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Plant Breeders' Rights Registry

Plant Breeders' Rights Journal



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PLANT BREEDERS' RIGHTS JOURNAL

An official journal

of

**Plant Breeders' Rights Registry
Ministry of National Food Security and Research
Government of Pakistan**

Plant Breeders' Rights Registry G-9/4,
Maive Area, Islamabad, Pakistan

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GRANTS OF THE PLANT BREEDERS' RIGHTS

Following seven varieties have been granted the Plant Breeders' Rights;

S. No.	Crop	Variety	Company/ Organization
1	Cotton	ICS-386	Imperial Crop Sciences (Pvt) Limited, Lahore
2	Rice	Sultan Super Basmati	Rice Research Institute, Kala Shah Kaku, Punjab, Pakistan
3	Rice	Sona Super Basmati	Rice Research Institute, Kala Shah Kaku, Punjab, Pakistan
4	Rice	Vital Super Basmati	Rice Research Institute, Kala Shah Kaku, Punjab, Pakistan
5	Rice	PK 2021 Aromatic	Rice Research Institute, Kala Shah Kaku, Punjab, Pakistan
6	Rice	KSK 111 H	Rice Research Institute, Kala Shah Kaku, Punjab, Pakistan
7	Potato	Alverstone Russet	IPR B.V., Netherlands

According to the section 22 of the PBR Act, 2016, the owner of the protected variety is having following exclusive rights in respect of the protected variety;

- a) Offering for sale or selling or marketing of the reproductive or vegetative propagating material of the protected variety.
- b) Importing the reproductive or vegetative propagating material of the protected variety into Pakistan or exporting it from Pakistan.
- c) Conditioning or multiplying the reproductive or vegetative propagating material of the protected variety.
- d) Carrying out any of the acts identified in clauses (a), (b) and (c) in relation to an Essentially Derived Variety (EDV) provided that the protected variety is not itself an EDV.
- e) Instigating or promoting any of the acts identified in clause(a), (b), (c) and (d).
- f) Authorizing any person to produce, sell, market or otherwise deal with the protected variety.
- g) Stocking for any of the purposes mentioned in clauses (a) to (d).

Moreover, consent from the owner is required for usage of the protected variety in development of an EDV.

In case of proved violation of any Plant Breeder Right, the court may order compensation to the owner of rights, fine not exceeding the quantum of loss caused or benefit derived from

such violation.

The court may grant an injunction and at the opinion of the plaintiff, either damages or a share of the profits.

DETAILS OF PBR PROTECTED PLANT VARIETIES

1. Application No.: PBRR-Cotton-112/24

Name of the Applicant: Imperial Crop Sciences (Pvt) Ltd., Lahore
Institute: Imperial Crop Sciences (Pvt) Ltd., Lahore
Name of Breeder(s): i. Dr. Khalid Hameed
ii. Muhammad Shahbaz
Name of Co-breeder(s):
Application for: New Plant Variety
Denomination of Variety: ICS-386
Crop: Cotton (*Gossypium hirsutum* L.)
Type of Variety: OPV
Name of Initial Variety (in case of EDV): Not Applicable
Salient features:

CHARACTERISTICS	DESCRIPTION
Comparable variety(s)	MNH-886, IUB-13
Origin	Local
Breeding method	Hybridization
Area of adaptation	All cotton growing areas of Pakistan
Type of variety	Upland Cotton
Days to maturity	140-160 Days
Maturity	Medium
Earlier than	MNH-886, IUB-13
Later than	None
Days to opening (50%)	103-115 days
SEEDLINGS CHARACTERISTICS	
Seedling length (cm)	6-10
Seedling colour	Dark Green

Foliage spot	Absent
PLANT CHARACTERISTICS	
Growth habit	Spreading
Plant height (cm)	90-140
Plant shape	Spreading
Fruit branch type	Cluster
Monopodia attitude	Semi erect
Sympodia attitude	Semi erect
Nodes to 1st monopodia	4-5
Monopodial plant	2-4
Sympodial plant	21-34
Stem pigmentation	Weak
Stem tip hairiness	Sparse
Bud gossypol	Low
LEAF CHARACTERISTICS	
Foliage density	Intermediate
Leaf colour	Green
Leaf length (cm)	11-14
Leaf width (cm)	16-19
Petiole length (cm)	13-17
Petiole anthocyanin	present
Leaf attitude	Semi erect
Leaf type	Normal
Leaf appearance	Flat
Leaf nectaries	Present
Leaf hairiness	Sparse
FLOWER CHARACTERISTICS	
Days to flowering (50%)	55-65
Flower duration	Medium
Flower size	Medium
Sepal pigmentation	Absent

