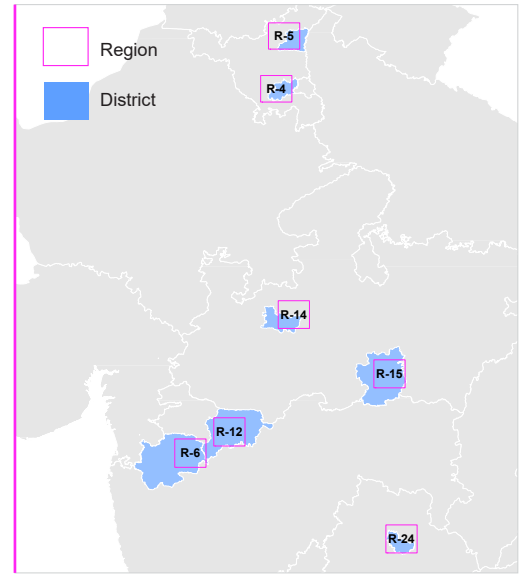




## Focus Regions

India is the second-largest onion-producing country in the world after China. Indian onions are famous for their pungency, are available round the year, and hence have a lot of demand in the world. Major export markets are Bangladesh, Malaysia, the United Arab Emirates (UAE), Sri Lanka, and Nepal. Major onion producing states include Maharashtra, Karnataka, Gujarat, Bihar, Madhya Pradesh, Andhra Pradesh, Rajasthan, Haryana, and Uttar Pradesh.

Region ID.	State	Production	Risk Free Production	Available Production	Metric Tons (MT)
					Available Risk Free Production
R-6	Maharashtra	6,95,964	6,95,960	13,919	13,919
R-12	Maharashtra	2,25,314	2,11,577	22,531	21,158
R-14	Madhya Pradesh	1,27,730	1,21,924	12,773	12,192
R-4	Haryana	43,415	41,582	4,341	4,158
R-15	Madhya Pradesh	33,012	32,965	3,301	3,297
R-5	Haryana	32,304	31,949	3,230	3,195
R-24	Telangana	20,590	20,574	2,059	2,057



## Major varieties grown in different agro-climatic zones of India

Agro-climatic zone	State	Region ID.	Major Districts	Varieties
Western Plateau & Hills (WPH)	Maharashtra	R-6	Nashik	Bhima (Super, Dark Red, Red, Raj, Shakti, Shweta, Shubhra) N-53, Baswant-780, Agrifound (Dark Red, White, Light Red), NHRDF-Red, NHRDF-Red-2, Fule safed, N-257-9-1, Phule Suvarna, N 241, Pusa Red.
		R-12	Jalgaon	
Central Plateau & Hills (CPH)	Madhya Pradesh	R-14	Shajapur	Bhima (Shakti, Shweta), N-53, Early Grano, Agrifound (Dark Red, Light Red, White)
		R-15	Chhindwara	
Trans-Gangetic Plains (TGP)	Haryana	R-4	Jhajjar	Bhima (Kiran, Shakti, Shweta), N-53, Early Grano, Agrifound (Dark Red, Light Red), NHRDF-Red.
		R-5	Karnal	
Southern Plateau & Hills (SPH)	Telangana	R-24	Karimnagar	N-53, CO- (1, 2, 3, 4, 5), MDU 1, Bellary Red, Pusa Red, Arka (Niketan, Kalyan, Lalima, Kirthiman, Pitambar), Agrifound (Dark Red, Light Red, Red)



## Seasonal Calendar

The seasonal details are depicted in the calendar by their agro-climatic zones

Agro-climatic zone	Region	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
WPH	R-6														
	R-12														
CPH	R-14, R-15														
	R-4, R-5														
TGP	R-4, R-5														
	R-24														

Note: WPH Western Plateau & Hills, CPH Central Plateau & Hills, TGP Trans-Gangetic Plains and SPH Southern Plateau & Hills

Sowing Mid season Harvesting



## Contract Summary

A brief overview of the commodity traded in the Agriota E-Marketplace.

