitability in Pakistan: It is found in the river valleys of the Chenab and Ravi near Sialkot and throughout the irrigated areas of the Sindh.</p> <p>Description: A large evergreen tree 12-21 m tall. Moderately shade tolerant tree that grows on a variety of well drained sites. It is quite adaptable, but does best on deep loamy soils. It requires a precipitation zone of 750 to 1500 mm/yr. It prefers a humid hot, sub-tropical to tropical, monsoon climate with a temperature</p>	

				<p>range of -3.5 to 40 °C at elevations up to 600 m. It is frost sensitive when young. Felled logs are susceptible to wood borers. Reproduced both from seed and by vegetative means. Growth is slow. Average height growth for 7 years is 4 m. The grain is interlocked, sometimes straight. Texture is moderately fine to coarse. The color of sapwood and heartwood are not distinct, gray to grayish-brown, reddish brown on exposure, lustrous. The specific gravity of 0.55 and a calorific value of 4600 kcal/kg. The wood is strong and durable. The flowers are small, greenish-yellow appearing between February and April.</p> <p>Uses: Fruit, Lumber and construction, chipboard, ornamental and food (pickles).</p> <p>Medicinal value: Ripe fruit is a laxative, seeds are astringent and vermifuge.</p>	
411	Marsilea quadrifolia Linn	Marsillia	Chapati		
412	Martynia annua Linn	Tiger's nail	Hath jorri		
413	Medicago sativa L	Lucerne/A lfa	Lusan		
414	Melia azedarach L	Persian Lalic	Bakain	<p>Origin: Native to the lower Himalayas including, Pakistan and Nepal. It has been successfully planted in many other part of the world.</p> <p>Suitability in Pakistan: It is extensively planted in the plains of the Punjab and NWFP.</p> <p>Description: A medium to small size,</p>	

				<p>deciduous tree, 6 to 12 m tall. An intolerant tree that grows on a variety of well drained soils in valleys and ravines. It requires a precipitation zone of 600 to 1000 mm/yr or more. It prefers a tropical to sub-tropical temperate climate with a temperature range of -5 to 40 °C within an elevation range of 900 to 1700 m. It is not frost hardy as a seedling but older trees are drought resistant and frost hardy. It coppices easily and is relatively insect and disease free. Growth rate is high. Yields of 17.5m³/ha/yr have been recorded. Reproduced both from seed and by vegetative means. Germination is about 70%. The seed can be stored for approximately a year without loss of viability. This is a good tree for reforestation projects because of its fast growth. It is also used for roadside plantings and irrigated plantations. It is a good farm forestry tree. The grain is straight, uneven textured. The color of sapwood is yellowish white, heartwood is reddish brown. The specific gravity is 0.56 and a calorific value of 5100 Kcal/kg. The wood is light, moderately hard, resilient. Flowers are small, lilac colored and fragrant appears between March and May.</p> <p>Uses: Furniture, fodder, ornamental, timber, construction, agricultural implements, boxes and packing crates, sports equipments, veneer and plywood .</p> <p>Medicinal value: Flowers and leaves as poultice for headaches, juice of leaves as an anathematic and diuretic.</p>	
--	--	--	--	--	--

415	Melaleuca species	Mega big valley	Bottle Brush	<p>Origin: Native to Australia and also found in Burma, Combodia and Thailand</p> <p>Suitibility in Pakistan: Cultivated in Punjab (Botanical garden Govt. College University, Lahore).</p> <p>Description: Megalong Valley Bottlebrush is a shrub 2.5m tall. Megalong Valley bottle brush is likely to become endangered in New South Wales unless the circumstances and factors threatening its survival or evolutionary development cease to operate. It can be propagated from seed. Flowers appear in March – April.</p>	
416	Melilouts pariflora Desf.	Honey clover	Senji		
417	Mentha arvensis L.	Japanese mint	Japani podina		
418	Mentha sylvestric L	Corn mint, Pepermint	Jangli podina		
419	Michelia champaca L.	Champak	Champa phool		
420	Millettia ovalifolia Kurz	Rose wood	Waliati shisham	<p>Origin: Native to Burma, Sub- Continent and all warmer parts of the world.</p> <p>Suitibility in Pakistan: It can be cultivated in Gardens of Lahore and Karachi in Pakistan.</p>	

				<p>Description: Millettia Ovalifolia is a handsome tree grown in gardens for its elegant foliage and handsome racemes of lilac or mauva flowers. Leaflets 7 ovate-elliptic, 1-2 inches long. Flowers purple, in racemes 2-3 inches long, solitary or fascicled appearing with the young leaves. Pod 2-3 inches long, linear oblong, flat. Suffers somewhat from frost. Flowers appear in April.</p> <p>Uses: An ornamental tree.</p>	
421	Millingtonia hortensis L.	Cork tree	Aksanim		
422	Mimosa pudica L.	Touch-me-not	Choie moie		
423	Mimusops elengi L.	Cpanish cheery/Bullet wood	Maulsari	<p>Origin: Native to Deccan Peninsula and Andaman Islands.</p> <p>Suitability in Pakistan: It can be planted in Pakistan in the gardens.</p> <p>Description: A small to large evergreen tree. An ornamental tree. The tree is shade bearer and appears to reproduce well under shade. It is best propagated by sowing seeds singly in baskets and planting out seedlings in the field, usually after two years in the rainy season. The rate of growth is slow. The tree is susceptible to the attack of wound fungus. The sapwood is pale reddish to brownish white, sharply defined; heartwood deep red to dark reddish brown, often with darker lines, moderately ornamental, smooth, fairly straight to shallowly interlocked grained, even and fine textured, very hard, tough, strong and heavy (specific gravity is</p>	

				<p>0.80 – 1.02) weight 49 – 62 lb./Cu ft).</p> <p>Uses: Wood is used for building purposes, piles, bridges, boats, oars, masts, spars, agriculture implements, carts, rice pounders, crushers and oil mills, furniture, cabinet work, panels, marline spikes, belaying pins, tools, turnery, picture frames, musical instruments and walking sticks. Flowers are used as a cosmetic after bath, in perfumes and stimulant. Ripe fruits are edible; it is sometimes used for making preserves and pickles. Young twigs are used for cleaning teeth.</p> <p>Medicinal value: The bark and fruit are astringent and tonic; they are used in diarrhoea and dysentery; a decoction of the bark is used as gargle. A snuff made from dried flowers induces copious defluxion from the nose and relieves headache and pains. Pounded seeds are pasted with oil or ghee and used in suppositories in case of obstinate constipation, especially for children.</p>	
424	Mimusops hexandra Roxb.	Mimusops	Khirn/Kherol	<p>Origin: Native to Sub-Continent and Deccan Peninsula.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A small to medium sized evergreen tree with a spreading crown and massive bole. Common in the dry evergreen forests of Deccan. The tree is light demander and natural reproduction by seed does not ordinarily take place under a dense canopy. Artificially propagated by seeds during rains. It yields strong dense timber, heartwood red to</p>	

				<p>light purplish brown with darker lines, freshly straight to irregular or shallowly interlocked grained, even and fined textured, hard, tough, strong and heavy, specific gravity 1.09; weight 70 lb/cu.ft. The timber is very durable even in contact with water, resistant to termites and needs no antiseptic treatment. Flowers whitish appear in November – January and the fruits ripen from April – July. . Flowers are strung together to form necklaces.</p> <p>Uses: Sugar Mills, Oil presses, piles, posts, joists, beams in construction, agricultural implements & carts, rollers, railway keys and brake blocks, tool handles, turnery, furniture, panels walking sticks, bark yields gum & other articles.</p>	
425	Mirabilis jalopa L.	Four O Clock	Gul-e-abbasi		
426	Momordica balsamina L.	Wild gourd	Gangli Karela		
427	Momordica charantia L.	Bitter gourd	Karela		
428	Monothea buxifolia falc.	Monothea	Gurgora		
429	Moringa oleifera/ pterygosperma	Horse-radish-tree	Sohanjna	<p>Origin: Native to Sub-Himalayan Tract.</p> <p>Suitability in Pakistan: It is cultivated in the plains from Rawalpindi Eastward.</p> <p>Description: A large deciduous tree. A very intolerant tree that is cultivated on a large variety of sites, but does best on well drained</p>	

				<p>soils. It can withstand period of drought, grows on eroded sites, and coppices well. Reproduced both from seed and by vegetative means. Growth rate is moderate. The tree has value as an avenue tree or planted along water courses. It is a good fodder tree especially for camels. The grain is straight. The color is light. The strength of wood is soft, spongy and weak. Flowers developed between February and April.</p> <p>Uses: Ornamental, fodder, food (leaves, flowers and fruits), seed oil (lubrication and perfume) & gum (bark).</p>	
430	Morus alba	Mulberry	Shahtoot	<p>Origin: Native to Pakistan, China, Central Asia and Afghanistan.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A medium size, deciduous tree, 9 to 15 m tall. It is monecious. Reproduced both from seed and by vegetative means. A moderately intolerant tree that grows on a variety of well drained, rich soils. It requires a precipitation zone of 750 to 1250 mm/yr or more, and prefers a semi-arid, cool to cold temperature range of -10 to 40 °C at an elevation up to 3300 m. It coppices well, can be grown in mixed stands, frost hardy, can tolerate hot drought conditions if not irrigated. It has numerous insects and pest enemies including porcupines, defoliators, powdery mildew, root rots and die back. It grows very fast and MAI of 5 to 8.5 m³/ha/yr is not uncommon. Diameters of 60 cm are recorded for 15 year old trees. The grain is straight, medium coarse uneven</p>	