Petal spot	Absent
Nectaries	Absent
Petal colour	Creamy
Anther colour	Creamy
Stamen density	Semi dense
Position of stigma	Exerted
Stigma exertion (mm)	8-10
Stigma height (mm)	20-24
Calyx size	Large/Broad
BOLL CHARACTERISTICS	
Boll bearing habit	Solitary
Boll shape	Round
Boll colour	Green
Boll size (boll width at Maximum point)	Medium
Beak size	Short
Boll length (cm)	2.9-3.2
Boll breadth (cm)	2.2-2.6
Boll broad at	Middle
Boll surface	Roughly Pit
Peduncle length (cm)	1.3
Gossypol	High
Bracteole length	short
Bracteole width	Medium
Boll/plant	32-42
Boll opening	Semi Open
Boll weight (g)	3.5
Yield (seed cotton) kg/acre	1800-2 100
Yield (lint) kg/acre	600-800
SEED CHARACTERISTICS	
Seed size	Medium
Seed shape	Oblong

Seed length (mm)	6-8
Seed width (mm)	3-4
Seed index (g)	6.53
Seed coat colour	Dark brown
Seed fuzz	Fuzzy
Fuzz colour	Dusky white
Oil content (%)	10-15
FIBRE CHARACTERISTICS	
Fiber colour	White
G.o.t i lint (%)	40.2
Staple length (mm)	28.8
Fiber fineness (micronaire Value μg /inch)	4.6
Fiber strength (g/tex)	35.3
Lint index (g)	5.2
Uniformity (%)	95
Spinning index	45
Fiber length group	Long (28.5-30.5)
Environmental adaptability	Stable (resilient)
Drought tolerant	Tolerant
Acid soil	Tolerant
Heat tolerant	Most Tolerant
Resistant to insect pest	Tolerant to heliothis, Spotted boll worm, Army worm and Tolerant to Pink boll worm
Resistant to diseases	Tolerant to CLCuV diseases
Distinguishing characteristics	Glyphosate Tolerant and tolerant to pink bollworms Fluffy Opening



Form PB-10
[See Rule 13(1)]

Serial No. 000055

Government of Pakistan Plant Breeders' Rights Registry



CERTIFICATE OF PLANT VARIETY PROTECTION

Registration No. 55-COT/112-2024 Dated: 11-07-2024
Crop: Cotton Denomination of Variety: ICS-386
Type: Registered Conventional/GMC: GMC
OP/Hybrid: OP Local/Exotic: Local

As declared

- That Dr. Khalid Hameed & Muhammad Shahbaz

has/have developed New plant variety and also that they are the true breeder(s).

- By virtue of an application that has been made to grant plant variety protection rights and that plant variety has particularly been described with respect to its distinctive features and a suitable denomination.
- There is no objection to grant plant variety protection rights of the said variety under the Plant Breeders' Rights Act, 2016 in favour of:

IMPERIAL CROP SCIENCES (PRIVATE) LIMITED, LAHORE

امپیریل کراپ سائنسز (پرائیویٹ) لمیٹڈ، لاہور

By virtue of this certificate, the above mentioned owner(s) of the rights have under the Plant Breeders' Rights Act, 2016, the exclusive right to produce, sell, market, distribute, import or export the variety (seed) or propagating material for a term of twenty years starting from the 11th day of July 2024 and expiring on the 10th day of July 2044



[Signature]

Registrar _____
Date of Grant 17-04-2025 _____

2. Application No.: PBRR-Rice-100/23

Name of the Applicant: Principal Scientist, Rice Research Institute, Kala Shah Kaku

Institute: Rice Research Institute, Kala Shah Kaku

Name of Breeder(s): i. Syed Sultan Ali
ii. Dr. Muhammad Sabar
iii. Dr. Muhammad Ijaz
iv. Awais Riaz
v. Rana Ahsan Raza Khan

Name of Co-breeder(s):

Application for: New Plant Variety

Denomination of Variety: Sultan Super Basmati

Crop: Rice (*Oryza sativa* L.)

Type of Variety: OPV

Name of Initial Variety (in case of EDV): Not Applicable

Salient features:

CHARACTERISTICS	DESCRIPTION
Planting time	07-20 July
Earlier than	PK-1121 Aromatic
Later than	Kissan Basmati
Maturity duration	Medium
Suitable for sowing	Punjab
Photo sensitivity	Sensitive
Suitable for nursery transplanting	04 Weeks nursery
Type of variety	Fine
SEEDLING CHARACTERISTICS	
Seedling colour	Light Green
Seedling height (cm)	30
Coleoptile colour	Colourless
STEM CHARACTERISTICS	
Plant height (cm) Stem+Panicle	125-130
Stem height	Tall
Taller than	Kissan Basmati

Shorter than	PK 2021 Aromatic
Stem attitude	erect
Stem length (from ground to panicle base)	95-100
Stem thickness (mm)	5.2-5.8
Stem stiffness	Semi stiff
No. nodes/ stem	5-6
Internode colour	Light Yellow
Tiller/ plant	20-25
Matured straw colour	Straw
LEAF CHARACTERISTICS	
Leaf length (cm)	51-55
Leaf length of blade	Long
Leaf width (cm)	0.8-1.1
Leaf width	narrow
Leaf colour	Green
Leaf anthocyanin	Absent
Distribution of anthocyanin	Absent
Leaf pubescence	Absent
Leaf sheath colour	Green
Leaf senescence	Intermediate
Ligule colour	Papery
Ligule length (leaf below flag leaf) (mm)	10-12
Ligule shape	2-cleft
Leaf auricle	Present
Auricle colour	Pale Green
Collar colour	Pale Green
Flag leaf attitude	Semi erect
Flag leaf length (cm)	40-44
Flag leaf width (cm)	1.2-1.5
PANICLE CHARACTERISTICS	
Days to 50% heading	80-85

