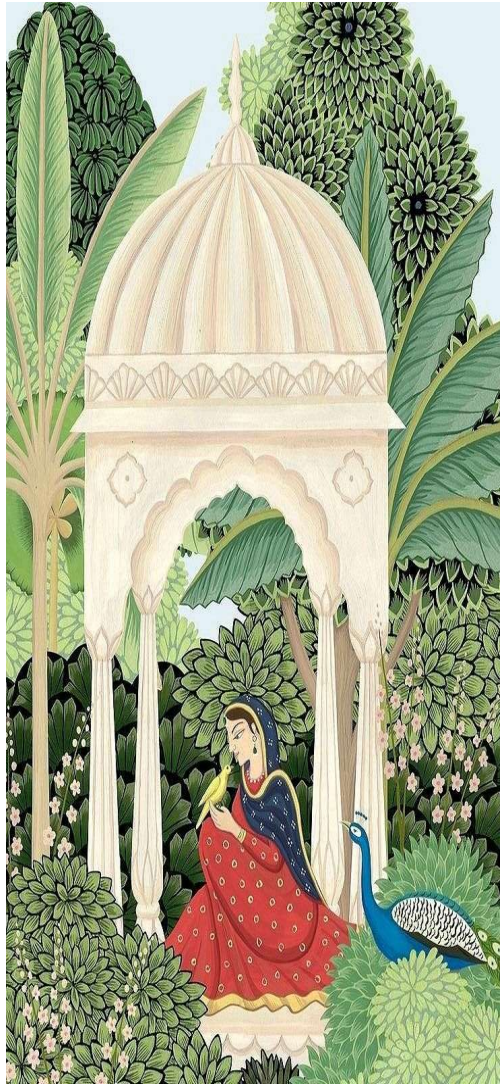




Heritage Grains, Modern Solutions: Pakistan's Basmati journey

Galaxy Rice Mills 
Grown locally, supplied globally



Origan of Basmati

- First mention of Basmati was in the Punjabi poem written by Waris Shah in 1766.
- The first Basmati variety was approved by Kala Shah Kaku in 1933
- First Variety was 370 which is the mother of all modern Basmati varieties
- Grown in the Indo Gangetic plain within a particular climate
- Fed by the waters of glacial melts of the Himalayas and Hindu Kush mountains



Characteristics of Basmati



- Sweet taste
- Exquisite aroma

- ❖ Long slender Kernel
- ❖ High length/breadth ratio

- ❑ High grain integrity



[illegible]

- Became independent in 1947
- 4 provinces
- Population 250m, 5th most populace in the world.
- Punjab (means 5 waters)