				<p>texture. The color of sapwood is yellowish to yellowish white, heartwood is bright yellowish brown changing to dull brown with age. The specific gravity is 0.69 and calorific value of 5100 Kcal/kg. The wood is hard, elastic and resilient. Flowers are greenish appearing between February and April. The fruit is a berry containing 5 to 15 small seeds, 0.7 to 1 cm long. The berries are white to pinkish to purple to red to black. Fruiting period is between March and June.</p> <p>Uses: Sports Industry, Silk worm food, fodder, fruit, carriages, sports equipment, veneer and plywood, furniture and shelterbelts.</p> <p>Medicinal value: Bark is a vermifuge and purgative, fruit is a laxative.</p>	
431	Morus nigra	Mulberry	Kala toot	As per above	
432	Morus serrata Roxb.	Mulberry	Karun	As per above	
433	Mucuna pruriens (L) DC	Cowitch plant	Gugli, Kawanch		
434	Murraya koenigil L	Curri-leaf	Kari Patta, gandalia		
435	Murraya peniculata L	Box Wood	Murva, Kamni	<p>Origin: Native to Sub-Continent, Andaman Islands.</p> <p>Suitability in Pakistan: It can be planted in Pakistan as ornamental trees.</p>	

				<p>Description: A handsome evergreen shrub or a small tree with spreading crown and short often crooked, trunk almost found up to an altitude of 1500 m. Bark pale yellowish brown. The plant is commonly grown in gardens for its glossy green foliage and large clusters. It is a popular hedge plant and is well adapted for topiary work. Propagation may be done by seeds, cuttings or layering. Wood is light yellow and lustrous when first exposed, fading to grayish yellow with age, without distinct heartwood; straight or curly-grained in the radial plane, even and fine textured, strong, hard, and heavy (specific gravity is 0.83; weight 53 lb/cu.ft). Flowers white, very fragrant appear throughout the year.</p> <p>Uses: Wood is used for tool handles, turnery, cabinet work and walking sticks, suitable for mathematical instruments, penholders, brushes, mallet heads. Wood root is often beautifully figured and prized for Kris handles.</p> <p>Medicinal value: Leaves are stimulant and astringent; they are reported to be used for diarrhoea and dysentery in the Philippines. Powdered leaves are applied to cuts. Leaves and root bark are sometimes used against rheumatism, coughs and hysteria. Twigs are used for cleansing teeth. Leaves possess antibiotic activity.</p>	
436	Musa sapientum Linn	Banana	Kela		

437	<i>Myristica fragrans</i> houtt	Nutmeg	Jaiphal		
438	<i>Myrtus communis</i> L	Myrtle	Velayti mehndi		
439	<i>Nannorrhops richleans</i> (Griff)	Palm	Mazri		
440	<i>Narcissus poeticus</i> L	Pheasant eye	Nergis		
441	<i>Nelumbium speciosum</i> Wild	Lotus	Kanwal		
442	<i>Nerium oleander</i> L	Oleander	Kaner		
443	<i>Nicotiana tabacum</i> L.	Tobacco	Tambakoo		
444	<i>Nigelia sativa</i> L.	Small funnel	Kalongi		
445	<i>Nyctanthes arbortristis</i>	Night Jasmine	Harsingar		
446	<i>Nymphaea lotus</i> L.	Blue water lilly	Nellofer		
447	<i>Ochthochica compressa</i> Forssk	Fodder grass	Phalwan		
448	<i>Ocimum basilicum</i> L	Sweet Basil	Niazbo		

449	Ocimum sanctum L	Sacred Basil	Tulsi		
450	Olea europea L.	Olive	Zatoon	<p>Origin: Native of Western Asia.</p> <p>Suitability in Pakistan: Cultivated in Punjab and Baluchistan.</p> <p>Description: A small tree 8-10 m high is widely cultivated for its fruits which yields the Olive Oil of commerce. The tree is extensively grown in countries bordering the Mediterranean and has also been introduced into many other parts of the world. Propagated by cuttings; grafting and budding. In many places the trees attain normal height but do not either bear fruit or if they do, the fruit does not mature. For proper growth the plant needs deep fertile soil and a temperature averaging to 13 °C not dropping to below – 10 °C. Both green and ripe fruits are edible. Fresh fruit may be pickled into various edible preparations. Oil is obtained from ripe fruit by expression. The yield ranges from 15 to 40%. If the fruit is not fully mature the yield of oil is poor and its taste bitter. Flowers fragrant; drupe subglobose or oblong, black and shining when ripe, from 1.5 - 3.5 cm long appeared in February and March.</p> <p>Uses: Olive oil is used chiefly as a salad oil, it is also used in the manufacture of soaps, textile lubricants and sulphonated oils, oil is demulcent, emollient and laxative.</p>	

451	Olea cuspidata	Wild olive	Kahu	<p>Origin: Native to Sub-Continent including Pakistan, Afghanistan and India.</p> <p>Suitability in Pakistan: It is found on the lower hills of Azad Kashmir, Punjab, NWFP, Balochistan and the hills on the west side of the Indus in the Sindh.</p> <p>Description: A small, evergreen tree 9 to 12 m tall with diameters of 0.3 to 0.6 m. A tolerant tree that grows on a variety of calcareous, loamy, to gravel sandy soils. It is adapted to a precipitation zone of 250 to 1000 mm/yr. It prefers an arid to semi-arid, cool-cold temperate, sub-humid semi arid, cool warm sub-tropical climate with a temperature range of – 10 to 40 °C at elevations from 500 to 2000 m. It coppices easily, and is frost and drought resistance. It has no known insect or disease problems. Reproduction from coppice profuse but by seed usually very scanty. Growth very slow. MAI of 0.25 cm is common. One year old coppice shoots are 0.25 to 0.90 m tall. The grain is close, even. The color of sapwood is white, heartwood varies from light brown to nearly black. The specific gravity of 1.125. The wood is hard, heavy and resilient. Flowers appear in March-September according to elevation and locality.</p> <p>Uses: Construction, fuel, tool handles, fodder, watershed protection and oil.</p>	
452	Onosma bracteatum Wall	Onosma	Gazoban		

453	Onosma echiodes L	Onosma	Lal Jhari		
454	Opuntia dillenii Haw	Prickly pear, cactus	Chhitar thor		
455	Opuntia monocantha wild	Opunita	Thor		
456	Orobanche indica Buch- Ham	Brromdap e	Sarsoonband a		
457	Oroxylum indicum (L) Vent	Plecan	Tat		
458	Oryza sativa L.	Rice	Chawal		
459	Othonnopsis intermedia Boiss	Othonopsi s	Gango		
460	Otostegia limbata Bois	Otostegia	Chiti buti		
461	Oxalis repens Thunb	Wood sorrel	Khati butti		
462	Paeonia emodi Wall	Paeoney Rose	Mamekh		
463	Panicum antidotale Retz	Screw pine	Keora		
464	Panicum milaceum L.	Common hog/broo mcorn millet	Cheena		

465	Paoaver sinbuferyn K	louyn oioot	Oist/Dodey		
466	Parkinsonia aculeata L	Jerrusala m thorn	Kabuli kikar, Ratama	<p>Origin: The tree is native to vast areas of America extending from Texas, New Mexico and Arizona South to Argentina.</p> <p>Suitability in Pakistan: In Pakistan it is a very common sight on G.T. Road as an avenue plant. Grows well on problematic sites.</p> <p>Description: A small evergreen tree or shrub. An intolerant tree that can adapt to varied soil conditions including salinity. It is successfully planted in areas below 1300m where precipitation is between 200 to 1000 mm/yr. It is drought resistant and can exist in a temperature range between -3 to 36 °C It grows poorly on waterlogged sites. Reproduced from seed or by vegetative means. A relatively fast growing tree. The wood grain is Coarse. The color is Grayish. The specific gravity is 0.6 Kcal/kg and heavy. The wood is hard, heavy and very brittle. The yellow flowers occur in May.</p> <p>Uses: Fuel, Ornamental, charcoal, Fodder, living hedges, wind and shelter breaks and erosion control.</p>	
467	Parrotia jacquemontian a Decne	Himalaya n witch- hazel	Paser		
468	Passiflora foetida L.	Passion flower	Ghari Phool, Jhumkalta		

469	Palatanus orientalis	Chinar, Plane tree	Chinar, Plane tree	<p>Origin: Native to southwestern Asia.</p> <p>Suitability in Pakistan: In Pakistan it has been successfully planted in the Northern Areas, NWFP, Balochistan, Peshawar, Islamabad and Lahore.</p> <p>Description: A large, deciduous tree 20 to 25 m tall. It is monoecious. An intolerant tree that grows on sandy, acidic soils, on wet sites and along stream banks. It is adapted to a precipitation zone of 1000 to 2000 mm/yr in a temperature range of 20 to 40 °C. It prefers an arid, cool temperate climate at elevations up to 3000 m. The tree is susceptible to many insects, which can be controlled with insecticides. Reproduced from seed and by vegetative means. Diameter growth of 2 cm a year is not unusual. The grain is straight, medium fine and un-even textured. The color of wood is light to grayish brown. The specific gravity of 0.59. The wood is moderately hard, heavy and strong. Flowers bloom between March and May.</p> <p>Uses: Construction, fuel, various wood products including furniture, erosion control and used as an ornamental.</p>	
470	Paulownia tomentosa Thunb	Paulowni a	Paulownia		
471	Peganum hermala L	Hermal	Harmal		