Panicle length of main axis	25-28
Panicle type	Open
Spikelet density	Semi Dense
Panicle curvature of main axis	Semi straight
Panicle exertion	Well Exerted
Branches/ panicle	Moderate
Secondary branches	Present
Intensity of Secondary branches	Light
Attitude of branches	Drooping
Awning at flowering	Short and partly
Awning at maturity	Short and partly
Awn colour at flowering	Straw
Awn colour at maturity	Straw
Spikelets/ panicle	125-130
Sterility	Very Low
Shattering	Low
Threshability	Easy
SEED CHARACTERISTICS	
Seed awning	Absent
Stigma colour	White
Apiculus colour (anthesis)	Straw
Apiculus colour (maturity)	Straw
Husk colour	Straw
Husk pigmentation	Weak
Husk pubescence	Medium
Pubescence length	Short
Seed shape	Spear
Seed length (mm)	13.2-13.9
Seed width (mm)	2.0-2.2
Seed thickness (mm)	1.9-2.1
Seed Size	Extra Long

1000, seed weight (g)	29.5-30.5
Seed dormancy	Low
Sterile lemma colour	Straw
Average Yield (kg/ acre)	1659
KERNAL CHARACTERISTICS	
Kernal size	Extra Long
Kernal length/ thickness (mm)	9.2/ 1.80
LB ratio	5.1
Kernal colour	Light Yellow
Kernal appearance	Translucent
Kernal Chalkiness	Present
Chalki Position	Abdominal
Kernal quality	Fine
Kernal Aroma	Strong
Cooking quality	Good



Form PB-10
[See Rule 13(1)]

Serial No. 000056

Government of Pakistan Plant Breeders' Rights Registry



CERTIFICATE OF PLANT VARIETY PROTECTION

Registration No. 56-RC/100-2023

Dated: 14-12-2023

Crop: Rice

Denomination of Variety: Sultan Super Basmati

Type: Registered

Conventional/GMC: Conventional

OP/Hybrid: OP

Local/Exotic: Local

As declared

- That Syed Sultan Ali, Dr. Muhammad Sabar, Dr. Muhammad Ijaz, Awais Riaz & Rana Ahsan Raza Khan

has/have developed new plant variety and also that they are the true breeder(s).

- By virtue of an application that has been made to grant plant variety protection rights and that plant variety has particularly been described with respect to its distinctive features and a suitable denomination.
- There is no objection to grant plant variety protection rights of the said variety under the Plant Breeders' Rights Act, 2016 in favour of:

RICE RESEARCH INSTITUTE, KALA SHAH KAKU

رائس ریسرچ انسٹیٹیوٹ، کالا شاہ کاکو

By virtue of this certificate, the above mentioned owner(s) of the rights have under the Plant Breeders' Rights Act, 2016, the exclusive right to produce, sell, market, distribute, import or export the variety (seed) or propagating material for a term of twenty years starting from the 14th day of December 2023 and expiring on the 13th day of December 2043



Registrar

Date of Grant 02-05-2025

3. Application No.: PBRR-Rice-101/23

Name of the Applicant: Principal Scientist, Rice Research Institute, Kala Shah Kaku

Institute: Rice Research Institute, Kala Shah Kaku

Name of Breeder(s): i. Syed Sultan Ali
ii. Dr. Muhammad Sabar
iii. Dr. Muhammad Ijaz
iv. Tahir Latif
v. Rana Ahsan Raza Khan

Name of Co-breeder(s):

Application for: New Plant Variety

Denomination of Variety: Sona Super Basmati

Crop: Rice (*Oryza sativa* L.)

Type of Variety: OPV

Name of Initial Variety (in case of EDV): Not Applicable

Salient features:

CHARACTERISTICS	DESCRIPTION
Planting time	07-20 July
Earlier than	Super Basmati
Later than	Kissan Basmati
Maturity duration	Medium
Suitable for sowing	Punjab
Photo sensitivity	sensitive
Suitable for N. transplanting	04 weeks nursery
Type of variety	Fine
SEEDLING CHARACTERISTICS	
Seedling colour	green
Seedling height (cm)	30
Coleoptile colour	colourless
STEM CHARACTERISTICS	
Plant height (cm) Stem+Panicle	130-135
Stem height	tall
Taller than	Kissan Basmati