Rice map Pakistan

**3.800 million
hectares rice area**

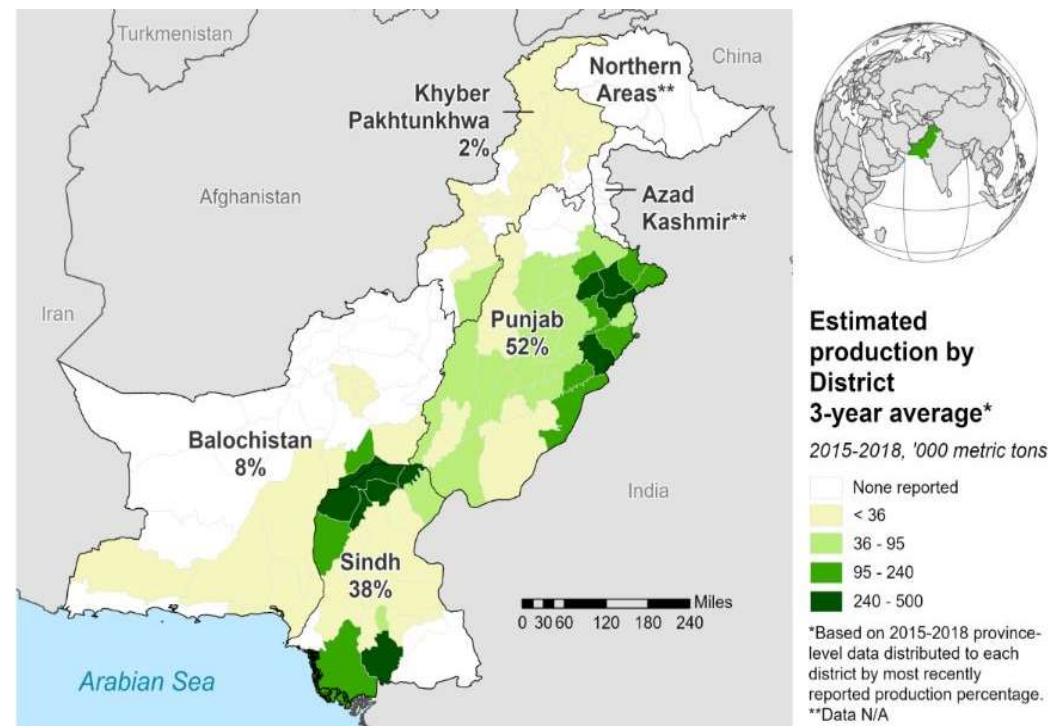
**Pakistan
9th largest rice
producer**

**2nd to Wheat in
acreage & 2nd to
cotton in export.**

**4th largest rice
exporter in the
world**

**Global share of
trade 11%**

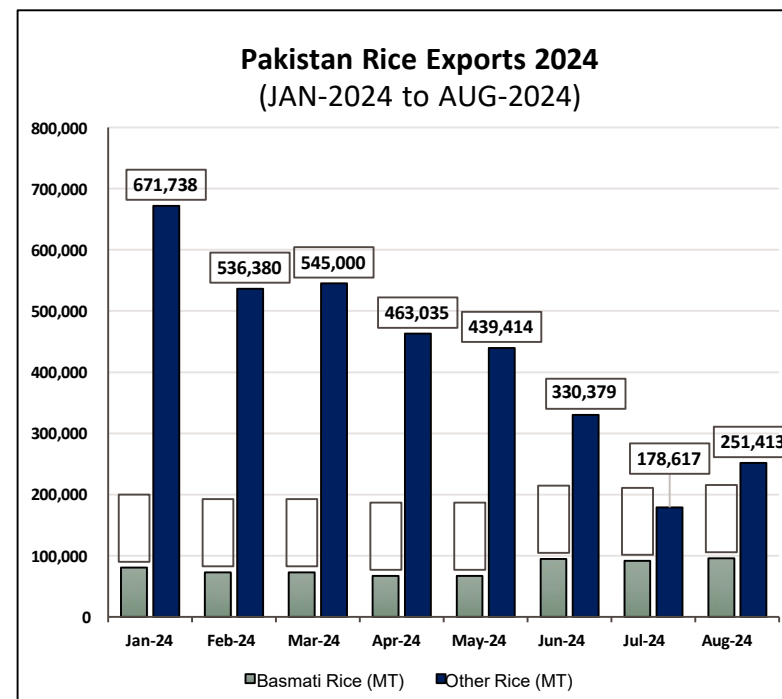
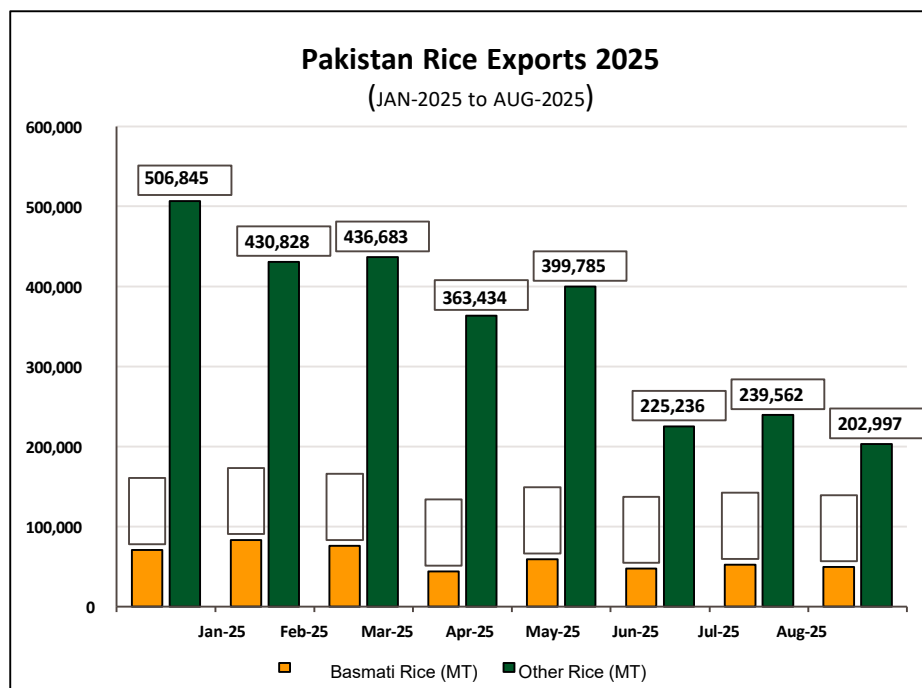
**Production 9.800
million tons**