472	Pennisetum typhoides auct.	Pearl, Millet	Bajra		
473	Periploca aphylla Decne	Buraye	Bata		
474	Petunia alba Hort.	Petunia	Petunia		
475	Phaseolus launatus L.	Bean	Lobia/Harwa n		
476	Phaseolus vulgaris L	Kidney bearn, French Bean	Frash been, Lobia		
477	Phoneix sylvestris/ dactlifera Roxb	Date- Palm	Khajoor	<p>Origin: Native to North – West Africa to South West Asian countries. Indigenous to countries around the Persian Gulf and even today Iraq remains the most important centre of the date production.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A tall tree up to 36 m in height, cultivated or occasionally found self-sown in some parts of the Sub-Continent. Date palm can thrive on sandy, loamy or clayey soils, but well-drained sandy loam of good depth and water holding capacity is considered the best. Propagated by seeds or by offshoots. Flowers appear in March-April.</p> <p>Uses: Leaves are used for thatching, making</p>	

				<p>mats, fans, baskets, ropes. The petioles make good, light walking sticks and also used for making crates, boxes and fishing floats. The lower thicker parts are used as fuel.</p> <p>Medicinal value: Dates are considered demulcent, expectorant and laxative and are used in respiratory diseases and fever; they are also reported to be used in Yemen in cases of memory disturbance. Brandy of good quality is prepared from dates.</p>	
478	Pragmites australis (Cav) Trin	Common dutch reed	Dila Grass		
479	Phragmites karka (Retz Steud)	Water grass	Nar		
480	Phyllanthis emblica L.	Emblica Myrobala n	Amla	<p>Origin: Native from Indus in Pakistan east to south China.</p> <p>Suitability in Pakistan: In Pakistan it is planted in the plains and in gardens on both sides of the Indus.</p> <p>Description: A medium sized, deciduous tree, 25 to 33 m tall. An intolerant tree that grows on a variety of soils, but prefers deep, moist alluvium. It can successfully be grown on alkaline or poor soils. It requires a precipitation zone of 750 to 1200 mm/yr or more. It prefers a sub-humid cool-warm sub-tropical monsoon climate with a temperature range of -5 to 40 °C at elevations up to 1800 m. It is susceptible to both frost and drought conditions, especially when young and will coppice readily. It has no known insect or disease problems of significance. Reproduced both from seed and</p>	

				<p>by vegetative means. A moderately fast growing tree. It has been reported that in 5 years a plantation will have an average diameter of 2.7 cm. At 40 years the same plantations has an average diameter of 20.5 cm. The grain is straight, closed and color is red. The specific gravity is 0.7 to 0.8 and a calorific value of 5200 kcal/kg. The wood is hard, strong, splits on drying, durable under water. The flowers are small greenish yellow in color appearing between March and May.</p> <p>Uses: Fuel, Furniture, construction, charcoal, fruit (200 kg from a 15 year old tree) and pickles.</p> <p>Medicinal value: Fruit is a laxative, diuretic, astringent.</p>	
481	Picea smithiana Wall	Spruce	Partal		
482	Pinus gerardiana Wall	Pine-nut	Chilghozah		
483	Pinus halepensis P. Mill	Allepo-pine	Quetta-pine		
484	Pinus roxburghii	Pine	Chir		
485	Pinus Wallichiana	Pine	Kail, Biar		
486	Piper betel Linn	Betel leaf	Pan		
487	Piper nigrum	Bloack	Kali Mirch		

	L.	peper			
488	Pistacia integerrima Stewart	Pistacia	Kangar	<p>Origin: Native to Sub-Continent, Afghanistan and cultivated in many parts of the world.</p> <p>Suitability in Pakistan: It can be planted in Pakistan in the foot hills of Azad Kashmir, Swat, Chitral & Balochistan and as avenue tree in Islamabad.</p> <p>Description: A medium sized deciduous tree 10 to 15 m tall. The crown is spreading with stem diameters of 38 to 48 cm. A moderately tolerant tree that grows well on shallow, calcareous, stony and sandy soils. It is drought hardy and grows on steep hill sides with hot aspects. It requires a precipitation zone of 400 to 1250 mm/yr. It prefers a humid sub-humid, cool sub-tropical monsoon to semi arid winter/monsoon climate with a temperature range of -5 to 40 °C at elevations between 400 and 1250 m. It has no observed insect or disease problems. Reproduced both from seed and by vegetative means. Its growth is slow with a diameter growth of 0.5 to 0.75 cm/yr. It reaches maturity between 50 and 60 years of age. The grain is twisted with medium fine, somewhat uneven grain. The sapwood is light brown and heartwood is dark, reddish brown with 5100 kcal/kg. The wood is hard, heavy and strong.</p> <p>Uses: Nuts, Ornamental, fodder, furniture and wood carving.</p> <p>Medicinal value: Galls are considered an expectorant.</p>	

489	<i>Pistacia khinjuk</i> Stocks	Khinjuk	Khinjuk, Shahna		
490	<i>Pistacia vera</i> L.	Pistachio-nut	Pista		
491	<i>Pisum sativum</i> L.	Garden/edible pea	Gol matter		
492	<i>Pithecolobium dulce</i> Roxb.	Pithecolobium	Jangli Jalebi		
493	<i>Pittosporum tobira</i> Thunb.	Japanese Pittosporum	Tibiliti		
494	<i>Plantago ovata</i> Forssk	Fleawort-seed	Ispaghol		
495	<i>Plantus orientalis</i> L.	Oriental plane tree	Chinnar		
496	<i>Plumeria pulcherrima</i> Poir	Temple tree	Gulchien		
497	<i>Podophyllum emodi</i> Wall	Indian Podophyllum	Bankakri		
498	<i>Polypogon monspeliensis</i> (L)	Grass	Malhar		
499	<i>Poncirus trifoliata</i> (L) Raf.	Trifoliate orange/Japanese Hardy Orange	Japani Narangi		
500	<i>Pongamia pinnata</i> /	Indian Beech	Suckchain	Origin: Native to South Eastern Asia and	

	Glabra			<p>Australia</p> <p>Suitability in Pakistan: It is found almost throughout Pakistan up to an altitude of 1,200 m.</p> <p>Description: A medium size glabrous evergreen tree with a short bole and spreading crown up to 18 m high. Bark grayish green or brown. It is often grown as a roadside avenue tree. It resists drought well, is moderately frost-hardy and highly tolerant to salinity. Natural reproduction is through seed or by root suckers. The seeds are said to retain viability for a year. Artificial regeneration is carried out through direct sowing or transplanting one-year old seedlings raised in nursery. It is a good coppicer and is regarded as a fast growing species. The wood is white and some what lustrous, often becoming dull, interlocked-grain, medium coarse, moderately strong, tough, fibrous hard and heavy (specific gravity is 0.747, weight 593-865 kg/cu.m). The calorific value is 4839 Kcal/Kg. Flowers appear in April – May.</p> <p>Uses: Leaves are lopped for fodder. Provides dense shade during hot summer. Twigs are used as Maswak for cleaning teeth.</p> <p>Medicinal value: Seeds are mainly valued for the oil which has many industrial and medicinal uses. Powdered seed is valued as a febrifuge and tonic and used also in bronchitis and whooping cough. The seeds crushed to paste are used for leprous sores, skin diseases and painful rheumatic joints. The seeds and</p>	
--	--------	--	--	--	--

				<p>roots are reported to be used as a fish poison. Juice of the roots is used for cleansing foul ulcers and closing fistulous sores and for cleaning teeth and strengthening gums. The juice is also used in the treatment of gonorrhoea. A paste of the roots is used for local application in scrofulous enlargements. The dried flowers are used in decoction to quench thirst in diabetes.</p>	
501	Populus alba L.	White poplar	Safeda	As per Sl.No.501	
502	Polulus ciliata Wall	Poplar	Palach		
503	Populus deltoides Bartr	Poplar	Poplar	<p>Origin: Native to North America.</p> <p>Suitability in Pakistan: It has been successfully planted in the plains as well as in the hills.</p> <p>Description: A large deciduous tree 25 to 30 meter tall. In Pakistan several clones of this species have been tested in different parts of Pakistan and the best ones suited to local conditions have been identified. An intolerant tree that grows on sandy loams and alluvial soils. It requires considerable frequent water to maintain growth and is adapted to precipitation zone of 750 to 1250 mm/yr or more, in a temperature range of -20 to 35 °C. It prefers a semi humid to semi-arid, cool, sub-tropical temperate climate. It coppices well. It is susceptible to many insect and disease problems especially when stressed. Reproduced both from seed and by vegetative means. It is fast growing. Yields of 20 to 40</p>	

				<p>m³/ha/yr have been recorded. Clones such as AY-48, S7C2, S7C3, S7C4, S7C20, I-63/51, I-72/51, I-24/64, I-72/58, I-69/55. I-262 and ST-92 have been given excellent performance. The grain is very fine, straight, even textured. The color of sapwood is white and heartwood pale to brownish gray. The specific gravity of 0.46 and calorific value of 5900 kcal/kg. The wood is moderately light, soft. Flowering and seed production occurs between June and August.</p> <p>Uses: Fuel, packing cases and crates, matches, erosion control and reforestation, plywood, pulp, fodder and roadside tree.</p>	
504	Populus euphratica Oliv.	Euphrates	Bhan		
505	Populus nigra L	Black poplar	Safeda	As per Sl.No.501	
506	Portulaca oleracea L	Pursiane	Lunak/Kulfa		
507	Prosopis cineraria L Druce	Mesquet	Jand, Kandi	<p>Origin: Native to the West Indies, South Western United States, Central and South America.</p> <p>Suitability in Pakistan: It is found in the dry plains and hills of Sindh, Punjab, Balochistan and NWFP.</p> <p>Description: An almost evergreen, thorny, shrub or small size tree 10 m tall. An aggressive intolerant tree that grows on a variety of dry sites. It also does well on highly alkaline sites (ph 0.8). It requires a precipitation</p>	