Shorter than	Basmati 515
Stem attitude	Semi erect
Stem length (from ground to panicle base)	100-105
Stem thickness (mm)	5.0-5.2
Stem stiffness	Semi stiff
No. nodes/ stem	4-5
Internode colour	Light Yellow
Tiller/ plant	17-21
Matured straw colour	straw
LEAF CHARACTERISTICS	
Leaf length (cm)	55-60
Leaf length of blade	Long
Leaf width (cm)	0.75-0.85
Leaf width	Narrow
Leaf colour	Green
Leaf anthocyanin	Absent
Distribution of anthocyanin	Absent
Leaf pubescence	Absent
Leaf sheath colour	Green
Leaf senescence	Intermediate
Ligule colour	papery
Ligule length (leaf below flag leaf) (mm)	18-20
Ligule shape	2-cleft
Leaf auricle	Present
Auricle colour	Pale Green
Collar colour	Pale Green
Flag leaf attitude	Erect
Flag leaf length (cm)	35-40
Flag leaf width (cm)	1.4-1.6
PANICLE CHARACTERISTICS	
Days to 50% heading	80

Panicle length of main axis	28-31
Panicle type	Medium compact
Spikelet density	Dense
Panicle curvature of main axis	deflexed
Panicle exertion	Well exerted
Branches/ panicle	Moderate
Secondary branches	Present
Intensity of Secondary branches	Light
Attitude of branches	Semi erect
Awning at flowering	Short and Partial
Awning at maturity	Short and Partial
Awn colour at flowering	Straw
Awn colour at maturity	Straw
Spikelets/ panicle	110-115
Sterility	Low
Shattering	Low
Threshability	Easy
SEED CHARACTERISTICS	
Seed awning	Absent
Stigma colour	white
Apiculus colour (anthesis)	Straw
Apiculus colour (maturity)	Straw
Husk colour	Straw
Husk pigmentation	Absent
Husk pubescence	Sparse
Pubescence length	Short
Seed shape	Spear
Seed length (mm)	2.5-13.5
Seed width (mm)	2.0-2.2
Seed thickness (mm)	1.65-1.75
Seed Size	Extra long

1000, seed weight (g)	28-30
Seed dormancy	Low
Sterile lemma colour	Straw
Average Yield (kg/ acre)	1942.00
KERNAL CHARACTERISTICS	
Kernal size	Extra Long
Kernal length/ thickness (mm)	9.35/ 1.88
LB ratio	4.9
Kernal colour	White
Kernal appearance	Translucent
Kernal Chalkiness	Present
Chalki Position	Abdominal
Kernal quality	Very fine
Kernal Aroma	Medium
Cooking quality	excellent



Form PB-10
[See Rule 13(1)]

Serial No. 000057

Government of Pakistan Plant Breeders' Rights Registry



CERTIFICATE OF PLANT VARIETY PROTECTION

Registration No. 57-RC/101-2023	Dated: 14-12-2023
Crop: Rice	Denomination of Variety: Sona Super Basmati
Type: Registered	Conventional/GMC: Conventional
OP/Hybrid: OP	Local/Exotic: Local

As declared

- That Syed Sultan Ali, Dr. Muhammad Sabar, Dr. Muhammad Ijaz, Tahir Latif & Rana Ahsan Raza Khan

has/have developed new plant variety and also that they are the true breeder(s).

- By virtue of an application that has been made to grant plant variety protection rights and that plant variety has particularly been described with respect to its distinctive features and a suitable denomination.
- There is no objection to grant plant variety protection rights of the said variety under the Plant Breeders' Rights Act, 2016 in favour of:

RICE RESEARCH INSTITUTE, KALA SHAH KAKU

رائس ریسرچ انسٹی ٹیوٹ، کالا شاہ کاکو

By virtue of this certificate, the above mentioned owner(s) of the rights have under the Plant Breeders' Rights Act, 2016, the exclusive right to produce, sell, market, distribute, import or export the variety (seed) or propagating material for a term of twenty years starting from the 14th day of December 2023 and expiring on the 13th day of December 2043



Registrar

Date of Grant 02-05-2025

4. Application No.: PBRR-Rice-102/23

Name of the Applicant: Principal Scientist, Rice Research Institute, Kala Shah Kaku

Institute: Rice Research Institute, Kala Shah Kaku
i. Dr. Muhammad Sabar
ii. Syed Sultan Ali

Name of Breeder(s): iii. Dr. Muhammad Ijaz
iv. Hira Saher
v. Fariha Shahzadi

Name of Co-breeder(s):

Application for: New Plant Variety

Denomination of Variety: Vital Super Basmati

Crop: Rice (*Oryza sativa* L.)

