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1. MORPHOLOGICAL DESCRIPTION OF EARLY SEASON MATURING MANGO

1.1 AALISHAN (Mangifera indica)

GENERAL

1.	Variety name	**AALISHAN (Mangifera indica)**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Anwar Retaul x Sanglakhi (MRS-Shujabad)
5.	Rootstock name	Monoembryonic unknown seedling
6.	Scion name	Aalishan
7.	Origin of scion	Through hybridization
8.	Time of flowering	From 10th March to 5th April
9.	Time of fruit availability	1st week of June – 1st week of July

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium branched, medium vigorous, and medium tall

LEAF CHARACTERISTICS

1.	Leaf length/width	18-22 x 4-7 centimeter (cm)
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Present and strong

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long
2.	Inflorescence color of axis and branches	Pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	8-10 x 6-8 x 4-7 cm
2.	Average weight per fruit	250 - 270 grams
3.	Fruit shape in cross section	Ovatish round
4.	Color of peel	Maize yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Shallow
8.	Fruit beak	Present
9.	Position of shoulders	Ventral higher than the dorsal
10.	Sinus of fruit	Present but weak
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	22 – 23%
14.	Acidity	0.17 – 0.19%
15.	Presence of fiber	Very low

STONE CHARACTERISTICS

1.	Average weight per stone	28 grams
2.	Average size of stone LxBxT	4-5 x 2-4 x 2-4 cm
3.	Length of fiber on ventral end	Very short
4.	Thickness of endocarp	Very thin
5.	Seed monoembryonic or polyembryonic	Monoembryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However,

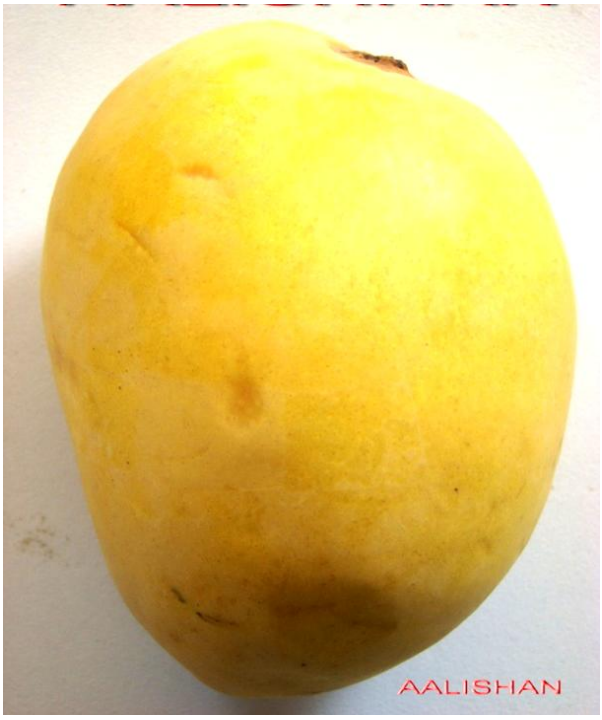
		can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Excellent variety for national as well as international marketing. Highly acceptable by the mango growers due to regular in bearing and consumers due to maximum recovery of pulp without fibers.



Leaf of Aalishan



Inflorescence of Aalishan



Fruit of Aalishan

1.2 ANWAR RETAUL

GENERAL

1.	Variety name	**ANWAR RETAUL**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Developed as chance seedling, local germplasm
5.	Rootstock name	Monoembryonic unknown seedling
6.	Scion name	Anwar Retaul
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	1st week of June – 1st week of July

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Semi erect, spreading and medium branched

LEAF CHARACTERISTICS

1.	Leaf length/width	20-30 x 4-7 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Present but weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Short to medium long
2.	Inflorescence color of axis and branches	Pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	9x 5-7 x 6-7 cm
2.	Average weight per fruit	150– 350 grams
3.	Fruit shape in cross section	Ovatish and narrow elliptic
4.	Color of peel	Lemon yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Medium
8.	Fruit beak	Present
9.	Position of shoulders	Ventral slightly higher than left
10.	Sinus of fruit	Present but weak
11.	Skin thickness	Medium
12.	Pulp color	Reddish yellow
13.	Total soluble solids	17 – 20%
14.	Acidity	0.17 - 0.18%
15.	Presence of fiber	Low

STONE CHARACTERISTICS

1.	Average weight per stone	35 grams
2.	Average size of stone LxBxT	4-6x 2-3 x 2-3 cm
3.	Length of fiber on ventral end	Very short
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic / polyembryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the

effective plant protection measures.

6. Resistance to diseases — No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

7. Distinguished traits — Excellent flavor, highly accepted by the consumers but shy bearer.



Leaf of Anwar Retaul



Inflorescence of Anwar Retaul



Fruit of Anwar Retaul

1.3 YAKTA

GENERAL

1.	Variety name	**YAKTA**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab, it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Local selection
5.	Rootstock name	Monoembryonic unknown seedling
6.	Scion name	**Yakta**
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	1st week of June – 1st week of July

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Semi erect, spreading, vigorous, large and well branched

LEAF CHARACTERISTICS

1.	Leaf length/width	20- 25 x 5-8 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Dark green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Present (medium)

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long
2.	Inflorescence color of axis and branches	Pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	10-14 x 6-9 x 6-7 cm
2.	Average weight per fruit	300-400 grams
3.	Fruit shape in cross section	Broad elliptical
4.	Color of peel	Cadmium yellow
5.	Size of lenticels	Small
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Present
9.	Position of shoulders	Ventral higher than dorsal
10.	Sinus of fruit	Present, medium
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	18– 20%
14.	Acidity	0.18- 0.20%
15.	Presence of fiber	Low

STONE CHARACTERISTICS

1.	Average weight per stone	60 grams
2.	Average size of stone LxBxT	7-10 x 3-5 x 3-4 cm
3.	Length of fiber on ventral end	Very short
4.	Thickness of endocarp	Thick
5.	Seed monoembryonic / polyembryonic	Monoembryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However,

		can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	The tree ripe fruit (Tapka) of Yakta has even ripening throughout the fruit and has great potential to serve national as well as international markets.