Source: USDA foreign agriculture services developed this map using the data of crop reporting services.

PAKISTAN RICE EXPORTS COMPARISON:2024-25

Source: Pakistan Bureau of Statistics



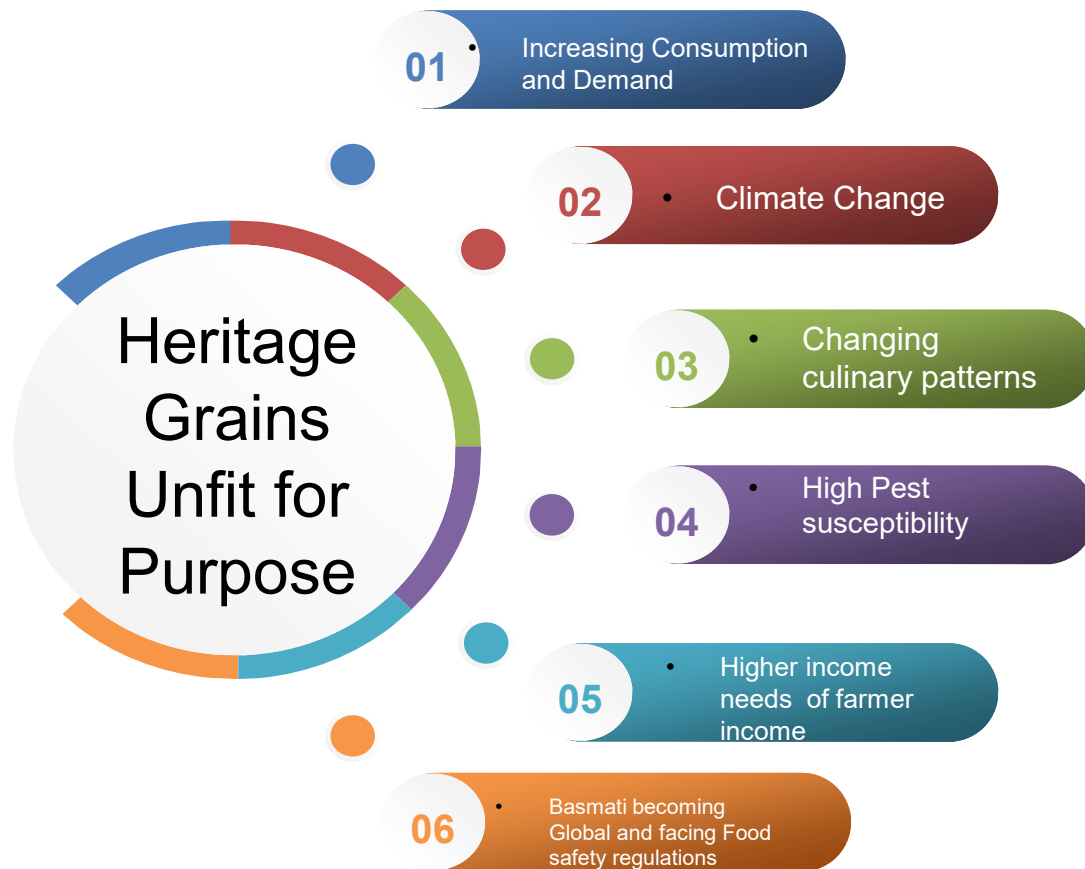
Rice Export

Source ["Rice export Association"](#)