Type of Variety: OPV

Name of Initial Variety (in case of EDV): Not Applicable

Salient features:

CHARACTERISTICS	DESCRIPTION
Planting time	07-20 July
Earlier than	Pk-1121 Aromatic
Later than	Kissan Basmati
Maturity duration	Medium
Suitable for sowing	Punjab
Photo sensitivity	sensitive
Suitable for N. transplanting	Punjab
Type of variety	Fine
SEEDLING CHARACTERISTICS	
Seedling colour	Green
Seedling height (cm)	30
Coleoptile colour	Colourless
STEM CHARACTERISTICS	
Plant height (cm) Stem+Panicle	130-135
Stem height	Tall
Taller than	Kissan Basmati

Shorter than	Basmati-515
Stem attitude	Semi erect
Stem length (from ground to panicle base)	100-105
Stem thickness (mm)	5.5-6.0
Stem stiffness	Semi stiff
No. nodes/ stem	5-6
Internode colour	Light yellow
Tiller/ plant	15-18
Matured straw colour	Straw
LEAF CHARACTERISTICS	
Leaf length (cm)	55-60
Leaf length of blade	Medium
Leaf width (cm)	0.75-0.80
Leaf width	Narrow
Leaf colour	green
Leaf anthocyanin	absent
Distribution of anthocyanin	absent
Leaf pubescence	Sparse
Leaf sheath colour	Green
Leaf senescence	Early
Ligule colour	Paper
Ligule length (leaf below flag leaf) (mm)	10-13
Ligule shape	2-cleft
Leaf auricle	Present
Auricle colour	green
Collar colour	green
Flag leaf attitude	Semi erect
Flag leaf length (cm)	43-47
Flag leaf width (cm)	1.0-1.4
PANICLE CHARACTERISTICS	
Days to 50% heading	75-80

Panicle length of main axis	31-35
Panicle type	open
Spikelet density	Semi dense
Panicle curvature of main axis	Deflexed
Panicle exertion	Well exerted
Branches/ panicle	Moderate
Secondary branches	Present
Intensity of Secondary branches	Light
Attitude of branches	Drooping
Awning at flowering	Short and partly
Awning at maturity	Short and partly
Awn colour at flowering	Straw
Awn colour at maturity	Straw
Spikelets/ panicle	150-160
Sterility	Very low
Shattering	Low
Threshability	Easy
SEED CHARACTERISTICS	
Seed awning	Absent
Stigma colour	White
Apiculus colour (anthesis)	Straw
Apiculus colour (maturity)	Brown
Husk colour	Straw
Husk pigmentation	Absent
Husk pubescence	Sparse
Pubescence length	Short
Seed shape	Semi crescent
Seed length (mm)	12.5-13.5
Seed width (mm)	1.85-1.95
Seed thickness (mm)	1.7-1.9
Seed Size	Extra long

1000, seed weight (g)	22.7
Seed dormancy	Low
Sterile lemma colour	Straw
Average Yield (kg/ acre)	1821
KERNAL CHARACTERISTICS	
Kernal size	Extra long
LB ratio	4.5
Kernal colour	White
Kernal appearance	Translucent
Kernal Chalkiness	Absent
Kernal quality	Fine
Kernal aroma	Strong
Cooking quality	Good



Form PB-10
[See Rule 13(1)]

Serial No. 000058

Government of Pakistan Plant Breeders' Rights Registry



CERTIFICATE OF PLANT VARIETY PROTECTION

Registration No. 58-RC/102-2023

Dated: 14-12-2023

Crop: Rice

Denomination of Variety: Vital Super Basmati

Type: Registered

Conventional/GMC: Conventional

OP/Hybrid: OP

Local/Exotic: Local

As declared

- That Dr. Muhammad Sabar, Syed Sultan Ali, Dr. Muhammad Ijaz, Hira Saher & Fariha Shahzadi

has/have developed new plant variety and also that they are the true breeder(s).

- By virtue of an application that has been made to grant plant variety protection rights and that plant variety has particularly been described with respect to its distinctive features and a suitable denomination.
- There is no objection to grant plant variety protection rights of the said variety under the Plant Breeders' Rights Act, 2016 in favour of:

RICE RESEARCH INSTITUTE, KALA SHAH KAKU

رائس ریسرچ انسٹی ٹیوٹ، کالا شاہ کاکو

By virtue of this certificate, the above mentioned owner(s) of the rights have under the Plant Breeders' Rights Act, 2016, the exclusive right to produce, sell, market, distribute, import or export the variety (seed) or propagating material for a term of twenty years starting from the 14th day of December 2023 and expiring on the 13th day of December 2043



Registrar

Date of Grant 02-05-2025

5. Application No.: PBRR-Rice-103/24

Name of the Applicant: Principal Scientist, Rice Research Institute, Kala Shah Kaku

Institute: Rice Research Institute, Kala Shah Kaku

Name of Breeder(s): i. Syed Sultan Ali
ii. Ch. Muhammad Rafiq
iii. Dr. Muhammad Akhter
iv. Tahir Latif
v. Muhammad Iqbal
vi. Dr. Muhammad Sabar
vii. Rana Ahsan Raza Kahn

Name of Co-breeder(s):

Application for: New Plant Variety

Denomination of Variety: PK 2021 Aromatic

Crop: Rice (*Oryza sativa* L.)