Leaf of Yakta



Inflorescence of Yakta



Fruit of Yakta

1.4 DUSEHRI

GENERAL

1.	Variety name	**DUSEHRI**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Developed as chance seedling, local germplasm
5.	Rootstock name	Monoembryonic unknown seedling
6.	Scion name	Dusehri
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	1st week of June – 1st week of July

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium branched, semi vigorous and medium tall

LEAF CHARACTERISTICS

1.	Leaf length/width	18-22 x 4-7 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Present and strong

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long
2.	Inflorescence color of axis and branches	Light green

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	8-10 x 6-8 x 4-7 cm
2.	Average weight per fruit	150 – 250 grams
3.	Fruit shape in cross section	Narrow elliptic
4.	Color of peel	Lemon yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Absent
9.	Position of shoulders	Ventral higher than dorsal
10.	Sinus of fruit	Present but weak
11.	Skin thickness	Thin
12.	Pulp color	Pale yellow
13.	Total soluble solids	25 – 27%
14.	Acidity	0.17– 0.19%
15.	Presence of fiber	Low

STONE CHARACTERISTICS

1.	Average weight per stone	32 grams
2.	Average size of stone LxBxT	5-6 x 2-4 x 2-4 cm
3.	Length of fiber on ventral end	Very short
4.	Thickness of endocarp	Thin
5.	Seed monoembryonic / polyembryonic	Monoembryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the effective plant

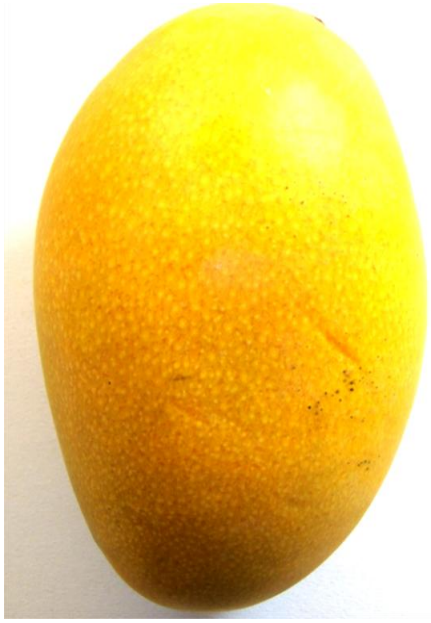
		protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Excellent variety for national as well as international marketing. Highly acceptable by the consumers.



Leaf of Dusehri



Inflorescence of Dusehri



Fruit of Dusehri

1.5 SINDHRI

GENERAL

1.	Variety name	**SINDHRI**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Developed as chance seedling, local germplasm
5.	Rootstock name	Monoembryonic unknown seedling
6.	Scion name	Sindhri
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	1st week of June – 1st week of July

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Semi erect, spreading and medium tall

LEAF CHARACTERISTICS

1.	Leaf length/width	16-20 x 4-7 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Medium

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long
2.	Inflorescence color of axis and branches	Greenish white

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	15-17 7-9 x 7-8 cm
2.	Average weight per fruit	350 - 550 grams
3.	Fruit shape in cross section	Ovatish oblong
4.	Color of peel	Maize yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent to weak
8.	Fruit beak	Almost absent
9.	Position of shoulders	Ventral higher than the dorsal.
10.	Sinus of fruit	Weak to medium
11.	Skin thickness	Medium
12.	Pulp color	Medium yellow
13.	Total soluble solids	15 - 17 %
14.	Acidity	0.18 - 0.22%
15.	Presence of fiber	Absent

STONE CHARACTERISTICS

1.	Average weight per stone	55 grams
2.	Average size of stone LxBxT	10-12 3-5 x 2-3 cm
3.	Length of fiber on ventral end	Short on ventral edge, sparse.
4.	Thickness of endocarp	Medium
5.	Seed monoembryonic or polyembryonic	Monoembryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the

		effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures. However, graft resistance against MSDS has been noted.
7.	Distinguished traits	Excellent flavor, highly accepted by the consumers and has significant volume in export.



Leaf of Sindhri



Inflorescence of Sindhri



Fruit of Sindhri

1.6 LANGRA

GENERAL

1.	Variety name	**LANGRA**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Developed as chance seedling, local germplasm
5.	Rootstock name	Monoembryonic unknown seedling
6.	Scion name	Langra
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	1st week of June – 1st week of July

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Semi erect, medium branched and medium tall

LEAF CHARACTERISTICS

1.	Leaf length/width	18-20 x 5-7 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Light green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Present but medium

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long
2.	Inflorescence color of axis and branches	Yellowish pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	9-11x 6-8 x 6-7 cm
2.	Average weight per fruit	250– 350 grams
3.	Fruit shape in cross section	Ovatish elliptic
4.	Color of peel	Sea green
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent to weak
8.	Fruit beak	Present but weak
9.	Position of shoulders	Almost equal
10.	Sinus of fruit	Present but weak
11.	Skin thickness	Medium
12.	Pulp color	Lemon yellow
13.	Total soluble solids	17 – 20%
14.	Acidity	0.18 - 0.19%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	35 grams
2.	Average size of stone LxBxT	4-6 x 2-3 x 2-3 cm
3.	Length of fiber on ventral end	Medium
4.	Thickness of endocarp	Medium
5.	Seed monoembryonic or polyembryonic	Monoembryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However,

		can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Excellent flavor, highly accepted by the consumers but shy bearer.