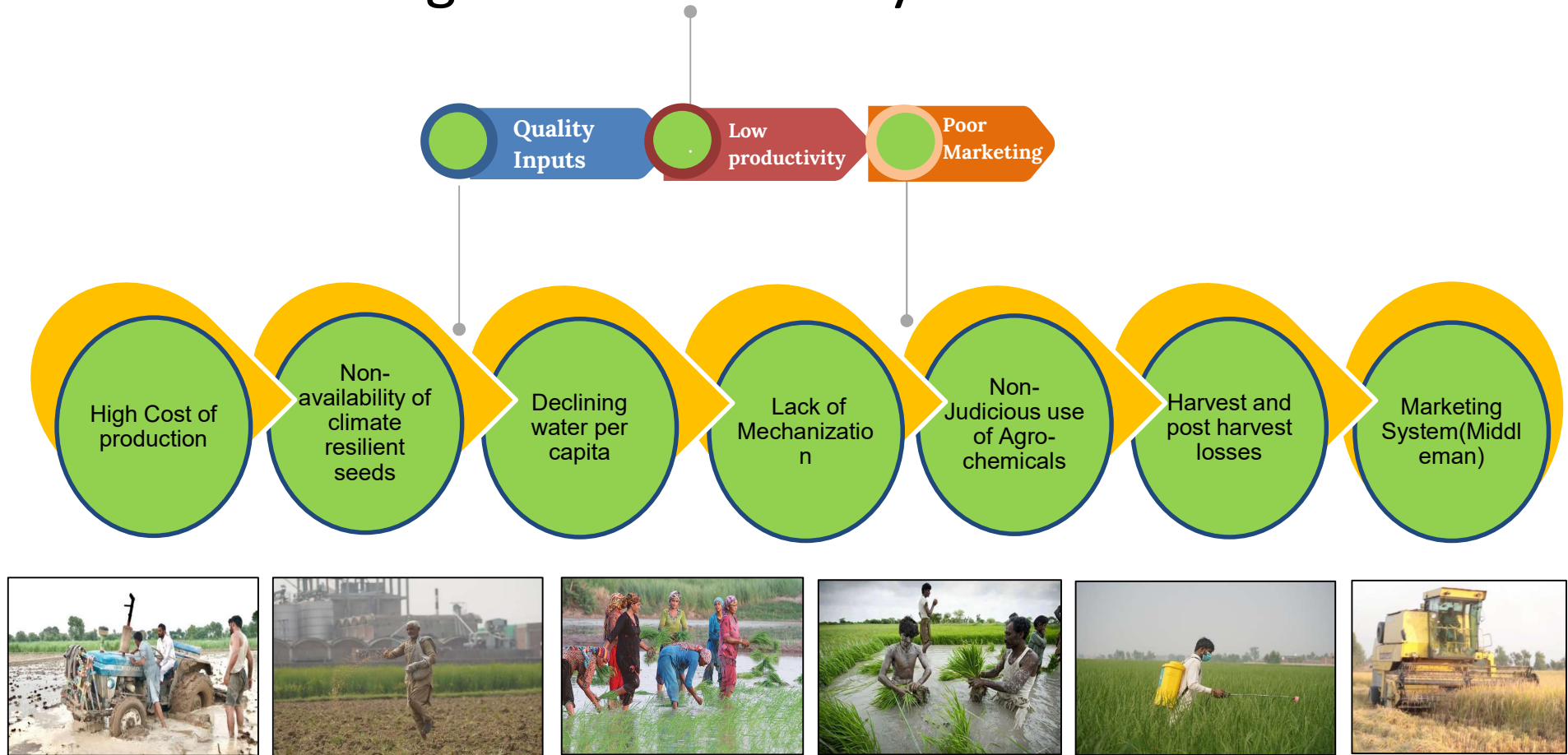
YEAR	BASMATI (MMT)	NON- BASMATI (MMT)	TOTAL QTY (MMT)	BASMATI VALUE \$ MILLIONS	NON- BASMATI VALUE \$ BN	TOTAL VALUE \$BN
2023-24	0.77	5.23	6.0	876	3.05	3.93
2024-25	0.80	4.80	5.6	832	2.52	3,35