Type of Variety: OPV

Name of Initial Variety (in case of EDV): Not Applicable

Salient features:

CHARACTERISTICS	DESCRIPTION
Planting time	07-20 July
Earlier than	PK 1121 Aromatic
Later than	Kissan Basmati
Maturity duration	late
Suitable for sowing	Medium
Photo sensitivity	Semi sensitive
Suitable for N. transplanting	04 weeks nursery
Type of variety	Fine
SEEDLING CHARACTERISTICS	
Seedling colour	Green
Seedling height (cm)	30-35
Coleoptile colour	Colouress
STEM CHARACTERISTICS	
Plant height (cm) Stem+Panicle	140-145
Stem height	Tall

Taller than	Super Basmati
Shorter than	Basmati 370
Stem attitude	Erect
Stem length (from ground to panicle base)	110-115
Stem thickness (mm)	4.9-5.3
Stem stiffness	Semi stiff
No. nodes/ stem	5-6
Internode colour	Light yellow
Tiller/ plant	22-24
Matured straw colour	Straw
LEAF CHARACTERISTICS	
Leaf length (cm)	60-65
Leaf length of blade	Medium
Leaf width (cm)	0.8-1.0
Leaf width	Narrow
Leaf colour	Green
Leaf anthocyanin	Absent
Distribution of anthocyanin	Absent
Leaf pubescence	Absent
Leaf sheath colour	Green
Leaf senescence	Intermediate
Ligule colour	Papery
Ligule length (leaf below flag leaf) (mm)	9-11
Ligule shape	2-cleft
Leaf auricle	Present
Auricle colour	Pale green
Collar colour	Pale green
Flag leaf attitude	Semi erect
Flag leaf length (cm)	45-50
Flag leaf width (cm)	1.4-1.8
PANICLE CHARACTERISTICS	

Days to 50% heading	78-83
Panicle length of main axis	29-33
Panicle type	Medium compact
Spikelet density	Semi dense
Panicle curvature of main axis	Deflexed
Panicle exertion	Well exerted
Branches/ panicle	Moderate
Secondary branches	Present
Intensity of Secondary branches	Weak
Attitude of branches	Semi erect
Awning at flowering	Short and partly
Awning at maturity	Short and partly
Awn colour at flowering	Straw
Awn colour at maturity	Straw
Spikelets/ panicle	130-135
Sterility	Very low
Shattering	Low
Threshability	Easy
SEED CHARACTERISTICS	
Seed awning	Absent
Stigma colour	White
Apiculus colour (anthesis)	White
Apiculus colour (maturity)	Straw
Husk colour	Straw
Husk pigmentation	Absent
Husk pubescence	Sparse
Pubescence length	short
Seed shape	Spear
Seed length (mm)	12.0-12.5
Seed width (mm)	2.0-2.2
Seed thickness (mm)	1.7-1.8

Seed Size	Extra long
1000, seed weight (g)	25-26
Seed dormancy	Low
Sterile lemma colour	Straw
Average Yield (kg/ acre)	1640
KERNAL CHARACTERISTICS	
Kernal size	Extra long
Kernal length/ thickness (mm)	8.4/ 1.9
LB ratio	4.4
Kernal colour	Off white
Kernal appearance	Translucent
Kernal Chalkiness	Absent
Kernal quality	Fine
Kernal aroma	Medium
Cooking quality	Good



Form PB-10
[See Rule 13(1)]

Serial No. 000059

Government of Pakistan Plant Breeders' Rights Registry



CERTIFICATE OF PLANT VARIETY PROTECTION

Registration No. 59-RC/103-2024	Dated:	01-01-2024
Crop: Rice	Denomination of Variety: PK 2021 Aromatic	
Type: Registered	Conventional/GMC: Conventional	
OP/Hybrid: OP	Local/Exotic: Local	

As declared

- That Syed Sultan Ali, Ch. Muhammad Rafiq, Dr. Muhammad Akhter, Tahir Latif, Muhammad Iqbal, Dr. Muhammad Sabar & Rana Ahsan Raza Khan

has/have developed new plant variety and also that they are the true breeder(s).

- By virtue of an application that has been made to grant plant variety protection rights and that plant variety has particularly been described with respect to its distinctive features and a suitable denomination.
- There is no objection to grant plant variety protection rights of the said variety under the Plant Breeders' Rights Act, 2016 in favour of:

RICE RESEARCH INSTITUTE, KALA SHAH KAKU

رائس ریسرچ انسٹیٹیوٹ، کالا شاہ کاکو

By virtue of this certificate, the above mentioned owner(s) of the rights have under the Plant Breeders' Rights Act, 2016, the exclusive right to produce, sell, market, distribute, import or export the variety (seed) or propagating material for a term of twenty years starting from the 01st day of January 2024 and expiring on the 31st day of December 2043



Registrar

Date of Grant 02-05-2025

6. Application No.: PBRR-Rice-104/24

Name of the Applicant: Principal Scientist, Rice Research Institute, Kala Shah Kaku

Institute: Rice Research Institute, Kala Shah Kaku

Name of Breeder(s): i. Syed Sultan Ali
ii. Dr. Muhammad Sabar
iii. Dr. Muhammad Akhter
iv. Tahir Latif
v. Tahira Bibi
vi. Misbah Riaz
vii. Zulqarnain Haider

Name of Co-breeder(s):

Application for: New Plant Variety

Denomination of Variety: KSK 111H

Crop: Rice (*Oryza sativa* L.)