				<p>zone of 150 to 750 mm/yr and is considered very drought hardy because of its large tap root and extensive root system. It prefers a hot arid, semi-arid to sub-tropical climate with a temperature range of – 2 to 45 °C at elevations up to 1200 m. It is fairly frost hardy and grazing is not a problem since cattle avoid it. Once established it is very difficult to eradicate. A number of insects attack it but they are of little significance. Reproduced both from seed easily. Yield of 3 to 5 m³/ha/ has been recorded. On favorable sites it produces 50 to 60 tons/ha biomass on a 10 year rotation. The grain is spiral. The color of heartwood is rich brown, sometime red. The specific gravity is 0.70 and a calorific value of 4500 kcal/kg. The wood is very strong, resilient, not durable. The flowers are small, greenish-yellow appear between March and June.</p> <p>Uses: Fodder, fuel, nitrogen fixing, poles and construction, agricultural implements, apiculture, furniture, and soil stabilization</p>	
508	Prosopis glandulosa Torr	Mesquet	Devi	As per Sl.No.507	
509	Prosopis juliflora DC	Mesquet	Devi	As per Sl.No.507	
510	Pinus amygdalus(L) Batsch	Amond	Badam		
511	Pinus	Apricot	Zardalu/Khu		

	armeniaca L		bani		
512	Prunus bokhariensis Royle	Plum	Alu-Bukhara		
513	Prunus eburnean Aitch	Wild Amrood	Jangli Badam		
514	Prunus padus L	Bird Cherry	Kala Kath		
515	Prunus persica L Batsch	Peach	Aaru	<p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A large deciduous shrub or small tree, twigs glabrous. The numerous varieties are propagated by budding. A double flowered variety is an ornamental garden plant. The tree is cultivated for its fruits, appear in May to October. Pink flowers appear in January - May according to elevation.</p>	
516	Psidium guayava L	Guava	Amrood		
517	Pterospermum acerifolium L Wild	Pterospermum	Kanak Champa	<p>Origin: Sub-Himalayan Tracts. It can be planted in Pakistan.</p> <p>Description: A large evergreen tree up to 24 m in height and 2.5 m in girth cultivated in gardens, along the river banks up to 1500 meters. It is a moderate shade bearer and fairly frost hardy. The tree coppices well and produces root suckers in abundance. Natural regeneration is by both seeds and root suckers. Artificial propagation can be done through trans-planting the nursery raised seedlings.</p>	

				<p>The sapwood is pale white; heartwood light pinkish red, turning a little darker on exposure, rather lustrous, even and somewhat interlocked-grained, fine textured with fine inconspicuous ripple marks, soft to moderately hard and light to moderately heavy (specific gravity is 0.59 ; weight 593-76 kg/cum). Flowers appear in April-June.</p> <p>Uses: Wood used for plank making, packing cases, turnery articles, veneer, plywood, constructional, paneling, bridges, boats, tool handles, box shooks and matches and match boxes, furniture, toys, walking sticks and other ornamental articles.</p> <p>Medicinal value: The flowers are sharply bitter and acrid in taste and render water mucilaginous. They are used as general tonic and occasionally as a cure for blood troubles, inflammation, ulcers, tumours and leprosy and also employed as an insect repellent and disinfectant.</p>	
518	Pulicaria crispa Forssk	Pulicaria	Pili Buti/Burhna		
519	Punica grantum L	Pomegranate	Anar		
520	Putranjiva roxbughii Wall	Putranjan	Putranjan	<p>Origin: Native to Sub-Himalayan Tract.</p> <p>Suitability in Pakistan: It can be planted in gardens and on roadsides as avenue/landscape tree, chiefly for shade.</p> <p>Description: A mostly dioecious, evergreen tree attaining a height of up to 18 m, ascending</p>	

				<p>up to an altitude of 750 m. The tree usually grows on alluvial soil. Natural reproduction takes place through seeds. Artificial reproduction through nursery raised seedlings. The wood is grayish white, shining, close-grained, hard, strong heavy (weight is 586 – 785 kg/cu.m) and durable. The seeds are made into necklace, are worn by children locally. Flowers yellow appear in March to May.</p> <p>Uses: Construction of House building, agricultural implements, tool handles and turnery. The seeds yield fatty oil, used for burning.</p> <p>Medicinal value: Leaves and stones are given in decoction for cold and fever; they are also used in rheumatism. Crushed leaves are reported to be applied to swollen throats of cattle.</p>	
521	Pyracantha crenulata Don	Firethorn	Firethorn		
522	Pyrus communis L	Pear	Nashpati		
523	Pyrus malus L.	Apple	Saib		
524	Pyrus pashia Don	Pear	Batangi		
525	Quercus baloot Griff	Oak	Shah Baloot		
526	Quercus dilatata Lindl	White Oak	Barungi		

527	Quercus incana Bartr	Oak	Rin, Rara		
528	Quercus rubra L.	Oak	Banni		
529	Quercus samicarpifolia smith	Brown oak	Bancher		
530	Quisqualis indica L	Rangoon creeper	Lal Malti		
531	Randia dumetorum Lam	Thaminsa	Rara		
532	Randia tetrasperma Roxb.	Thaminsa	Kukal		
533	Raphanus sativus L	Radish	Moli		
534	Rauwolfia serpentina Benth	Rauwolfia	Choota Chand		
535	Reinwardita trigyna Roxb.	Bush/Yellow Flax	Basanti		
536	Reptonia buxifolia Falc.	Reptonia	Gurgura		
537	Rhamnus virgatus Roxb.	Indian Buckthorn	Setapaja/Chato		
538	Rhizophora mucronata Lam.	Uppu, Poma, Pyu	Kamri/Bhara		

539	Phus cotinus L	Sumach, Wig tree	Ban/Tung		
540	Rhus typhina L.	Stagthorn sumac	Rhus		
541	Ribes nigrum L	Black currant	Kali-dakh		
542	Ricinus communis L	Castor Oil	Arind	<p>Origin: Native to Tropical Africa & Sub-Continent.</p> <p>Suitability in Pakistan: It can be planted in the plains.</p> <p>Description: An annual or perennial bush or occasionally a soft wooded small tree up to 6 m or more found nearly throughout Sub-Continent mostly cultivated up to an elevation of 2,000 m. An evergreen tree. The castor is one of the major oilseed crops of India. Cultivated and self sown; prefers sandy soil along streams and river bed but also grows in dry places. The seeds are poisonous if eaten. Silkworm is reared on the leaves in Assam. Flowers appear in various seasons.</p> <p>Uses: Caster crop is valuable since a substantial portion of the oil produced is exported. The oil used being of great industrial importance, used in the manufacture of lubricants, soaps, dehydrated castor oil useful in the paint industry. Turkey Red oil employed in textile dyeing and hydrogenated castor oil used widely in the plastics industry.</p> <p>Medicinal value: Oil used in medicine, mostly as a purgative.</p>	

543	Robinia pseudoacacia L	Black locust	Rubinia		
544	Rosa indica L	Rose wood	Ghulab		
545	Rosa moschata L	Wild rose	Jhangli Ghulab		
546	Royestonia regia	Bottle palm	Bottle palm	<p>Origin: Native of Cuba, West Indies & Sub-Continent.</p> <p>Suitability in Pakistan: Commonly planted in Parks and Gardens.</p> <p>Description: A graceful palm growing up to 12 m or more with a columnar bole. Trunk smooth, generally slightly swollen about the middle and covered all over with a white substance. Fruits globose-oblong, purplish. This palm is very popular in gardens and parks as an avenue tree. The tender top portion is edible. The middle part giving a bottle-shaped appearance, trunk smooth, light grey showing ring like marking of leaf bases; leaves feathery 2-4 meters long, resembling coconut palm, basal sheath tubular and larger. Embracing the trunk below the crown; flowers in 3-4 clusters, enclosed by two boat-shaped spathes, whitish, male longer than the female; fruit spherical to oblong 1-14 cm long. Flowers appear in August.</p> <p>Uses: Vegetable, Trunks used as Wharf-piles and construction. Crushed seeds can be used as pig feed.</p>	