Leaf of Langra



Inflorescence of Langra



Fruit of Langra

1.7 EARLY GOLD

GENERAL

1.	Variety name	**EARLY GOLD**
2.	Breeding center / Institute	Mango Research Station, Shujabad Introduced from Florida
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was introduced from Florida
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Early Gold
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	December to February
9.	Time of fruit availability	1st week of June – 1st week of July

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing and semi erect to spreading

LEAF CHARACTERISTICS

1.	Leaf length/width	19-20 x 5-6 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Light green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long and densely branched
2.	Inflorescence color of axis and branches	Pinkish yellow

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	9-10 x 6-7 x 5-6 cm
2.	Average weight per fruit	230-235 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Pale yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Obtuse, just point only
9.	Position of shoulders	Almost leveled
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Cadmium yellow
13.	Total soluble solids	18-19
14.	Acidity	0.19-0.20%
15.	Presence of fiber	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	28 grams
2.	Average size of stone LxBxT	4-5x 3-4 x 2-3 cm
3.	Length of fiber on ventral end	Very low, scanty on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium, get effected by winter frost
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However,

can be controlled by adopting the effective plant protection measures.

6. Resistance to diseases — No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

7. Distinguished traits — Late season maturing variety, highly accepted by the local consumers especially for juice purpose. High yielding culminating better returns for the growers.



Leaf of Early Gold



Inflorescence of Early Gold



Fruit of Early Gold

2. MORPHOLOGICAL DESCRIPTION OF MID SEASON MATURING MANGO

2.1 CHAUNSA SAMMAR BAHISHT

GENERAL

1.	Variety name	**CHAUNSA SAMMAR BAHISHT**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Developed as chance seedling, local germplasm
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Chaunsa Sammar Bahisht
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	Spring / March
9.	Time of fruit availability	2nd week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Spreading, well branched and vigorous

LEAF CHARACTERISTICS

1.	Leaf length/width	25-28x8-10 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Dark green
4.	Fully developed leaf twisting of blade	Present
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Strongly present

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long, medium branched
2.	Inflorescence color of axis and branches	Light pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	11-14 x 6-8 x 6-7 cm
2.	Average weight per fruit	300 – 400 grams
3.	Fruit shape in cross section	Broad elliptic
4.	Color of peel	Canary yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Medium
8.	Fruit beak	Present
9.	Position of shoulders	Ventral higher than dorsal
10.	Sinus of fruit	Present but weak
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	25 – 27%
14.	Acidity	0.17 – 0.18%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	55 grams
2.	Average size of stone LxBxT	8-10 x 5-7 x 2-4 cm
3.	Length of fiber on ventral end	Medium long
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic / poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium

3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Excellent flavor, with great export potential and highly accepted in national as well as international markets.



Leaf of Chaunsa S.B.



Inflorescence of Chaunsa S.B.



Fruit of Chaunsa S.B.

2.2 ROHAAN

GENERAL

1.	Variety name	**ROHAAN**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Chaunsa S.B. x Sensation (MRS-Shujabad)
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Rohaan
7.	Origin of scion	Through hybridization
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium vigorous and semi erect type

LEAF CHARACTERISTICS

1.	Leaf length/width	18-19 x 5-6 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Acuminate
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long and well branched
2.	Inflorescence color of axis and branches	Yellowish green

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	13x14 x 9-10 x 7-8 cm
2.	Average weight per fruit	250-260 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Pale yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Slight shallow
8.	Fruit beak	Weak to absent
9.	Position of shoulders	Ventral higher than the dorsal
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Cadmium yellow
13.	Total soluble solids	25 - 26
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Very scanty

STONE CHARACTERISTICS

1.	Average weight per stone	25 grams
2.	Average size of stone LxBxT	5-6x 3-4 x 2-3 cm
3.	Length of fiber on ventral end	Very short, on ventral edge only
4.	Thickness of endocarp	Sharp
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium

5.	Resistance to insects / pests	Natural resistance against midge and hopper on flowers has been found. However, the rest of insects can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	Natural resistance against Powdery mildew and Blossom blight has been found. However, the rest of diseases can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Mid season maturing variety, highly accepted by the local consumers. Taste better than Chaunsa S.B., fiber free having peculiar flavor.



Leaf of Rohaan



Inflorescence of Rohaan



Fruit of Rohaan

2.3 GHULAB-E-KHAS

GENERAL

1.	Variety name	**GHULAB-E-KHAS**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	**Ghulab-e-Khas**
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	2nd week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, medium vigorous and semi erect

LEAF CHARACTERISTICS

1.	Leaf length/width	18-20x 5-6 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Dark green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Light Pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	9-10 x 8-9 x 7-8 cm
2.	Average weight per fruit	280-300 grams
3.	Fruit shape in cross section	Ovatish round
4.	Color of peel	Lemon yellow with pink ting
5.	Size of lenticels	Medium
6.	Fruit skin	Almost smooth
7.	Stalk cavity	Shallow
8.	Fruit beak	Weak to absent
9.	Position of shoulders	Ventral higher than the dorsal
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	25-26
14.	Acidity	0.19-0.20%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	35 grams
2.	Average size of stone LxBxT	4-5 x 3-4 x 3-4 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium

4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Mid season maturing variety, highly accepted by the local consumers. High yielding culminating better returns for the growers.