Lot ID	LOT14ON03
HSN Code	07031010
Commodity	Onion
Variety	Bhima Raj
Grade	Grade-I (Band-III)
Aggregation Unit	Metric Tons (MT)
Minimum Lot Size	7.00 MT
Bid Window Termination	48 Hr
Allowable Lot Variance (+)	0.17 MT
Allowable Lot Variance (-)	0.34 MT
Rights per Lot (No.)	1
Current Lot Size	8.00 MT
Contract Price (Per Unit)	₹ 25,500
Fees	1.00%
Taxes	0.00%
Packaging Size (Per Bag)	50 Kg
Contract Value	₹ 2,06,040
Logistic Hub Location	Radhika, 4th Mile stone, Near B.D Cotton beed, Hisar, Haryana 125001



## Quality Specifications

Quality by both standard post-harvest parameters and specific biological indicators for better price realisation

No.	Onion	Band - 1	Band - 2	Band - 3	Band - 4	Band - 5
	Tradable parameters	611	612	613	614	615
I	Size (diameter of the equatorial section) mm	55.01 - 65.00	45.01 - 55.00	35.01 - 45.00	25.01 - 35.00	≤ 25.00
II	Defects (% by count)					
	Cut (5-15mm long)	01.00 - 05.00	01.00 - 05.00	01.00 - 05.00	05.01 - 10.00	10.01 - 15.00
	Double split	01.00 - 02.00	01.00 - 02.00	01.00 - 02.00	02.01 - 05.00	> 05.01
	Sprouted	01.00 - 02.00	01.00 - 02.00	01.00 - 02.00	02.01 - 05.00	> 05.01
	Rooting	01.00 - 02.00	01.00 - 02.00	01.00 - 02.00	02.01 - 05.00	> 05.01



## Dynamic Crop Calendar (DCC)

It is a real-time tool that tracks and forecasts stresses and their severity by commodity, variety and phenophase. The DCC helps estimate crop health, yield and risk for individual fields at various temporal and geo-spatial levels. DCC also helps in customised monitoring, alert generation and advisory activities.

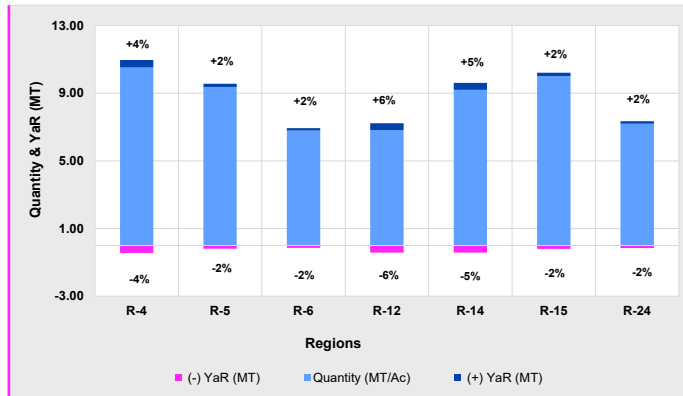
MONTHS	May				Jun				Jul				Aug				Sep			
WEEK	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
STAGES	Seedling				Vegetative				Bulb Initiation				Bulb Filling				Maturity			
BIOTIC STRESS									Disease : DM, PRR, PB											
					Insect Pest : BM, EM, RSM															
ABIOTIC STRESS									Low Temperature $\geq 13^{\circ}\text{C}$											
									High Temperature $\leq 16^{\circ}\text{C}$											
									Bright Sun Shine hrs $\leq 12$ hrs											
													High RH $\leq 70\%$							

Note: DM Downey Mildew, PRR Pink Root Rot, PB Purple Blotch, BM Bulb Mite, EM Eriophyid Mite, RSM Red Spider Mite



