

## Package of Practice for Wheat Cultivation

Wheat is one of the most important staple food crops in India, mainly grown during the Rabi season (winter). Major wheat-producing states include Uttar Pradesh, Punjab, Haryana, Madhya Pradesh, Rajasthan, and Bihar. The crop thrives in cool, dry weather with well-drained loamy soils and requires timely irrigation at critical growth stages.

### Soil Selection

Wheat thrives best in medium loamy soils with good drainage. Avoid waterlogged or saline soils.

### Field Preparation

After pre-irrigation (paleva), carry out 3–4 ploughings followed by harrowing to achieve a fine tilth.

### Seed Rate

Small-seeded varieties: **40 kg per acre**

Bold-seeded varieties: **50 kg per acre**

For broadcast sowing: **50 kg per acre**

For late sowing: **60 kg per acre**

### Sowing Method

Use seed-cum-fertilizer drills for sowing. Maintain **20 cm row spacing** in timely sowing and **18 cm** in late sowing.

In rice-wheat rotation systems, wheat can also be sown using **Zero Till Drill** or **Happy Seeder** directly in rice stubble.

### Ideal Sowing Time

**Irrigated areas:** October 25 to November 15

**Late sowing:** Up to third week of December

Best sowing temperature: **around 22°C** for optimal growth.

### Seed Treatment

Seeds from **Greenline Agriseeds** come pre-treated with fungicide.

For **late sowing**, soak seeds overnight (10–12 hours) in water with the water level 1–2 cm above seeds. Drain and shade-dry for 2 hours before sowing.

## Fertilizer Recommendation

Whenever possible, base fertilizer application on **soil testing**. In the absence of testing, follow this general guideline:

Fertilizer (kg/acre)	Irrigated	Rainfed
Urea	120	25
D.A.P.	50	13
Super Phosphate	20	–
Muriate of Potash	10	–
Zinc Sulphate	10	–

### Nutrient Content:

Nutrient (kg/acre)	Irrigated	Rainfed
Nitrogen (N)	60	12
Phosphorus (P)	24	6
Potassium (K)	12	–

Apply **full dose of phosphorus, potash, zinc**, and **1/3 nitrogen** at sowing time.

Apply the **2nd dose of nitrogen** at the first irrigation and the **final 1/3** at the second irrigation.

**Zinc deficiency correction:** If not applied at sowing, spray 500g Zinc Sulphate + 2.5 kg Urea in 100L water per acre at 45 and 60 days.

**Iron deficiency:** If yellow striping appears on new leaves, spray **500g Ferrous Sulphate in 100L water per acre** at 15-day intervals.

### Irrigation Schedule

Wheat typically requires **4–6 irrigations**, depending on soil type:

No. of Irrigations	Days After Sowing
Two	22, 85
Three	22, 65, 105
Four	22, 45, 85, 105

No. of Irrigations	Days After Sowing
Five	22, 45, 65, 85, 105
Six	22, 45, 65, 85, 105, 120

Use **more irrigations in light soils** and fewer in heavy soils.

### **Weed Control**

**For narrow-leaved weeds** (like Phalaris minor, wild oats):

Apply **500g Isoproturon 75% WP** or **160g Clodinafop** in **200L water per acre, 35–45 days after sowing**

**For broad-leaved weeds** (like Chenopodium, Bathua, wild spinach):

Use **8g Metsulfuron (Algrip)** per acre, sprayed **30–35 days after sowing**

**For mixed weeds:**

Apply **16g Total (Sulfosulfuron + Metsulfuron)** or

**160g Vesta (Clodinafop + Metsulfuron)** in 200L water per acre, **35–45 days after sowing**

Use **flat-fan nozzles** for herbicide spray.

**Note:** Avoid maize or sorghum after using 'Total' herbicide.

### **Disease Management**

#### **Rusts (Yellow, Brown, Black)**

Common in Dec–Feb during cold temperatures

Spray **800g Mancozeb (Dithane M-45)** in **200L water per acre**, two times at 10–15 day intervals

#### **Molya Disease (Nematodes)**

Affected plants turn yellow with stunted growth and fibrous root clusters

Use **13 kg Carbofuran (Furadan 3G)** per acre at sowing

#### **Note:**

These recommendations are based on research center findings. Yield may vary due to soil, weather, pest/disease attacks, and crop management.

Farmers are responsible for their crop outcomes. Local agricultural department guidelines may also be followed.