Leaf of Ghulab-e-Khas



Inflorescence of Ghulab-e-Khas



Fruit of Ghulab-e-Khas

2.4 BADIA MUNA SYED

GENERAL

1.	Variety name	**BADIA MUNA SYED**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	**Badia Muna Syed**
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, medium vigorous and semi erect

LEAF CHARACTERISTICS

1.	Leaf length/width	15-18 x 5-6 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Obtuse
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Light Pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	8-9 x 7-8 x 6-7 cm
2.	Average weight per fruit	235-240 grams
3.	Fruit shape in cross section	Ovatish round
4.	Color of peel	Sea green
5.	Size of lenticels	Medium
6.	Fruit skin	Almost smooth
7.	Stalk cavity	Shallow
8.	Fruit beak	Weak to absent
9.	Position of shoulders	Ventral higher than the dorsal
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	25-26
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	35 grams
2.	Average size of stone LxBxT	4-5 x 3-4 x 3-4 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However,

		can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Mid season maturing variety, highly accepted by the local consumers. High yielding culminating better returns for the growers.



Leaf of Badia Muna Syed



Inflorescence of Badia Muna Syed



Fruit of Badia Muna Syed

2.5 KENSINGTON PRIDE

GENERAL

1.	Variety name	**KENSINGTON PRIDE**
2.	Breeding center / Institute	Introduced from Australia
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Kensington Pride
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, semi erect to spreading
2.	Leaf length/width	14-15 x 3-4 cm
3.	Leaf shape	Elliptical
4.	Leaf color	Medium green
5.	Fully developed leaf twisting of blade	Medium
6.	Leaf shape of tip	Tapering
7.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long and medium branched at the base.
2.	Inflorescence color of axis and branches	Yellowish pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	9-10 x 7-8 x 6-7 cm
2.	Average weight per fruit	280-285 grams
3.	Fruit shape in cross section	Ovatish round
4.	Color of peel	Greenish yellow with light pink tinge
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Slight
8.	Fruit beak	Medium but obtuse
9.	Position of shoulders	Ventral slightly higher than the dorsal.
10.	Sinus of fruit	Just slight
11.	Skin thickness	Medium
12.	Pulp color	Light yellow
13.	Total soluble solids	17-18 %
14.	Acidity	0.20-0.21%
15.	Presence of fiber	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	35 grams
2.	Average size of stone LxBxT	5-6 x 4-5 x 3-4 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge only
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	90% Polyembrony in Pakistan.

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the

effective plant protection measures.

6. Resistance to diseases — No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

7. Distinguishing characteristics — Mid season maturing variety, good for export purpose where Australia has made the room for its marketing as it is available in Pakistan at the odd time of Australia.



Leaf of Kensington Pride



Inflorescence of Kensington Pride



Fruit of Kensington Pride

2.6 SPRING FELLS

GENERAL

1.	Variety name	**SPRING FELLS**
2.	Breeding center / Institute	Introduced from Florida
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Spring Fells
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd Week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Short growing, medium vigorous and spreading

LEAF CHARACTERISTICS

2.	Leaf length/width	19-20 x 4-5 cm
3.	Leaf shape	Elliptical
4.	Leaf color	Dark green
5.	Fully developed leaf twisting of blade	Medium
6.	Leaf shape of tip	Tapering
7.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium and well branched.
2.	Inflorescence color of axis and branches	Pinkish yellow

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	9-10 x 7-8 x 6-7 cm
2.	Average weight per fruit	280-285 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Sea yellow with light pink tinge
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Slight shallow
8.	Fruit beak	Medium but obtuse
9.	Position of shoulders	Ventral slightly higher than the dorsal
10.	Sinus of fruit	Slight
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	17-18 %
14.	Acidity	0.20-0.21%
15.	Presence of fiber	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	30 grams
2.	Average size of stone LxBxT	3-4 x 3-4 x 2-3 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge only
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Monoembrynoic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the

		effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Mid season maturing variety, low stature plants, good for density plantation and also good for export purpose.



Leaf of Spring Fells



Inflorescence of Spring Fells



Fruit of Spring Fells

2.7 ZAFRAN

GENERAL

1.	Variety name	**ZAFRAN**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling.
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Zafran
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, medium vigorous and semi erect

LEAF CHARACTERISTICS

1.	Leaf length/width	17-18 x 3-4 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Dark green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Obtuse
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Pinkish yellow

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	13-15 x 7-8 x 6-7 cm
2.	Average weight per fruit	230-240 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Yellowish green with light blush
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Slight shallow.
8.	Fruit beak	Present
9.	Position of shoulders	Almost leveled.
10.	Sinus of fruit	Medium
11.	Skin thickness	Medium
12.	Pulp color	Light yellow
13.	Total soluble solids	20-21 %
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	31 grams
2.	Average size of stone LxBxT	5-6 x 4-5 x 3-4 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge only
4.	Thickness of endocarp	Medium
5.	Seed monoembryonic or polyembryonic	Monoembryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting

		the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Mid season maturing variety, having a peculiar fragrance like saffron, medium stature as it is most suitable for density plantation.



Leaf of Zafran



Inflorescence of Zafran



Fruit of Zafran

2.8 BAGAN PHALI

GENERAL

1.	Variety name	**BAGAN PHALI**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Developed as chance seedling, local germplasm
5.	Rootstock name	Monoembryonic unknown seedling
6.	Scion name	Bagan Phali
7.	Origin of scion	Natural through seed
8.	Time of fruit set	From 10th March to 5th April
9.	Time of fruit availability	2nd week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Semi erect to spreading, moderately vigorous and tall

LEAF CHARACTERISTICS

1.	Leaf length/width	14-15 x 4-7 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Medium

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long
2.	Inflorescence color of axis and branches	Pinkish

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	16-17 x 7-9 x 7-8 cm
2.	Average weight per fruit	350 - 360 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Sea green
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Shallow
8.	Fruit beak	Almost absent
9.	Position of shoulders	Ventral higher than the dorsal.
10.	Sinus of fruit	Weak to medium
11.	Skin thickness	Medium
12.	Flesh color	Light yellow
13.	Total soluble solids	19-20
14.	Acidity	0.18 - 0.20%
15.	Presence of fiber	Absent

STONE CHARACTERISTICS

1.	Average weight per stone	45 grams
2.	Average size of stone LxBxT	9-10 x 3-5 x 3-4 cm
3.	Length of fiber on ventral end	Short on ventral edge, sparse.
4.	Thickness of endocarp	Medium
5.	Seed monoembryonic or polyembryonic	Monoembryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the

effective plant protection measures.