547	Rubus ellipticus Smith	Raspberr y	Giracha		
548	Rubus lasiocarpus smith	Black Berry	Bhagwan		
549	Ruellia tuberosa	Ruellia	Pataka		
550	Rumex hastatus Don.	Yellow dock	Bijband		
551	Russelia juncea Zucc.	Coral plant	Russelia		
552	Saccharum bengalense Retz	Muni	Sarkanda/Kana		
553	Saccharum ciliaris L.	Saccharum	Sar, Sarkanda		
554	Saccharum officinarum L	Sugar-cane	Ganna, Kamad		
555	Saccharum spontaneum L.	Thatch grass	Kahi		
556	Salicornia indica R. Br.	Grasswort , Saltwort	Salicornia		
557	Salix babylonica L	Weeping willow	Bad-e-majnoo		
558	Salsoia	Saltwort	Lan		

	foetida Del.				
559	Salvadora oleoides Decne	Salvadora	Jal/Wan/Peel u		
560	Salvadora persica L.	The Toothbrush tree	Pilu/Wan		
561	Sambucus nigra L	The elder Berry	Sambucus		
562	Santalum album L	Sandalwood	Sandal, Chandan		
563	Sapindus mukrossi Garten	Soap nut	Ritha	<p>Origin: Native to China and is cultivated in Japan, Bangladesh & Sub-Continent</p> <p>Suitability in Pakistan: In Pakistan it found in gardens.</p> <p>Description: A deciduous tree that sometime grows to a rather large size with heights from 15 to 20 m. An intolerant tree that requires deep, moist soils. It is adapted to a precipitation zone of 1000 to 1750 mm/yr or more in a temperature range of -0 to 40 °C. It prefers a sub-humid, cool, sub-tropical monsoon climate up to 600 m elevation. It appears to be disease and insect free. Reproduced both from seed or branch cuttings. The seed can be stored up to a year and still maintain 90% viability. Trees with height of 9 m and diameter of 10 Cm have been recorded in 5 year. The grain is straight & fine. The color is greenish, light yellow. The wood is moderately hard, compact and heavy. The greenish yellow flower occurs in May and</p>	

				June while fruit matures between June and January.	
				Uses: Fodder and nuts for Soap.	
564	Sapium sebiferum L.	Chinese tallow, Hilly Shisham	Charbi, Pahari shisham	<p>Origin: Native to China and Japan.</p> <p>Suitability in Pakistan:</p> <p>It is planted in the plains and in gardens. Grows naturally along stream beds in Abbottabad.</p> <p>Description: A small sized deciduous tree 6 to 12 meter tall with a diameter of 0.2 to 0.3 m. An intolerant tree that grows on a variety of soils including wet and saline sites. It can be successfully grown on alkaline or poor soils. It requires a precipitation zone of 500 to 1200 mm/yr or more. It prefers a sub-humid to semi-arid, cool-warm sub-tropical monsoon climate with a temperature range of -10 to 40 °C, up to an elevation of 1200 m. It is frost hardy and coppices readily. It has no known insect or disease problems. Reproduced both from seed and by vegetative means. A moderately fast growing tree, it has been reported to have a diameter growth MAI of 0.85 cm. In a plantation it is reported to have produced 22 m³/ha/yr over a 4 year period. The grain is straight rather deeply interlocked to wavy; luster low, texture medium. The color is light yellow brown. The specific gravity of 0.5 and a calorific value of 4100 kcal/kg. The wood is weak, soft. Flowers</p>	

				<p>occur between May and October.</p> <p>Uses: Fuel, candles and soap (from wax on seed coat) ornamental, erosion control, apiculture, crates and boxes. Also used extensively in Islamabad for landscaping.</p>	
565	Saraca indica Linn	Ashoke tree	Ashoka		
566	Saussurea costus Falc.	Costus	Kuth Talkh		
567	Saxifraga ligula Wall	Saxifrage	Sakhm-e-hayat		
568	Schinus mole L.	Pepper tree	Nakli Kali Mirch	<p>Origin: Native to Mexico, Chile and Brazil.</p> <p>Suitability in Pakistan: In Pakistan it is commonly planted as an avenue tree in Lahore, Rawalpindi, Islamabad and Peshawar.</p> <p>Description: A large shrub or small evergreen tree. Grown easily from seed. It can be coppiced. Under cultivation it can be grown on very dry sites with a rainfall of as low as 250 mm/yr. Wind stress will result in a bushy growth form. Fairly rapid growing. The grain is twisted, medium fine, somewhat uneven. The color is light. The wood is strong, heavy and hard. Flowers are very small and appear between February to March.</p> <p>Uses: Ornamental & fuel.</p> <p>Medicinal value: Have a medicinal value.</p>	
569	Schinus	Christmas	Fil Fil		

	terebinthifolius Raddi	berry tree			
570	Schotia brachypetala	Weeping boar	Weeping boar/Bean	<p>Origin: Indigenous to Tropical Africa. Has long grown in Botanical Garden of Saharanpur and Calcutta.</p> <p>Suitability in Pakistan: The tree is cultivated as ornamental tree in various gardens of Pakistan.</p> <p>Distribution: A large tree, 16 meters tall with a rounded crown. The bark is brownish-grey and rough. Typically growing on collapsed termite mounds or on the fringe of drainage lines and rivers. It is evergreen for most of the year, although it may shed leaves briefly towards the end of winter. The flowers usually appear prior to the first rains of the season (August or September) and attract sunbirds, weavers, parrots and other birds.</p> <p>Uses: The wood is hard, heavy very dark, used to make furniture. The wood and roots are used in tanning. Seeds are roasted and eaten in South Africa.</p> <p>Medicinal value: Have a medicinal importance. A decoction of the bark is taken for heart burn and diarrhea.</p>	
571	Scindapsus aureus Lindl.	Marble queen	Money plant		
572	Sesbania aculeata Wild	Sesban	Janter		
573	Sesbania bispinosa	Sesban	Janter		

	Jacq.				
574	<i>Sesbania grandiflora</i> (L) Poir	Sesban	Valiati Manghli		
575	<i>Sesbania sesban</i> (L) Merrii	Sesban	Manjhli Jhinjin		
576	<i>Setaria italica</i> L	Millet, Braceiet	Kangni		
577	<i>Setaria pumila</i> Poir	Grass	Band Kangni		
578	<i>Shorea robusta</i> Gaertn.F	Sal tree	Sal		
579	<i>Sida cordifolia</i> Linn	Sida	Kherenti		
580	<i>Sisymbrium irio</i> L.	Wild mustard	Khoob-Kalan		
581	<i>Skimmia laureola</i> D.C.	Skimmia	Ner		
582	<i>Smilax aspera</i> L.	Smilaz	Ushba		
583	<i>Smilax ovalifolia</i> L	Smilax	Ushba		
584	<i>Solanum indicum</i> L	Indian Night-shade	Kandiari		
585	<i>Solanum melongena</i> L	The eff-plant,	Bangen		

		brinjal			
586	Solanum nigrum L	Black Night Shade	Kachmach/M akoh		
587	Solanum xanthocarpu m Schard	Thorn weed	Kandiali, Mamoli		
588	Sophora griffithii Stocks	Sophora	Guzera		
589	Sophora Japonica L	Japanes Pagoda	Sophora		
590	Sophora mellis Royle	Himalaya n laburnum	Khumbi, Kun		
591	Sophora secundiflora Orteg	Mescal	Coral Bean	<p>Origin: Native of America and Sub-Continent.</p> <p>Suitability in Pakistan: It can be planted in Pakistan. Also cultivated in Kennard College, Lahore.</p> <p>Description: An evergreen tree or shrub. An ornamental tree. Leaves 10 – 15 cm long with oblong elliptic leaflets. Pods woody, tomentose, seed bright red. Foliage and pods are reported to cause poisoning in livestock; seeds as well as flowers are extremely poisonous to human beings. Cytisine is present in sufficient amounts in seeds to cause death. Flowers violet-blue or pale-blue very fragrant in terminal one sided racemes; appear in March-April.</p>	
592	Sorghum bicolor L	Millet, Braceiet	Jowar		
593	Sorghum	Sorghum	Chota baru		

	nitidum (Vahl) Pers	seeds			
594	Spinacea oleracea L	Spanich	Palak		
595	Spiraea cantoniensis Lour.	Spiraea	Spiraea		
596	Spiraea lindleyana Wall.	Spiraea	Karrari		
597	Spondia mangifera Wild	Hog plum	Ambara		
598	Staphylea emodi Brandis	Snake stick	Chitra		
599	Sterculia diversifolia G. Don	Sterculia	Sterculia		
600	Sterculia alata Roxb	Sterculia	Sterculia	<p>Origin: Native to Sikkim, Sylhet, Chittagong lower Burma, Andaman, Malayan Peninsula.</p> <p>Suitibility in Pakistan: Cultivated in Karachi and Lahore gardens.</p> <p>Description: A tall, handsome tree up to 45 m. in height and 3 m in girth, with a straight, cylindrical bole up to 30 m. Found in Himalayas. The tree is commonly cultivated for ornament in avenues and gardens. Natural regeneration through seed is quite common. Artificial reproduction may be done through direct sowing of freshly collected seeds or transplanting. The wood is white, when first exposed, turning grayish with age. It is</p>	

				<p>generally straight-grained, coarse-textured, moderately hard and light (specific gravity is 0.2 – 0.6; weight 385-657 kg/cu.m). It is easy to season. Flowers brownish yellow appear in February - March.</p> <p>Uses: Making light furniture, planking and plywood, tea boxes, packing cases, match boxes and splints, making drums, fuel and fodder. Roasted seeds are eaten in parts of Assam and Burma. They are reported to be used as a cheap substitute for opium.</p>	
601	Sterculia villosa Roxb	Sterculia	Gulkhandar		
602	Stereospermum colais	Kaghzi Toot	Paper Mulberry	<p>Origin: Native to Sub-Himalayan Tracts from Rawalpindi eastwards.</p> <p>Suitability in Pakistan: In Pakistan it can be planted in the gardens.</p> <p>Description: A large, straight-stemmed, deciduous tree up to 18 m. high and 2.8 m in girth with a clean bole of 15 m., met with throughout the moist parts of Sub-Continent, ascending to an altitude of 1200 m. In its natural habitat absolute maximum shade temperature varies from under 38 to 46 °C and the absolute minimum from 2 to 16 °C and the normal rainfall is from 100 to 735 mm. The wood is light grey (with a faint olive-yellowish cast) to brownish grey, often with lighter and darker markings. Heartwood is not distinct, but in some trees a small chestnut-brown, apparently false heart is sometimes formed. The wood is known as Padri wood or Padal</p>	