BREEDING JOURNEY OF BASMATI GRAINS

Category	Definition	Examples – Pakistan	Examples – India	Novelty Status
Traditional	Ancient farmer-maintained landraces, foundation of basmati identity.	<i>Basmati 370 & Mushkan 7, Mushkan 41, Basmati C 622, Basmati Pak</i>	<i>Basmati 370, Karnal Local, Taraori Basmati (HBC-19)</i>	Not novel (already in public domain, centuries old)
Evolved (Basma types)	Improved through pure line or mass selection from traditional basmati.	<i>Basmati 198, Basmati 385 (1988)</i>	<i>Pusa Basmati-1, Basmati-386</i>	Not novel (derived from traditional germplasm)
Distinct	Clearly different from existing varieties by at least one essential trait (grain length, aroma, plant type, disease resistance).	<i>Super Basmati (distinct from 370 in plant height & yield), Basmati 515, Kisan Basmati, Vital Super (zinc fortified) Basmati Sultan Super Basmati</i>	<i>Pusa Basmati 1692, Pusa Basmati 1718 (blast-resistant)</i>	Novel at time of release
NIL (Near-Isogenic Lines)	Molecular breeding/backcrossing to introduce one or few resistance genes into basmati background while keeping >95% genome intact.	<i>Super Gold NILs with BLB resistance gene Xa-21</i>	<i>Pusa Basmati-1718 & Pusa Basmati Pusa Basmati-1847 with BLB Resistance genes (Xa13, Xa21)</i>	Novel (each NIL is new & specific introgression line)



Challenges in Present Day Rice Production



Path to Solutions: Connect to the Farm

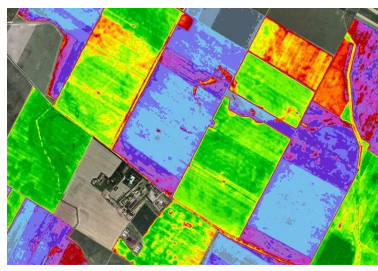
Cluster Farming



. Farm advisory services from certified seed to quality harvest.



- Mechanization (Mechanical Transplantation of Rice)



- Crop health monitoring and surveillance through RS.



- Judicious use of selected agrochemicals through drones



- Paddy buyback with premium price and prompt payments.