6. Resistance to diseases — No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

7. Distinguishing characteristics — Mild flavor, highly accepted by the consumers and has significant capacity in export.



Leaf of Bagan Phali



Inflorescence of Bagan Phali



Fruit of Bagan Phali

2.9 INTIKHAB

GENERAL

1.	Variety name	**INTIKHAB**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Intikhab
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, medium vigorous and semi erect

LEAF CHARACTERISTICS

1.	Leaf length/width	15-18 x 5-6 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Obtuse
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Greenish yellow with light pink branches.

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	9-10 x 7-8 x 6-7 cm
2.	Average weight per fruit(g)	240-250
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Maize yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Weak to absent
9.	Position of shoulders	Ventral slightly higher than the dorsal.
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Light yellow
13.	Total soluble solids	24-25 %
14.	Acidity	0.18-0.19%
15.	Fruit fiber beneath the skin	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	30 grams
2.	Average size of stone LxBxT	5-6 x 4-5 x 4-5 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting

		the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Mid season maturing variety, highly accepted by the local consumers. High yielding culminating better returns for the growers.



Leaf of Intikhab



Inflorescence of Intikhab



Fruit of Intikhab

2.10 ANMOLE

GENERAL

1.	Variety name	**ANMOLE**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Anmole
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of July – 1st week of August

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Tall growing, moderately vigorous, semi erect type

LEAF CHARACTERISTICS

1.	Leaf length/width	18-20 x 5-6 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Acuminate
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long and well branched
2.	Inflorescence color of axis and branches	Greenish yellow

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	5-7 x 5-6 x4-5 cm
2.	Average weight per fruit	225-230 grams
3.	Fruit shape in cross section	Ovatish round
4.	Color of peel	Pale yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Shallow
8.	Fruit beak	Weak to absent
9.	Position of shoulders	Ventral higher than the dorsal.
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	25-26 %
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	30 grams
2.	Average size of stone LxBxT	4-5 x 2-3 x2-3 cm
3.	Length of fiber on ventral end	Medium, on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium

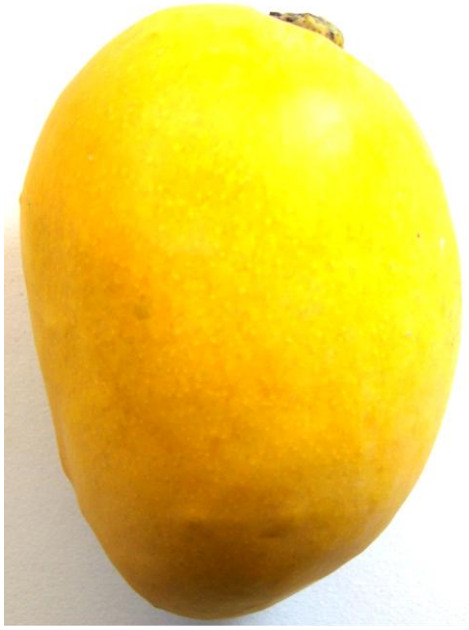
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Mid season maturing variety, highly accepted by the local consumers. High yielding culminating better returns for the growers especially for juice industry.



Leaf of Anmole



Inflorescence of Anmole



Fruit of Anmole

3. MORPHOLOGICAL DESCRIPTION OF LATE SEASON MATURING MANGO

3.1 CHAUNSA SUFAID

GENERAL

1.	Variety name	**CHAUNSA SUFAID**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Selected as chance seedling from District Multan
5.	Rootstock name	Monoembryonic unknown seedling
6.	Scion name	Chaunsa Sufaid
7.	Origin of scion	Through natural crossing
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium branched and medium tall

LEAF CHARACTERISTICS

1.	Leaf length/width	27-30 x 7-10 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Dark green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Present and strong

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long
2.	Inflorescence color of axis and branches	Pinkish yellow

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	10-15 x 8-10 x 6-8 cm
2.	Average weight per fruit	400-550 grams
3.	Fruit shape in cross section	Broad elliptic
4.	Color of peel	Maize yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Present
9.	Position of shoulders	Ventral higher than the dorsal.
10.	Sinus of fruit	Present but weak
11.	Skin thickness	Thick
12.	Pulp color	Whitish yellow
13.	Total soluble solids	23-25%
14.	Acidity	0.18 – 0.19%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	85 grams
2.	Average size of stone LxBxT	7-10 x 3-5 x 2-4 cm
3.	Length of fiber on ventral end	Medium
4.	Thickness of endocarp	Medium
5.	Seed monoembryonic or polyembryonic	Monoembryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Excellent variety for national as well as international marketing being exported to different countries. Highly acceptable by the mango growers due to medium regular in bearing, late in ripening and earning more income for the growers.