				<p>wood in the trade. The wood is light to heavy (specific gravity is 0.708 – 0.717, weight 560-881 kg/cu.m), scented generally straight grained, coarse and uneven textured, elastic, hard and moderately durable. Flowers appear in May-June.</p> <p>Uses: Wood is used for canoes, oars, heavy packing-cases, house building, tea-boxes, matchboxes and splints, yokes, shafts, ploughs, constructional work, furniture & fancy work, attractive plywood & floor boards & good for sleepers.</p> <p>Medicinal value: A decoction of the root is considered useful in asthma, cough, excessive thirst and that of leaves is reported to be given in chronic dyspepsia. The juice of the leaves is boiled with oil for use in disease of ear and teeth and in rheumatism.</p>	
603	Stipa pennata L	Grass	Washta		
604	Stipagrostis plumosa L.	Desert grass	Drakunchal, Washtah		
605	Strychnos nux-vomica L.	Paison nut	Kuchla		
606	Suaeda fruticosa Forssk	Seablite	Lan/Salonak buf.		
607	Swertia chirata Ham.	Chiretta	Chirata		
608	Swietenia	Mahagon	Margosa	Origin: Native to tropical South and Northern	

	mahagoni L.	y		<p>America and Jamaica.</p> <p>Suitibility in Pakistan: it can be Cultivated in Jinnah Garden, Lahore.</p> <p>Description: An evergreen tree up to 22 meters tall. Flowers small, greenish white. The distribution of Swietenia on the mainland extends from Southern Mexico through Central America to Colombia, Venezuela and the upper basin of the Amazon in eastern Peru, Brazil and Bolivia. Mexico, Honduras and Peru are among the more important producing countries. The quality of the commercial timber, particularly the density, hardness and colour, varies greatly with the locality. The recorded range of specific gravity is 0.40-0.85 (25-53 lb/ft.³), average about 0.55 (34 lb/ft³). The color is to some extent correlated with the density; it varies from yellowish-brown to reddish-brown when freshly cut, darkening to a deep reddish-brown shade, practically indistinguishable from West Indian mahogany, though it is inclined to fade in strong sunlight. The texture is usually finer than that of African mahogany. A large proportion of the timber is straight grained and of plain appearance but there is a tendency to interlocked grain and other irregularities which produce a variety of figure, fiddle-back, blister, stripe or roe, curl, mottle etc. and the wood has a natural luster which further enhances its appearance. When dry, it has no distinctive odour or taste. Flowers small, greenish white.</p> <p>Uses: Mahogany is one of the world's finest cabinet timbers. Its popularity is due to its combination of excellent working and finishing properties, stability and handsome appearance.</p>	
--	-------------	---	--	--	--

				For mass-production furniture it has been largely replaced by the less expensive and more plentiful African mahogany, but is preferred for the highest class of furniture. The same applies to its use in boat building and shipbuilding. Its outstanding technical qualities make it particularly suitable for precision wood work such as engineers patterns, instrument cases, printers blocks and parts of musical instruments. For this purposes, plain, straight-grained material is used. The tree is planted as ornamental tree in gardens; elsewhere used as avenue tree as well as a timber crop.	
609	Syringa emodi Wall	Himalayan Lilac	Syranja		
610	Syringe vulgaris L.	Common lilac	Dam dam		
611	Syzygium cumini	Jamun, Black Plum	Jaman	<p>Origin: Native to the Sub-Continent. It has been successfully planted in many areas of the world.</p> <p>Suitability in Pakistan: In Pakistan it is found in the plains and lower hills of the Punjab, NWFP and Azad Kashmir.</p> <p>Description: A large evergreen tree up to 40 meter tall. A very intolerant tree that grows on a variety of soils, from sands to loams as long as they are well drained. It is adapted to a precipitation zone up to 1250 mm/yr. It prefers a semi-humid warm hot, sub-tropical winter/monsoon climate with a temperature range of -5 to 40 °C at elevations up to 1500 m. It coppices easily. The tree is frost hardy and can tolerate hot draughty conditions if irrigated.</p>	

				<p>It has no known insect or disease problems. Reproduced both from seed and by vegetative means. It grows very fast. Height growth rates of 0.75 m/yr for young stands have been reported. MAI of 10 to 12 m³/ha/yr is not uncommon over rotations of 20 years. The specific gravity of wood is 0.70 and a calorific value of 4800 Kcal/kg. The grain is interlocked, texture moderately fine. The color of wood is reddish gray to brownish gray. The wood is hard, heavy and resilient. Flowers bloom usually between February and March.</p> <p>Uses: Construction, fuel, fruit, tannin, shelterbelts, apiculture, paper pulp, shade, fodder and roadside planting.</p> <p>Medicinal value: Fruit is a carminative, seed for treatment of diabetes.</p>	
612	Tabernaemontana diversifolia	Crap Jasmine	Chandni		
613	Tamarindus indica L.	Tamarind	Imlee		
614	Tamrix aphylla L.	Tamarix	Lal/Ghazz	<p>Origin: Native to the middle East including Pakistan, Central Asia, North Africa and Arabia.</p> <p>Suitability in Pakistan: It is common in the plains of the Punjab, Sindh, Balochistan and NWFP.</p> <p>Description: An erect medium to large sized evergreen tree. It reaches heights of 10 to 18 m. Extensively planted in the sand dune area of Thal desert. A strongly intolerant tree that grows well on well-drained sandy soils and can</p>	

				<p>tolerate highly saline/sodic sites. It is adapted to a precipitation zone of 100 to 500 mm/yr with prolonged periods of draught. It has a temperature range of -1 to 50 °C and frost hardy. It prefers an arid to hot sub-tropical winter monsoon climate and usually occurs at an elevation below 600 m. It is disease and insect free with the exception of some minor gall forming insects. Reproduced from cuttings and root suckers, rarely from seed. Diameters up to 30 cm have been attained in 12 years. Wood production of 5 to 10 m³/ha/yr has been reported. This is a very valuable tree in arid areas. The grain is straight to twisted fibrous, coarse and uneven textured. The color is white with a yellowish tinge. The specific gravity of 0.68 and calorific value of 4835 kcal/kg. The wood is moderately hard, heavy and nondurable. White flowers appear between April to September.</p> <p>Uses: Wood used in Carpentry, toys, switch boards, agriculture implements, fuelwood, shelter belts, charcoal, tannin, erosion control and sand dune stabilization.</p>	
615	Tamarix articulata Vahl.	Tamarix	Farash/Ghaz /Lai	As per above	
616	Tamarix dioica Roxb.	Tamarix	Pilichi/Lai		
617	Tamarix troupia Hole	Tamarix	Farash, Lai		
618	Taxodium	Bald	Taxodium	Origin: Native to Southeastern USA and	

	distichum L	cyprus		<p>Mexico.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A deciduous tree, 30 – 45 m. in height and 3.8 – 7 m in girth of conical habit when young, but developing wide and often flattened crown when old. The tree thrives in moist and loamy soil. Propagation is done by cuttings or by fresh seeds; if the seeds are not fresh, they should be soaked in warm water before sowing. The wood (weight is 449.5 k.g/cu.m) is soft and weak. The sapwood is white or yellowish white. The heartwood is red to black, soft and straight-grained and is easy to work, requires care in seasoning and application of finishes; it is not subject to serious shrinkage.</p> <p>Uses: Wood used for construction of greenhouses, vats, cooperage, water-tanks, water-pipes, furniture, fencing, ventilators, cabinet work, shingles, ties, boats and ships and coffins.</p> <p>Medicinal value: A resin exudes from the cones. It is credited with diuretic, carminative and vulnerary properties and is used as an application for wounds.</p>	
619	Taxodium Rich	Bald Cypress	Bald Cypress	As per above	
620	Taxus wallichiana Zucc.	Yew	Bami		

621	Tecoma grandiflora Thunb	Trumpet creeper	Lahura		
622	Tecoma radicans L.	Trumpet vine	Lahura		
623	Tecoma stans L.	Yellow elder	Tecoma		
624	Tecoma undulata (Sm) Don	Tecoma	Lahura/Rohir a		
625	Tectona grandis Linn	Teak	Sagwan	<p>Origin: Indigenous to India, Burma, Thailand and Vietnam and is virtually naturalized in Java and some of the smaller islands of the Indonesian Archipelago.</p> <p>Suitability in Pakistan: Cultivated in Punjab, Sindh gardens.</p> <p>Description: A medium to large tree, 10-40 meters. The teak thrives best in areas having a normal rainfall, varying from 125 to 250 cm with a marked dry season of 3-5 months, but it is known to grow, though not adequately well, in places with a rainfall as low as 75 cm, absolute maximum shade temperature varying from 39 to 44° and the absolute minimum from 13 to 17°. The tree is quite hardy and shows very good development on the fertile lower slopes of the hills, where the soil is deep, but in shallow soils and along dry ridges it becomes stunted due to deficiency of nitrogen. The tree is a pronounced light demander. Teak reproduces naturally from seed, but the extent of natural regeneration depends on climatic and edaphic factors. The teak can be raised direct or by</p>	