Drones are Key for Managing MRLs & Traceability



OVERCOME
LABOR
SHORTAGE



COVER 4
ACRES IN 15
MINUTES



ENSURE
UNIFORM
PESTICIDE
APPLICATION



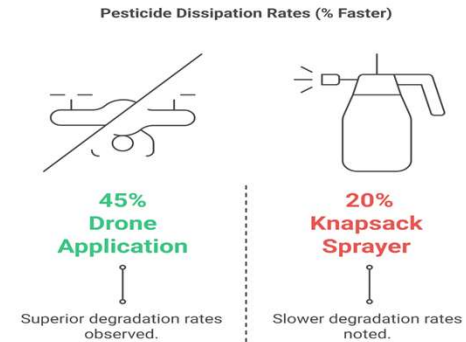
PESTICIDE
SAVING UP TO
30%



REDUCES COST
OF
PRODUCTION

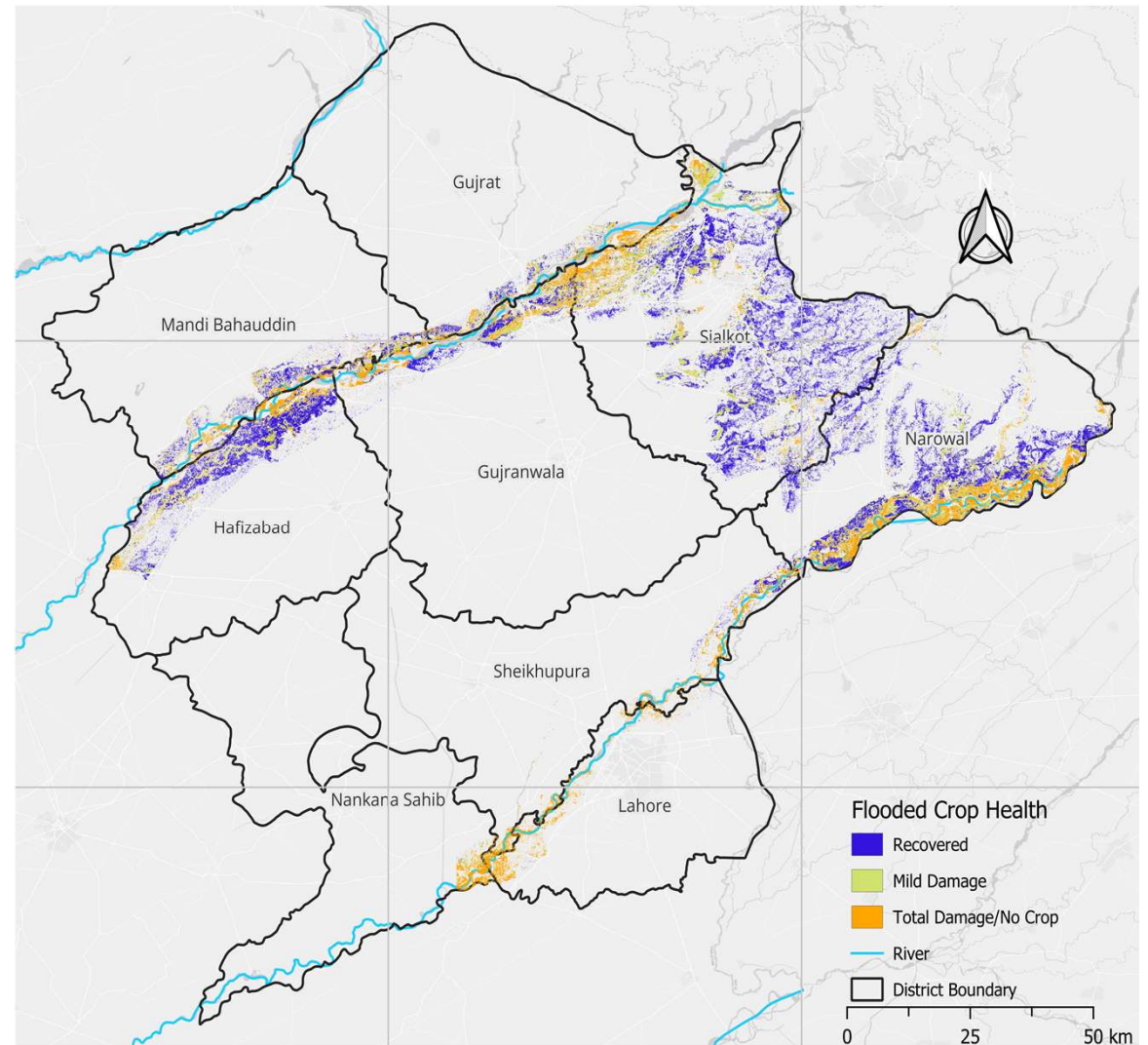


EASY TO
SPRAY EVEN IN
STANDING
WATER



Health Assessment of Flooded Cropland

- The map highlights **recovered cropland in blue**, with the greatest recovery in **Sialkot and Narowal**, where water levels have subsided.
- Recovery accounts for **23% of the affected cropland in Sialkot** and **20% in Narowal**.
- Areas **near rivers in both districts** still show **minor damage**.
- Zones **adjacent to riverbeds** reveal **substantial crop loss**.
- These regions will continue to be **monitored in upcoming satellite imagery**.
- **Mapped damaged area** is based on **flooded and rainwater impact**.





From Loss to Resilience: A Sector Tested, a Sector Standing

A reminder that even in crisis, the country's rice farmers remains its enduring strength

The story doesn't end with destruction after floods. Rice acreage this year actually expanded to **12.2 million acres (up from 11.2m)**, and enriched soils may boost yields **20–25%** in healthier zones. Despite floods, Pakistan could still harvest **≈12 million acres worth of rice** — one of its biggest crops in history

The floods displaced 4 million people and killed 1,000+, but Pakistan's **rice sector proves resilient.**



THANKS