Leaf of Chaunsa Sufaid



Inflorescence of Chaunsa Sufaid



Fruit of Chaunsa Sufaid

3.2 GOLDEN

GENERAL

1.	Variety name	**GOLDEN**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Selected from the germplasm developed at Mango Research Station, Shujabad
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	**Golden**
7.	Origin of scion	Through natural crossing
8.	Time of fruit set	From 10th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium branched, medium tall and medium vigorous

LEAF CHARACTERISTICS

1.	Leaf length/width	20-22 x 5-7 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Yellowish green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acuminate
6.	Leaf fragrance	Present but weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium
2.	Inflorescence color of axis and branches	Yellowish pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	10-12 x 6-7 x 5-6 cm
2.	Average weight per fruit	225 – 275 grams
3.	Fruit shape in cross section	Broad elliptic
4.	Color of peel	Cadmium yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Present
9.	Position of shoulders	Ventral higher than the dorsal.
10.	Sinus of fruit	Cadmium yellow
11.	Skin thickness	Thick
12.	Pulp color	Maize yellow
13.	Total soluble solids	23-25%
14.	Acidity	0.18 – 0.19%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	45 grams
2.	Average size of stone LxBxT	5-6 x 3-4 x 2-3 cm
3.	Length of fiber on ventral end	Short
4.	Thickness of endocarp	Medium
5.	Seed monoembryonic / polyembryonic	Monoembryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium

4.	Heat tolerance	Medium
5.	Resistance to insects / pests	High resistance has been found against fruit fly which is major threat for the export of mango.
6.	Resistance to diseases	Medium resistance has been found against Powdery mildew and Blossom blight.
7.	Distinguished traits	Excellent variety for national as well as international marketing as it is naturally resistant to **fruit fly** and **malformation** which is major threat for the export of mango from Pakistan to different countries. Highly acceptable by the mango growers as it is late in ripening and can earn more income for the growers.



Leaf of Golden



Inflorescence of Golden



Fruit of Golden

3.3 HASAAN

GENERAL

1.	Variety name	**HASAAN**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Dusehri x Neelum (MRS-Shujabad)
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Hasaan
7.	Origin of scion	Through hybridization
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing and semi erect type

LEAF CHARACTERISTICS

1.	Leaf length/width	18-19 x 5-6 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Acuminate
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long and well branched
2.	Inflorescence color of axis and branches	Yellowish green

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	14-15 x 10-11 x8-9 cm
2.	Average weight per fruit	350-380 grams
3.	Fruit shape in cross section	Oblongish elliptical
4.	Color of peel	Pale yellow with light pink tinge
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Shallow
8.	Fruit beak	Weak to absent
9.	Position of shoulders	Ventral higher than the dorsal.
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Cadmium yellow
13.	Total soluble solids	25-26 %
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Very scanty

STONE CHARACTERISTICS

1.	Average weight per stone	30 grams
2.	Average size of stone LxBxT	7-8 x 3-4 x 1-2 cm
3.	Length of fiber on ventral end	Very short, on ventral edge only.
4.	Thickness of endocarp	Sharp
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	Natural resistance against midge and hopper on flowers has been found. However, the rest of insects can be

		controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	Natural resistance against Powdery mildew and Blossom blight has been found. However, the rest of diseases can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Late season maturing variety, highly accepted by the local consumers. High yielding culminating better returns for the growers with appealing fruit color giving accent look on the retailer's shelf.



Leaf of Hasaan



Inflorescence of Hasaan



Fruit of Hasaan

3.4 FAJRI

GENERAL

1.	Variety name	**FAJRI**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	Developed as chance seedling, local germplasm
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Fajri
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium tall, medium vigorous and spreading

LEAF CHARACTERISTICS

1.	Leaf length/width	18-20 x 4-6 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Present but weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Medium

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Yellowish pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	15-17x 7-10 x 7-9 cm
2.	Average weight per fruit	350-700 grams
3.	Fruit shape in cross section	Oblong to obliquely oval
4.	Color of peel	Sea green
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth but bumpy
7.	Stalk cavity	Absent
8.	Fruit beak	Almost absent
9.	Position of shoulders	Ventral higher than the dorsal.
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	20 – 22 %
14.	Acidity	0.19 - 0.21%
15.	Presence of fiber	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	56 grams
2.	Average size of stone LxBxT	8-10 x 3-5 x 3-4 cm
3.	Length of fiber on ventral end	Low, long, sparse on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	Medium
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium

5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Excellent flavor, highly accepted by the consumers and has significant volume in export.



Leaf of Fajri



Inflorescence of Fajri



Fruit of Fajri

3.5 KALA CHAUNSA

GENERAL

1.	Variety name	**KALA CHAUNSA**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	**Kala Chaunsa**
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Tall growing, very vigorous, spreading and rounded

LEAF CHARACTERISTICS

1.	Leaf length/width	18-22 x 4-7 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Medium

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Yellowish pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	12-15 x 5-8 x 7-9 cm
2.	Average weight per fruit	250-350 grams
3.	Fruit shape in cross section	Ovatish oblong
4.	Color of peel	Yellowish green
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Almost absent
9.	Position of shoulders	Ventral higher than the dorsal
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Lemon yellow
13.	Total soluble solids	20 – 24 %
14.	Acidity	0.16 - 0.20%
15.	Presence of fiber	Medium to high

STONE CHARACTERISTICS

1.	Average weight per stone	51 grams
2.	Average size of stone LxBxT	8-10 x 3-5 x 2-4 cm
3.	Length of fiber on ventral end	Low, long on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However,

		can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Late maturing variety, highly accepted by the local consumers. High yielding culminating better returns for the growers.