			<p>transplanting the nursery-raised seedlings. Direct sowing can be done by broadcasting the seed or by dibbling, but transplanting of seedlings is preferred and is most prevalent. The seed is sown in nursery beds, generally during April-May, depending upon the local conditions, but it may also be sown as early as in March. The sap wood of teak is white to pale-yellowish brown. The heartwood is golden yellow when fresh cut, turning brown, oily to touch with strong scent, moderately hard rather course, uneven textured and strongly odorous. It is medium heavy (specific gravity is 0.55-0.70; weight 608-688 kg/cu.m) extremely durable weighing 45 lb per cu. ft. It is medium heavy. The specific gravity is 0.55 – 0.70, weight 608 – 688 kg/cu.m, strong and average of hardness. It coppices well, requires much light.</p> <p>Uses: The timber (teak) is world's famous for furniture, construction of poles, beams, trusses, columns, roofs, doors, window frames, flooring, planking, paneling, staircases, making railway sleepers, bridges, lorry bodies, carts & carriages, agricultural implements like ploughs, shingles, footboards, stretching boards in woolen mills, heavy packing cases, boating in tropical waters, deckhouses & fittings., ships, making sound boards, plywood. The dye can be commercially extracted by heating chopped leaves with water or preferably with 0.25 % sodium carbonate solution. The dye can be used as a substantive dye for wool and silk, but for cotton a mordant is required.</p>	
--	--	--	--	--

626	Terminalia arjuna Roxb.	Arjan	Arjun	<p>Origin: Native to the sub-continent.</p> <p>Suitability in Pakistan: It has been planted throughout the plains, in gardens and as a roadside tree.</p> <p>Description: A large evergreen tree 21 to 30 meter tall. A shade intolerant tree that grows on a variety of moist sites if well drained. It grows on saline, sodic and waterlogged sites. It requires a precipitation zone of 750 to 3800 mm/yr. It prefers a humid, hot tropical, sub-tropical monsoon climate with a temperature range of 0 to 45 °C on an elevation up to 600 m. The tree is not frost hardy. It has no known insect or disease problems. It is a fast growing tree that can produce yields between 10 and 12 m³/ha/yr. Heights of 5 to 8m have been recorded in a 5 year period. This is a fast growing tree can grow on waterlogged and saline sites. It is valuable for fuel and other wood products. Its fodder can also be used to feed tasar silkworms. An excellent farm forestry tree for areas where there are sodic, saline and waterlogged conditions. The grain is wavy, coarse and even-textured. The color is sapwood is reddish white and heartwood is brown with streaks. The specific gravity of 0.9 and calorific value of 5000 kcal/kg. The wood is hard, heavy and resilient. Tree is reproduced both from seed and by vegetative means. Flowers are yellowish white.</p> <p>Uses: Fuel, implements, erosion control, wheels, spokes and axles, fodder, timber and ornamental.</p>	
-----	-------------------------	-------	-------	---	--

				Medicinal value: Bark is a astringent and cardiac stimulant.	
627	Terminalia belerica Roxb.	Beleric Myrobala n	Bahera	<p>Origin: Native to the sub-continent.</p> <p>Suitability in Pakistan: It is planted in sub-Himalayan tract east of Rawalpindi, Sialkot and Azad Kashmir. It has been planted throughout the plains, gardens and roadside tree.</p> <p>Description: A large deciduous tree 24 to 30 m tall. An intolerant tree that grows on a variety of moist soils if they are well drained. It requires a precipitation zone of 750 to 1750 mm/yr. It prefers a humid, hot tropical, sub-tropical monsoon climate with a temperature range of -5 to 40 °C on elevations up to 900 m. The tree is not frost hardy. There are a number of fungi that attack it but they do not cause significant damage. Reproduced from seed and by vegetative means. It is a fast growing tree. Diameter growth MAI of 0.24 to 0.69 cm have been recorded. The grain is straight, coarse and even-textured. The color is yellowish. The specific gravity is 0.69 Kcal/kg. The wood is hard, heavy & resilient. Flowers are greenish yellow appear between April and June.</p> <p>Uses: Fuel, implements, boats, tannin, fodder (nuts) timber, nut intoxicate and ornamental.</p> <p>Medicinal value: Fruit is a laxative.</p>	
628	Terminalia chebula Retz.	Mysobala n	Harrar	<p>Origin: Native to Sub-Himalayan Tract from Ravi eastwards.</p> <p>Suitability in Pakistan: It can be planted in</p>	

				<p>Pakistan</p> <p>Description: A tree of about 15 – 24 m height. It found in the Sub-Himalayan tracts from the Ravi eastwards to West Bengal and Assam. It ascends 1500 m and attains a girth of 1.5 – 1.8 m and bole of 4.5 – 6.0 m. The absolute maximum shade temperature varies from 36 to 47.05°C and the minimum from -1 to 15.5°C. The plant occurs on clay to sandy soils. It is a light demander, requiring direct overhead light. It withstands fire and is frost hardy and drought resistant to a considerable extent. The tree can be successfully raised in the field by direct sowing of seeds, transplanting the seedlings, and planting root and shoot cuttings. The wood is heavy to very heavy (Specific gravity is 0.80 – 1.03; weight 945 Kg/cu m), not of much value. Seeds hard, pale yellow. Flowers yellowish-white.</p> <p>Uses: Posts, beams, carts and tool handles, fruits. The bark yields gum. Fruits contain tanning (46%) used for tanning.</p> <p>Medicinal value: Fruit used as a valuable ingredient of Triphala, an Ayurvedic medicine. The fruits are credited with laxative, stomachic, tonic and alterative properties and to cure bleeding and ulceration of gums. Water in which the fruits have been steeped overnight is a good cooling wash for eyes, affording relief in conjunctivitis and similar affections of the eyes. When coarsely powdered and smoked in a</p>	
--	--	--	--	---	--

				<p>pipe, the fruit affords relief in asthma. A fine paste of the fruit with carron oil effect a more rapid cure when applied to burns and scalds than when carron oil alone is used. The bark is endowed with both diuretic and cardiotonic properties.</p>	
629	Thevetia nerifolia Juss	Yellow oleander	Peeli Kaneer	<p>Origin: Native to Tropical America, West Indies and Sub-Himalayan tract.</p> <p>Suitability in Pakistan: Cultivated in gardens and plains.</p> <p>Description: A large evergreen shrub, 4.5 – 6.0 m tall. The plant is widely cultivated in gardens for its elegant and shady foliage and scented handsome flowers. It requires little attention except sunshine and well-drained soil with open compost. It is grown from seeds and cuttings, transplants well and can endure drought and frost to some extent. The wood is brownish grey, soft to moderately hard, fibrous, light, strong, readily worked, but has very low resistance to decay. Flowers bright yellow or pinkish yellow.</p> <p>Uses: Wood used for making axe-handles, Poisonous to fish .</p> <p>Medicinal value: Bark, leaves possess purgative and emetic properties and are said to be poisonous to animals, dried & smoked. The roots are made into a plaster which is applied to tumours. The seeds are used as an abortifacient and as a purgative in rheumatism and dropsy; they are also used as an alexiteric. A decoction of the seeds acts as a violent</p>	

				emetic, hinders respiration and may cause paralysis of the heart. However with caution it is used for the treatment of haemorrhoids. All parts of the plant produce latex, which is highly poisonous.	
	Thuja orientalis L	Thuja	Morpank		
630	Tinospora cordifolia Wild	Hear-leaved moon seed	Gloa/Gulancha		
631	Trapa bispinosa Roxb.	Water chestnut	Sanghara		
632	Tribulus terrestris L.	Calthrop	Bhakra		
633	Trifolium alexandrinum L	Berseem/ Clover	Bareem/Shaf tal		
634	Trifolium incarnatum L.	Crimson clover	Shatal, Barseen		
635	Trifolium pretense L.	Red clover	Shaftal		
636	Trigonella foenum-graecum L	Fenugreek Birds, Foot	Methi		
637	Triticum vulgare L.	Wheat	Gandam		
638	Trewia nudiflora	Tumri	Gahar (Punjabi)	Origin: Native to Sub Himalayan tracts upto 1000 meter. East and South of Jamuna river	

				<p>Burma.</p> <p>Suitibility in Pakistan: Cultivated in Lahore gardens.</p> <p>Description:A large soft wooded deciduous tree found chiefly in the moist forests particularly along the streams and swampy places. The fruit ripen in different period, depending upon the locality, and generally begin to fall early in the rainy season. The ripe fruits are collected for artificial reproduction, they are dried for a few days and the seeds removed. Fresh seeds give very high percentage of germination. Germination usually begins within 10-21 days and completes in 60 days. The trees should be planted at a distance of 15m x 15m for full growth. Wood is uniformly white when first exposed, ageing to pale-brownish grey; heartwood is not distinct. The wood is dull, fairly elastic, straight-grained, somewhat fine and even textured, extremely light to moderately heavy. The specific gravity is 0.85; weight 352-465 kg/cu.m and soft to moderately hard. Flowers appear in March.</p> <p>Uses: The wood is white and soft, used for packing cases, tea boxes, match industry, making agricultural implements, dugouts, carving and making toys, packing cases, planking and plywood, yokes, drums, barrels, slate and picture frames, carved images, good quality pencils, Fruit pulp is reported to be sweet & edible. Root contains resinous matter and fat.</p>	
639	Typha	Elephant	Kundar,		