Type of Variety: OPV

Name of Initial Variety (in case of EDV): Not Applicable

Salient features:

CHARACTERISTICS	DESCRIPTION
Planting time	07-20 July
Earlier than	Super Basmati
Later than	Kissan Basmati
Maturity duration	Medium
Suitable for sowing	Punjab
Photo sensitivity	intermediate
Suitable for N. transplanting	04 weeks nursery
Type of variety	Fine (long)
SEEDLING CHARACTERISTICS	
Seedling colour	Light green
Seedling height (cm)	30-35
Coleoptile colour	Colourless
STEM CHARACTERISTICS	
Plant height (cm) Stem+Panicle	118-122
Stem height	Medium

Taller than	Kissan Basmati
Shorter than	Basmati 515
Stem attitude	Semi erect
Stem length (from ground to panicle base)	92-96 cm
Stem thickness (mm)	< 0.40 (cm)
Stem stiffness	Semi stiff
No. nodes/ stem	4-5
Internode colour	Light yellow
Tiller/ plant	21-25
Matured straw colour	Straw
LEAF CHARACTERISTICS	
Leaf length (cm)	55-60
Leaf length of blade	Long
Leaf width (cm)	Less than 1
Leaf width	Narrow
Leaf colour	Green
Leaf anthocyanin	absent
Distribution of anthocyanin	absent
Leaf pubescence	absent
Leaf sheath colour	Pale green
Leaf senescence	Late
Ligule colour	Papery
Ligule length (leaf below flag leaf) (mm)	12-14
Ligule shape	2-cleft
Leaf auricle	Present
Auricle colour	Pale green
Collar colour	Pale green
Flag leaf attitude	Semi erect
Flag leaf length (cm)	45-47
Flag leaf width (cm)	1.7-1.8
PANICLE CHARACTERISTICS	

Days to 50% heading	79-83
Panicle length of main axis	26-31
Panicle type	Medium compact
Spikelet density	Semi dense
Panicle curvature of main axis	Semi straight
Panicle exertion	Well exerted
Branches/ panicle	11-14
Secondary branches	Present
Intensity of Secondary branches	Strong
Attitude of branches	Erect to semi erect
Awning at flowering	Short and partly
Awning at maturity	Short at partial
Awn colour at flowering	Purple
Awn colour at maturity	Straw
Spikelets/ panicle	155-165
Sterility	Low
Shattering	Very low
Threshability	Easy
SEED CHARACTERISTICS	
Seed awning	Awned
Stigma colour	Purple
Apiculus colour (anthesis)	Purple
Apiculus colour (maturity)	Dark brown
Husk colour	Straw
Husk pigmentation	Absent
Husk pubescence	Medium
Pubescence length	Short
Seed shape	Semi crescent
Seed length (mm)	9.2-9.8
Seed width (mm)	1.7-1.9
Seed thickness (mm)	1.5-1.6

Seed Size	Long
1000, seed weight (g)	20-22
Seed dormancy	Low
Sterile lemma colour	Straw
Average Yield (kg/ acre)	3642
KERNAL CHARACTERISTICS	
Kernal size	Medium long
Kernal length/ thickness (mm)	7.21/ 1.32
LB ratio	4.2-4.5
Kernal colour	White
Kernal appearance	Translucent
Kernal Chalkiness	Present
Chalki Position	Abdominal
Kernal quality	Fine
Kernal aroma	Strong
Cooking quality	Good



Form PB-10
[See Rule 13(1)]

Serial No. 000060

Government of Pakistan Plant Breeders' Rights Registry



CERTIFICATE OF PLANT VARIETY PROTECTION

Registration No. 60-RC/104-2024	Dated: 01-01-2024
Crop: Rice	Denomination of Variety: KSK 111H
Type: Registered	Conventional/GMC: Conventional
OP/Hybrid: OP	Local/Exotic: Local

As declared

- That Syed Sultan Ali, Dr. Muhammad Sabar, Dr. Muhammad Akhter, Tahir Latif Tahira Bibi, Misbah Riaz & Zulqarnain Haider

has/have developed new plant variety and also that they are the true breeder(s).

- By virtue of an application that has been made to grant plant variety protection rights and that plant variety has particularly been described with respect to its distinctive features and a suitable denomination.
- There is no objection to grant plant variety protection rights of the said variety under the Plant Breeders' Rights Act, 2016 in favour of:

RICE RESEARCH INSTITUTE, KALA SHAH KAKU

رائس ریسرچ انسٹیٹیوٹ، کالا شاہ کاکو

By virtue of this certificate, the above mentioned owner(s) of the rights have under the Plant Breeders' Rights Act, 2016, the exclusive right to produce, sell, market, distribute, import or export the variety (seed) or propagating material for a term of twenty years starting from the 01st day of January 2024 and expiring on the 31st day of December 2043



Registrar

Date of Grant 02-05-2025

7. Application No.: PBRR-Potato-37/21

Name of the Applicant: IPR B.V., Edisonweg 5, 8501 XG Joure, The Netherlands

Institute: HZPC Research B.V.