Leaf of Kala Chaunsa



Inflorescence of Kala Chaunsa



Fruit of Kala Chaunsa (SS-I)

3.6 LATE RETAUL

GENERAL

1.	Variety name	**LATE RETAUL**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	**Late Retaul**
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 10th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, semi vigorous and semi erect

LEAF CHARACTERISTICS

1.	Leaf length/width	17-18 x 5-7 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Dark green
4.	Fully developed leaf twisting of blade	Weak
5.	Leaf shape of tip	Acute
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Light green

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	8-10 x 6-8 x 6-7 cm
2.	Average weight per fruit	150-350 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Lemon yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Shallow
8.	Fruit beak	Weak to absent
9.	Position of shoulders	Ventral higher than the dorsal.
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Lemon yellow
13.	Total soluble solids	18-20 %
14.	Acidity	0.18 - 0.22%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	38 grams
2.	Average size of stone LxBxT	5-7x 3-5 x 3-5 cm
3.	Length of fiber on ventral end	Low, abundant on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

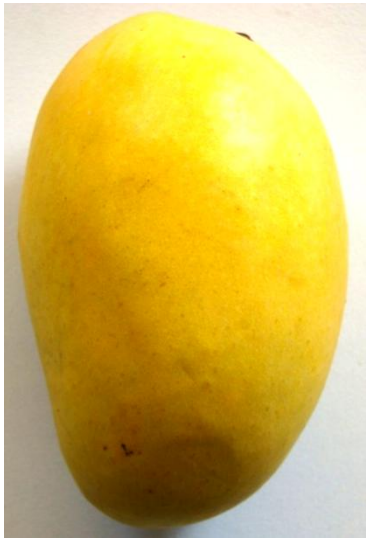
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Late maturing variety, highly accepted by the local consumers. High yielding culminating better returns for the growers.



Leaf of Late Retaul



Inflorescence of Late Retaul



Leaf of Late Retaul

3.7 AAMINIA

GENERAL

1.	Variety name	**AAMINIA**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Aaminia
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, medium vigorous and semi erect

LEAF CHARACTERISTICS

1.	Leaf length/width	15-18 x 5-6 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Obtuse
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Light Pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	8-9 x 7-8 x 6-7 cm
2.	Average weight per fruit	235-240 grams
3.	Fruit shape in cross section	Ovatish round
4.	Color of peel	Pale yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Somewhat rough
7.	Stalk cavity	Shallow
8.	Fruit beak	Weak to absent
9.	Position of shoulders	Ventral higher than the dorsal.
10.	Sinus of fruit	Weak
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	25-26 %
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	30 grams
2.	Average size of stone LxBxT	5-6 x 3-4 x 3-4 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

6. Resistance to diseases

No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

7. Distinguished traits

Late maturing variety, highly accepted by the local consumers. High yielding culminating better returns for the growers. Erect growth habit which favors its density plantation in per unit area.



Leaf of Aaminia



Inflorescence of Aaminia



Fruit of Aaminia

3.8 SHAH PASAND

GENERAL

1.	Variety name	**SHAH PASAND**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Shah Pasand
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, medium vigorous and spreading

LEAF CHARACTERISTICS

2.	Leaf length/width	14-15 x 5-6 cm
3.	Leaf shape	Elliptical
4.	Leaf color	Dark green
5.	Fully developed leaf twisting of blade	Medium
6.	Leaf shape of tip	Obtuse
7.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Greenish yellow

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	9-10 x 6-7 x 5-6 cm
2.	Average weight per fruit	230-240 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Yellowish green
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Prominent
9.	Position of shoulders	Ventral slightly higher than the dorsal.
10.	Sinus of fruit	Strong
11.	Skin thickness	Medium
12.	Pulp color	Light yellow
13.	Total soluble solids	24-25 %
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	33 grams
2.	Average size of stone LxBxT	5-6 x 4-5 x 4-5 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the

effective plant protection measures.

6. Resistance to diseases — No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

7. Distinguished traits — Late season maturing variety, highly accepted by the local consumers especially for juice purpose. High yielding culminating better returns for the growers.



Leaf of Shah Pasand



Inflorescence of Shah Pasand



Fruit of Shah Pasand

3.9 ZARD AALU

GENERAL

1.	Variety name	**ZARD AALU**
2.	Breeding center / Institute	Mango Research Station, Shujabad.
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Zard Aalu
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Short growing, low vigorous and short stature

LEAF CHARACTERISTICS

1.	Leaf length/width	14-15 x 3-4 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Light green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Obtuse
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Pinkish yellow

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	9-10 x 6-7 x 5-6 cm
2.	Average weight per fruit	230-240 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Yellowish green with pink blush
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent but stalk point is raised.
8.	Fruit beak	Not prominent but point only.
9.	Position of shoulders	Ventral slightly higher than the dorsal.
10.	Sinus of fruit	Just slight
11.	Skin thickness	Medium
12.	Pulp color	Light yellow
13.	Total soluble solids	20-21 %
14.	Acidity	0.18-0.19%
15.	Fruit fiber beneath the skin	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	28 grams
2.	Average size of stone LxBxT	4-5x 3-4 x 3-4 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge only
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found.

		However, can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Mid season maturing variety, having a peculiar fragrance, low stature as it is most suitable for density plantation.



Leaf of Zard Aalu



Inflorescence of Zard Aalu



Fruit of Zard Aalu

3.10 TAIMURIA

GENERAL

1.	Variety name	**TAIMURIA**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Taimuria
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, Medium vigorous and semi erect

LEAF CHARACTERISTICS

1.	Leaf length/width	14-15 x 3-4 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Obtuse
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Yellowish green

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	10-11 x 6-7 x 5-6 cm
2.	Average weight per fruit	230-235 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Greenish yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent but stalk point is raised.
8.	Fruit beak	Medium but obtuse
9.	Position of shoulders	Ventral slightly higher than the dorsal
10.	Sinus of fruit	Just slight
11.	Skin thickness	Medium
12.	Pulp color	Light yellow
13.	Total soluble solids	22-24 %
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	30 grams
2.	Average size of stone LxBxT	4-5 x 3-4 x 3-4 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge only
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the

effective plant protection measures.