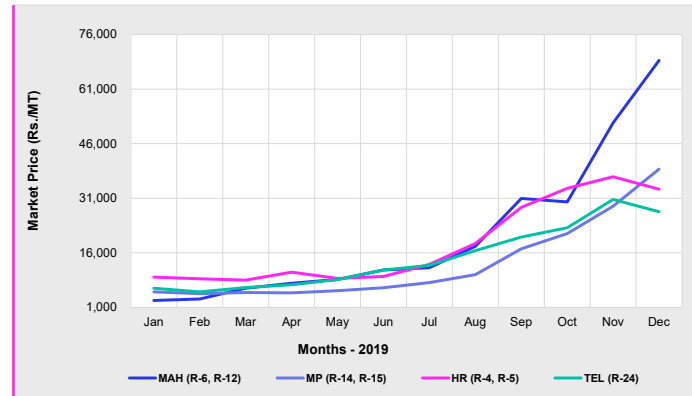
## Yield at Risk (YaR) - Stability

The fluctuation/risk in yield or productivity varies from region to region. The region-wise variation on the yield is depicted in the graph below.



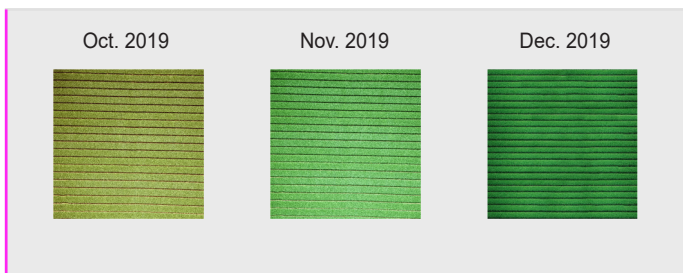
## Price Volatility

The monthly fluctuations in price for different benchmark markets are shown below.



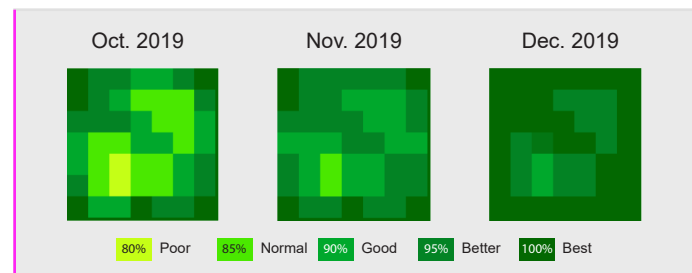
## Aerial Photo

Aerial photo provides the visual representation of a the field periodically.



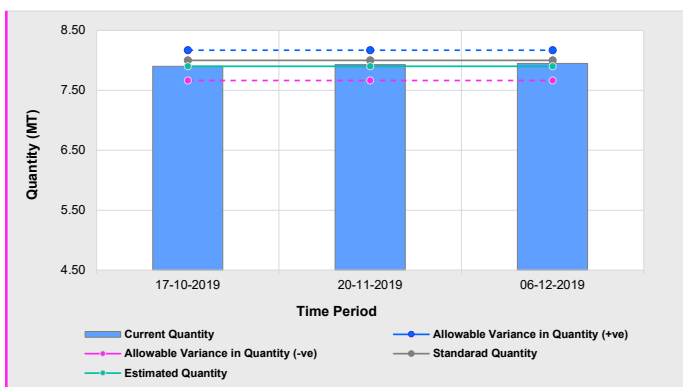
## Multispectral Yield Analysis

Tool that provides a Normalised Differential Vegetation Index (NDVI) analysis of individual fields to ground-truth indices. It is standardised across time periods for quick visual interpretation.



## Ground-Truth Risk Report

Real-time estimation of yield and its threshold at various stages of crop growth, based on field monitoring of plant health and detection of stress.



## Multispectral Analysis

Normalised Differential Vegetation Index (NDVI) comparison of field versus regional indices across commodity, variety and phenophase.

