

Wheat Variety Technical Specifications

Comparative Performance, Yield Potential, Duration, and Disease Resistance Profile

Reference Standard: High-Yielding Commercial Wheat Varieties (HD 2851, DBW 327, WH 1270, DBW 222, PBW 826, PBW 872, HD 3086)

Overview & Key Specifications

Variety Code & Name	Avg. Yield (q/ha)	Potential Yield (q/ha)	Crop Duration	Disease Resistance	Optimal Sowing Window
HD 2851	45 – 50	60+	126 – 135 days	High resistance to Leaf & Brown Rust	Early to Timely (Nov 1–15)
DBW 327 (Karan Shivani)	79 – 80	87.7	145 – 155 days	Excellent against Yellow & Brown Rust	Timely Sown (Nov 10–30)
WH 1270	75 – 76	91.5	140 – 156 days	Yellow/Brown Rust, Leaf Blight, Flag Smut	Early Sown (Late Oct–Nov 1)
DBW 222 (Karan Narendra)	61 – 65	82.1	139 – 150 days	Strong against Brown Rust; Moderate to Yellow	Timely Sown (Nov 1–15)
PBW 826	63 – 64	75+	145 – 150 days	Moderate resistance to Yellow & Brown Rust	Timely Sown (Nov 5–25)
PBW 872	75.2	93.4	145 – 152 days	High resistance to Brown & Yellow Rust	Early to Timely (Late Oct–Nov)
HD 3086 (Pusa Gautami)	54 – 55	71.0	140 – 145 days	Highly resistant to Yellow & Brown Rust	Timely Sown (Nov 5–25)

Unit Conversion Note: 1 quintal/hectare (q/ha) $\approx$ 0.4 quintals/acre. Yield figures reflect optimal field conditions with recommended agronomic practices.

Variety-Wise Detailed Breakdown

1. HD 2851

Developer:	ICAR - Indian Agricultural Research Institute (IARI)
Yield Range:	Average 45–50 q/ha (18–20 q/acre)
Maturity Duration:	Medium-early (126–135 days)
Disease Resistance:	High field resistance to stripe (yellow) and leaf (brown) rusts
Key Traits:	Medium plant height (~80–90 cm), low water requirement (2–3 irrigations), highly adapted for late or timely sowing.

2. DBW 327 (Karan Shivani)

Developer:	ICAR - Indian Institute of Wheat and Barley Research (IIWBR)
Yield Range:	Average 79.4 q/ha (31–32 q/acre) Potential up to 87.7 q/ha
Maturity Duration:	145–155 days
Disease Resistance:	Strong resistance to Yellow Rust and Brown Rust
Key Traits:	High protein content, bold lustrous grains, highly resistant to lodging due to sturdy stem structure.

3. WH 1270

Developer:	Chaudhary Charan Singh Haryana Agricultural University (CCSHAU)
Yield Range:	Average 75.9 q/ha (30 q/acre) Potential up to 91.5 q/ha
Maturity Duration:	140–156 days
Disease Resistance:	High immunity to Yellow Rust, Brown Rust, Leaf Blight, and Flag Smut
Key Traits:	Responds exceptionally well to early sowing (late October). Superior chapati and flour quality.

4. DBW 222 (Karan Narendra)

Developer:	ICAR - IIWBR, Karnal
Yield Range:	Average 61.3 q/ha (24.5 q/acre) Potential up to 82.1 q/ha
Maturity Duration:	139–150 days
Disease Resistance:	High resistance to Brown Rust and Karnal Bunt; moderate resistance to Yellow Rust
Key Traits:	Thick internode providing high lodging resistance; robust tolerance to high temperatures during the grain filling stage.

5. PBW 826

Developer:	Punjab Agricultural University (PAU)
Yield Range:	Average 63.6 q/ha (25.4 q/acre) Potential 75+ q/ha
Maturity Duration:	~148 days
Disease Resistance:	Moderately resistant to Yellow Rust and Brown Rust
Key Traits:	Bold, amber, hard grains with high test weight and high milling yield.

6. PBW 872

Developer:	Punjab Agricultural University (PAU)
Yield Range:	Average 75.2 q/ha (30 q/acre) Potential up to 93.4 q/ha
Maturity Duration:	145–152 days
Disease Resistance:	High resistance to Brown Rust and prevailing stripe rust strains
Key Traits:	Biofortified variety enriched with higher iron (~42 ppm) and zinc (~41 ppm); exceptional chapati quality score.

7. HD 3086 (Pusa Gautami)

Developer:	ICAR - IARI, New Delhi
Yield Range:	Average 54.6 q/ha (22 q/acre) Potential up to 71.0 q/ha
Maturity Duration:	140–145 days
Disease Resistance:	Resistant to Yellow Rust and Leaf Rust
Key Traits:	Outstanding bread-making quality, high sedimentation value, and superior terminal heat tolerance.