Name of Breeder(s): IPR B.V., Edisonweg 5, 8501 XG Joure, The Netherlands

Name of Co-breeder(s):

Application for: New Plant Variety

Denomination of Variety: Alverstone Russet

Crop: Potato (*Solanum tuberosum* L.)

Type of Variety: Conventional Crossing

Name of Initial Variety (in case of EDV): Not Applicable

Salient features:

CHARACTERISTICS	DESCRIPTION
Origin	Exotic
Maturity Duration	Medium to long
SPROUT CHARACTERISTICS	
Sprout size	Medium
Sprout shape	Ovoid
Predominant sprout colour	Purple
Sprout pubescence	Strong
Sprout size of tip	Medium
Sprout habit of tip	Closed
ROOT CHARACTERISTICS	
Root number	Medium
Root protrusion	Strong
PLANT CHARACTERISTICS	
Growth habit	Semi erect
Plant height at flowering (cm)	99
Shoot length	long
Shoot height (cm)	97
No. of shoot	Many

STEM CHARACTERISTICS	
Stem type	Leaf type
Stem habit	Semi erect
Stem thickness	Medium
Stem extension	Medium
Stem cross section	Conical
LEAF CHARACTERISTICS	
Leaf size	Large
Leaflet shape	Ovate
Silhouette	Medium
Leaf intensity	Medium
Degree of dissection	Medium
Abaxial leaf pubescence	Pubescence
LEAFLET CHARACTERISTICS	
Leaflet size	Medium
Leaflet width	Medium
Leaflet frequency	Medium
Leaflet waviness	Medium
Leaflet anthocyanin	Absent
Leaflet glossiness	Medium
Midrib frequency	Low
Leaflet terminal	Very Low
Lateral	Nil
INFLORESCENCE CHARACTERISTICS	
size	Medium
Anthocyanin	Medium
FLOWER CHARACTERISTICS	
Flower anthocyanin	Medium
Flower size	Medium
Flower colour	Blue violet
Calyx colour	Green with some purple

Calyx symmetry	Regular
Corolla shape	Pentagonal
Stamen formation	Normal
Style length	Longer than anther
Frequency of fruits	Medium
TUBER CHARACTERISTICS	
Tuber shape	Oval long
Depth of tuber eyes	Medium
Tuber skin texture	Medium
Colour of tuber skin	Yellow
Predominant tuber flesh colour	Yellowish White

NEWS AND EVENTS

PREMIER PLEDGED TO REDUCE TAX ON AGRICULTURAL INPUTS

Prime Minister Shehbaz Sharif said that sustainable reform in the agriculture sector will increase economic development and would ultimately reduce cost of production. He further added that Government is planning to reduce taxes on farm machinery and should try to provide storage facilities for agricultural commodities. There is a proposal that in the upcoming budgets no taxes will be implemented on farms inputs like fertilizer and agricultural chemicals for the betterment of agriculture sector.

PAKISTAN-WORLD BANK: A NEW DECADE COUNTRY PARTNERSHIP FRAMEWORK

A new 10-year country partnership framework (CPF) is under way focusing on facilitating investment of private sector in collaboration with public sector for sustainable growth in energy and water, agriculture, access to finance, manufacturing and digital infrastructure. It is well aligned with the National Economic Transformation Plan Uraan Pakistan. PM Shehbaz Sharif discussed \$20 billion development funding with the World Bank officials.

MANGOES EXPORT TARGET: 125000 TONS

Pakistan is planning to export mangoes from 25th of May 2025 with the objective to ship 125,000 tons worthing about \$100 million, which shows 25% increase from last year.

HANDS-ON TRAININGS ON DUS STUDIES OF WHEAT ACROSS PAKISTAN

To increase the technical expertise of the Breeders and Scientists working on wheat variety development, couple of hands-on training held at different regions across Pakistan

One day hands on training on DUS studies/ Morphological Description of wheat held at Directorate General of Agricultural Research, Sindh. All the Scientists

and Breeders from the Research Institutes of public and private sector and Academia attended the training.

Another hands-on training for Punjab was held at Khanewal for public and private sector Breeders and Scientists by the technical experts of PBRR.

In continuation of the activities for the dissemination of knowledge on Morphological Descriptions, a hands-on training session for Northern areas and Upper Punjab held at National Agricultural Research Center, Islamabad by PBRR in collaboration with the Federal Seed Certification and Registration Department, Islamabad. Participants from the KPK, AJK, PMAS-AAU, BARI and NARC attended two days of hands-on training on the morphological characterizations of wheat varieties.

EVENTS



One day workshop on DUS studies/Morphological description of Wheat at Directorate General Agriculture Research, Sindh - 08/04/2025



One day workshop on DUS studies/Morphological description of Wheat at DUS site Khanewal, Punjab - 10/04/2025



**One day workshop on DUS studies/Morphological description of Wheat at
DUS site NARC, Islamabad - 22/04/2025**



**One day workshop on DUS studies/Morphological description of Wheat at
DUS site NARC, Islamabad - 23/04/2025**