6. Resistance to diseases — No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

7. Distinguished traits — Late season maturing variety, having a peculiar fragrance, medium stature as it is most suitable for density plantation.



Leaf of Taimuria



Inflorescence of Taimuria



Leaf of Taimuria

3.11 SOBEY DE TING

GENERAL

1.	Variety name	**SOBEY DE TING**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Sobey De Ting
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, Medium vigorous and rounded

LEAF CHARACTERISTICS

1.	Leaf length/width	19-20 x 3-4 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Medium green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Obtuse
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long and medium branched
2.	Inflorescence color of axis and branches	Yellowish green

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	8-9 x 5-6 x 4-5 cm
2.	Average weight per fruit	180-185 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Greenish yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Medium but obtuse
9.	Position of shoulders	Ventral slightly higher than the dorsal.
10.	Sinus of fruit	Just slight
11.	Skin thickness	Medium
12.	Pulp color	Light yellow
13.	Total soluble solids	22-24 %
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Medium

STONE CHARACTERISTICS

1.	Average weight per stone	25 grams
2.	Average size of stone LxBxT	3-4 x 3-4 x 2-3 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge only
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the

effective plant protection measures.

6. Resistance to diseases — No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.

7. Distinguished traits — Late season maturing variety, medium stature as it is most suitable for density plantation and for juice industry.



Leaf of Sobey De Ting



Inflorescence of Sobey De Ting



Fruit of Sobey De Ting

3.12 SENSATION

GENERAL

1.	Variety name	**SENSATION**
2.	Breeding center / Institute	Introduced from Florida
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Sensation
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Short growing, semi erect to spreading and rounded

LEAF CHARACTERISTICS

1.	Leaf length/width	19-20 x 4-5 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Dark green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Tapering
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Long and well branched.
2.	Inflorescence color of axis and branches	Yellowish pink

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	8-9 x 6-7 x 5-6 cm
2.	Average weight per fruit	210-215 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Greenish yellow with light pink tinge.
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent but slightly raised.
8.	Fruit beak	Medium but obtuse
9.	Position of shoulders	Ventral slightly higher than the dorsal.
10.	Sinus of fruit	Slight
11.	Skin thickness	Medium
12.	Pulp color	Pale yellow
13.	Total soluble solids	17-18 %
14.	Acidity	0.20-0.21%
15.	Presence of fiber	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	31 grams
2.	Average size of stone LxBxT	4-5 x 3-4 x 2-3 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge only
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Monoembrynoic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium

5.	Resistance to insects / pests	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Late season maturing variety, low stature plants, good for density plantation and also good for export purpose



Leaf of Sensation



Inflorescence of Sensation



Fruit of Sensation

3.13 POHILOT

GENERAL

1.	Variety name	**POHILOT**
2.	Breeding center / Institute	Mango Research Station, Shujabad
3.	Areas of adaptation	This variety can be grown successfully in the tropical and sub tropical region of Pakistan. In Punjab it is well adapted in Districts of Rahim Yar Khan, Bahawalpur, Muzaffargarh, Multan, Khanewal, Faisalabad and Sahiwal.
4.	Parentage	This variety was developed as a chance seedling
5.	Rootstock name	Mono embryonic unknown seedling
6.	Scion name	Pohilot
7.	Origin of scion	Natural through seed
8.	Time of flowering / fruit set	From 5th March to 5th April
9.	Time of fruit availability	2nd week of August – 2nd week of October

TREE CHARACTERISTICS

1.	Main branch attitude and tree	Medium growing, medium vigorous and spreading

LEAF CHARACTERISTICS

1.	Leaf length/width	20-22 x 3-4 cm
2.	Leaf shape	Elliptical
3.	Leaf color	Dark green
4.	Fully developed leaf twisting of blade	Medium
5.	Leaf shape of tip	Pointed
6.	Leaf fragrance	Weak

FLOWER CHARACTERISTICS

1.	Inflorescence length	Medium long and medium branched
2.	Inflorescence color of axis and branches	Light pinkish yellow

FRUIT CHARACTERISTICS

1.	Average size of mature fruit LxBxT	11-12 x 7-8 x 5-6 cm
2.	Average weight per fruit	230-240 grams
3.	Fruit shape in cross section	Oblongish ovate
4.	Color of peel	Maize yellow
5.	Size of lenticels	Medium
6.	Fruit skin	Smooth
7.	Stalk cavity	Absent
8.	Fruit beak	Present
9.	Position of shoulders	Almost leveled but drooping.
10.	Sinus of fruit	Medium
11.	Skin thickness	Medium
12.	Pulp color	Light yellow
13.	Total soluble solids	21-22 %
14.	Acidity	0.18-0.19%
15.	Presence of fiber	Scanty

STONE CHARACTERISTICS

1.	Average weight per stone	29 grams
2.	Average size of stone LxBxT	4.5x 3-4 x 2-3 cm
3.	Length of fiber on ventral end	Low, scanty on ventral edge only
4.	Thickness of endocarp	Medium
5.	Seed mono embryonic or poly embryonic	Mono embryonic

ENVIRONMENTAL ADAPTABILITY

1.	Drought tolerance	Medium
2.	Salinity tolerance	High
3.	Cold tolerance	Medium
4.	Heat tolerance	Medium
5.	Resistance to insects / pests	No natural resistance has been found. However,

		can be controlled by adopting the effective plant protection measures.
6.	Resistance to diseases	No natural resistance has been found. However, can be controlled by adopting the effective plant protection measures.
7.	Distinguished traits	Late season maturing variety, medium stature as it is most suitable for density plantation and produces uniform fruits best suited for export purpose.



Leaf of Pohilot



Inflorescence of Pohilot



Fruit of Pohilot