	elephantina Roxb.	grass	Patira Dab		
640	Ulmus Wallichiana Planch.	Elem	Mannu		
642	Urginea indica L.	Indian squill	Jangli Piaz/Phapho r		
643	Urtica dioica L.	The English Nettle	Bichu buti		
644	Valeriana wallichii DC.	Pakistani valerian	Mushkhabala		
645	Verbascum thapsus L.	Great Mullein	Gidar tambakoo		
646	Vetiveria zizanioides L.	Khus- khus grass	Khas-Khas		
647	Viburnum continifolium Don	Viburnum	Chamkat		
648	Viburnum neryosum Don	Viburnum	Guchh		
649	Vigna mungo L	Mung bean/green gram	Dal-Mash		
650	Vigna radiata L	Green gram	Dal Mung		
651	Vigna	Wild bean	Jangli Moth		

	trilobata L				
652	Vinca rosea L.	Periwinkle	Sada Bahar		
653	Viola serpentina L.	Violet	Binsfsha		
654	Viscum album L.	Mistletoe	Bhangra		
655	Vitex negundo L	Five leaved Chaste tree	Marwan		
657	Vitis vinifera L.	Grape vine	Angur/Gidar Dakh		
658	Washington filifera	Petticoat Palm	Palmae	<p>Origin: Native of California in USA, Mexico and adjacent areas and Sub-Continent.</p> <p>Suitability in Pakistan: It can be planted in Pakistan in parks, gardens and roadside.</p> <p>Description: A genus of handsome, massive fan-palms and tall palm growing up to 21 m in height and 1.5 m in diam. The trunk is covered with a cylindrical mass of dried leaves. Fruit is ovoid and wrinkled. The plants are utilized for various purposes. The wood (weight 517 kg./cu.m) is light and soft contains numerous, conspicuous, dark orange-colored fibrovascular bundles. White flowers appear in March-June.</p> <p>Uses: Fruit is eaten fresh or dried; the seeds are ground into a meal; and the terminal bud or cabbage is roasted and eaten. Leaves are used for building huts, fibre from the leaves is</p>	

				used for tying and in basketry.	
658	Wisteria sinensis D.C.	Crepe Flower	Wisteria		
659	Withania coagulans Stocks	The cheesemaker/ Vegetable Rennet	Panirband		
660	Withania somnifera Lin.	Winter Cherry	Aksanim		
661	Woodfordia floribunda Salisb	Woodfordia	Dhawi		
662	Wrightia tinctoria	Dudhi/Khirni	Dudhi/Khirni	<p>Origin: Native to Tropical Asia and Australia.</p> <p>Suitability in Pakistan: Found in Jinnah Garden and Botanical Garden, Govt. College, Lahore</p> <p>Description: A small deciduous tree. Species of Wrightia are deciduous 10-15 m tall and upto 20 Cm dbh (Anon 1951). It requires a mixture of peat, loam and sand and is propagated by seeds or cuttings. It produces root suckers. The annual increase in girth being 1.16 – 2.3 cm. It is moderate light demander and rather frost sensitive (Anon 1951). Wood moderately hard, close grained and is uniformly white when first exposed, turning ivory-colored with age; heartwood not distinct. The wood is rather lustrous, with smooth feel, straight or somewhat wavy or curly-grained, in the radial plane, very fine and even textured, extremely close-grained, moderately hard and light (sp.gr.</p>	

			<p>C.0.57' wt. 577 kg/cu.m). It coppices well; W. Tinctoria also produces root suckers (Troup 1921). Temperature range 0 - 48° C; the minimum mean annual rainfall for W.Ttinctoria is about 400 mm. Fragrant white flowers appear in June-September.</p> <p>Uses: The trees provide small timber mainly for turnery, carving and toy making, for which it is considerable to be very fine (Anon 1951). The wood is also used to make combs, small boxes, cups, plates, pen-holders, cheap grade pencils, wooden idols, match boxes, splints, bobbins printing blocks, furniture & tools, especially where stained wood inlay work is involved. The leaves (Sharma & Tiagi 1979), flowers, fruits and roots of W.Tinctoria are the source of indigo-yielding glucoside which provides blue dye (Singh, Wadhwani & Johri 1983, Anon 1951, Bor 1953). The tree bears handsome clusters of white, jasmine scented, star-shaped flowers in profusion, which are much esteemed by Hindus for offerings at the temples. The flowers are also used as a vegetable after a thorough wash.</p> <p>Medicinal value: The bark is commonly used as an adulterant of the well-known drugs, Juice of fresh unripe fruits of W.tinctoria is used for coagulating milk and as in the latex, the presence of proteolytic enzyme has been reported, (Anon 1951). It seeds are reported to have aphrodisiac and anthelmintic properties (Anon 1951). It has rubber content over 5% which can be exploited commercially. The bark and seeds are used in flatulence and bilious</p>	
--	--	--	--	--

				affections. A decoction of the leaves and bark is taken as stomachic.	
663	Wrightia coccinea			<p>Origin: Native of Sikkim. Also found in the hills of the eastern Himalayas, West Bengal, Asam, Arunachal Pradesh, Meghalaya and Nagaland.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A deciduous tree 8 m tall up to an altitude of 1200 m. The trees have whitish grey bark with copious milky latex. It is occasionally grown in the Sub-Continent for its handsome red or velvety flowers which are very ornamental in the hot months. Propagated by seeds or cuttings. The wood is white, close-grained, strong and remarkably light. Flowers bright scarlet appear in August-September.</p> <p>Uses: Wood is used by turners to make palkees and for other purposes where lightness and strength needed.</p>	
664	Wrightia tomentosa	Indarjau (seeds)	Dodi (Punjabi)	<p>Origin: Native to Sub-Continent, Burma, Sri Lanka & Chittagong.</p> <p>Suitability in Pakistan: It can be planted in Pakistan.</p> <p>Description: A small deciduous tree up to 12 m. high, ascending to an altitude of 600 m. in the Himalayas and to 1200 m in the Nilgiris. The tree is planted as an ornamental. The tree is a moderate light demander. The wood is uniformly white and lustrous when first exposed, turning yellowish white to light lemon-yellow with age; heartwood not distinct. It is</p>	

				<p>straight or somewhat wavy grained in the radial plane, very fine and even textured, very light to light (specific gravity is 0.49; weight 512 kg/cu.m) moderately hard. Flowers appear in April.</p> <p>Uses: Wood is durable under cover and saws works & machine with ease. Wood is also used for building purposes, furniture, combs, toys, packing cases, pen holders, picture-frames, bobbins and cheap-grade pencils and sometimes</p>	
665	Xanthium strumarium L.	Cockle-bur	Bandar Butti, Gokhru		
666	Xyiosma logiflollum Cics.	Plecan tree	Batti		
667	Yucca aloifolia L.	Adam's needle	Aber-aadam		
668	Zanthxylum armaturn D.C.	Prickly ash	Timbar		
669	Zingiber officinale Rosc.	Ginger	Adrak		
670	Zizyphus mauritiana Lam.	Zizyphus	Ber	<p>Origin: Native of North China from where it was introduced in to West Asia 2,500 – 3,000 years ago & Sub-Himalayan Tract.</p> <p>Suitability in Pakistan: It can be planted in the Scrub Forests, plains of Sindh, Punjab, NWFP and Baluchistan.</p> <p>Description:A deciduous tree up to 12 m in</p>	

				<p>height, some times a large bush, found both cultivated and naturalized in Punjab. It is also grown as a hedge for fencing. The tree is a light demander, developing best in the open. It is frost-hardy though it can stand frost well. Propagation by cuttings has been much successful. It possesses great power of recovery from injury of any kind, including fire and thrives on burnt grass tract. Flowering in July-September.</p> <p>Uses: Fodder, for agricultural implements. Fruits from the cultivated plants are nutritious and are eaten dried, steamed & preserved in Sugar. Heartwood of the old trees is used for manufacture of combs, turnery and cots.</p> <p>Medicinal value: Leaves are laxative and prescribed in scabies and throat troubles. Fruits of the wild plants are considered cooling, anodyne and tonic and employed as an antidote to aconite-poisoning and are recommended in nausea and vomiting; also prescribed for abdominal pain in pregnancy. It is used externally in poultices and application for wounds.</p>	
671	Zizyphus nummularia Wight.	Zizyphus	Mallah, Ber, Karkana	<p>Origin: Native to Sub-Continent.</p> <p>Suitability in Pakistan: Commonly it can be planted throughout Pakistan in dry parts.</p> <p>Description: A thorny, small bush or shrub with widely divaricating flexuous branches tree. The shrub grows in abundance in the grazing lands of the arid and semi arid areas in Sub-Continent. It is planted in overgrazed land, depressions and in rocky and semi-rocky sites.</p>	

				<p>It propagates naturally through root suckers as well as by seeds. Direct sowing and transplanting are also effective. Shrub is grazed by animals. These shrubs check wind erosion, help in deposition of soil in and around them and bring about a change in the micro-habitat. Young plants need protection from browsing, though once established, they can withstand fairly heavy browsing. Fruits ripen in November and may be used for seed. Fruit are eaten by shepherds and also sold to a limited extent. The heartwood has a calorific value of 4400 kcal per kg. Flowers pale yellow appear in March-June (in the North), August-November in Sindh.</p> <p>Uses: Wood is used as firewood. Branches are lopped as fodder for livestock. It is also used for fencing and fuel with high calorific value.</p> <p>Medicinal value: Leaves are used in scabies and other skin diseases. Smoke from the dried leaves is inhaled for the treatment of colds and coughs. The fruit is cooling and astringent and said to be useful in bilious affections.</p>	
672	Zizyphus oxyphylla Edgew	Zizyphus	Phitni, Amlai	As per SI.No.669	
673	Zyzyphus sativa	Jujube berries	Unap/Baryan	As per SI.No.669	
674	Zygophyllum simplex Linn	Salt-bush	Lani		