# Farming in Uttar Pradesh – Crops & Step-by-Step Agricultural Practices

## 📍 Region: Uttar Pradesh (UP), India

UP is one of India’s largest agricultural states, contributing significantly to the nation’s food production. The state has fertile alluvial soil, access to rivers like **Ganga and Yamuna**, and a strong irrigation system. Most farmers here practice **multi-cropping** across three main seasons: **Rabi, Kharif, and Zaid**.

## 🌾 Major Crops Grown Across the Year in UP

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| --- | --- | --- |
| Season | Crop Type | Examples |
| Rabi (Oct–Mar) | Winter crops | Wheat, Barley, Mustard, Gram (Chana), Peas |
| Kharif (June–Oct) | Monsoon crops | Paddy (Rice), Maize, Bajra, Jowar, Arhar |
| Zaid (March–June) | Summer crops | Watermelon, Muskmelon, Cucumber, Vegetables |

## 🔄 Step-by-Step Farming Process (For Any Major Crop)

|  |  |
| --- | --- |
| Step | Inputs Required (Per Acre) |
| 1️⃣ Land Preparation | Ploughing (tractor/labour), leveling, soil testing |
| 2️⃣ Seed Selection & Sowing | Certified seeds (e.g. 40-60 kg/acre for wheat), seed treatment |
| 3️⃣ Irrigation Setup | Tube well or canal, 4–5 rounds for wheat, 10+ for rice |
| 4️⃣ Manuring & Fertilizing | FYM (Farmyard manure), Urea, DAP, Potash (quantities below) |
| 5️⃣ Weeding & Pest Control | Manual weeding/labour or herbicide spray, pesticides |
| 6️⃣ Crop Monitoring | Regular checks, applying micronutrients and pest solutions |
| 7️⃣ Harvesting | Labour or machine (harvester), based on crop maturity |
| 8️⃣ Post-Harvest Handling | Threshing, cleaning, drying, storage, or market sale |

**Let’s look at an example of wheat farming in Uttar Pradesh.**

📍 Wheat Farming Process in 1 Acre Land - Uttar Pradesh

Uttar Pradesh is one of India's top wheat-producing states. This document outlines the full wheat farming process from seed planting to harvesting, including month-wise activities, manpower, resources (seeds, fertilizers, water), and typical yields per acre.

# 📅 Month-wise Timeline

|  |  |  |
| --- | --- | --- |
| Month | Activity | Details |
| October | Land Preparation | Ploughing, leveling, removal of weeds |
| November | Sowing | Use certified wheat seeds (40-50 kg/acre). |
| December | Irrigation & Weed Control | First irrigation + apply weedicides |
| January | Top Dressing | Apply Urea (Nitrogen) after first irrigation |
| February | Second Irrigation | Light irrigation depending on weather |
| March | Pest Control & Monitoring | Check for rust, aphids, and apply pesticides if needed |
| April | Harvesting | Manual or machine harvesting when grains mature |

**1. Land Preparation**

* 🔹 First Ploughing (Deep Tilling):  
  After the monsoon, perform deep ploughing using a Moldboard Plough (MB Plough) or tractor to remove weeds and loosen the soil thoroughly.
* 🔹 Second & Third Ploughing:  
  Use a cultivator or rotavator 2–3 times to make the soil fine and well-tilled.
* 🔹 Leveling (Levelling with Planker):  
  After ploughing, run a planker (pata) to level the land. This ensures even water distribution during irrigation.

**2. Seed Preparation & Sowing**

* 🔹 Seed Selection:  
  Use high-yielding, disease-resistant varieties like HD-2967, PBW-343, DBW-187, HD-3086 depending on regional suitability.
* 🔹 Seed Treatment:  
  To protect seeds from fungus and disease, treat them with Carbendazim (2.5 gm/kg seed) or Thiram (3 gm/kg seed).
* 🔹 Sowing Time:  
  Ideal sowing period is from mid-October to mid-November.
* 🔹 Seed Rate:  
  Use 100–125 kg seeds per hectare. Depth of sowing should be 4–5 cm.
* 🔹 Sowing Method:  
  Use tractor seed drill, zero-till drill, or traditional plough with spacing of 20–22 cm between rows.

**3. Fertilizers & Nutrients**

* 🔹 Nitrogen (N): 120 kg per hectare – applied in 2–3 splits (mainly as urea).
* 🔹 Phosphorus (P): 60 kg P₂O₅ per hectare (use DAP during sowing).
* 🔹 Potash (K): 40 kg K₂O per hectare (apply during sowing).
* 🔹 Organic Manure: Apply well-decomposed FYM (Farmyard Manure) at 10–15 tons per hectare before sowing.

**4. Irrigation Management**

Wheat requires 5–6 irrigations during its life cycle:

1. First Irrigation: 20–25 days after sowing (critical stage – tillering).  
2. Second Irrigation: 40–45 days after sowing (jointing stage).  
3. Third Irrigation: At booting or ear head emergence.  
4. Fourth Irrigation: During grain filling.  
5. Fifth Irrigation: Just before crop maturity.

**5. Weed Management**

* Spray Isoproturon 75% WP or Clodinafop 15% WP after 30–35 days of sowing for broadleaf and grassy weeds.
* Manual weeding can also be done depending on field conditions.

**6. Pest & Disease Management**

* 🔹 Rust / Blight (Karnal bunt or Leaf blight): Use fungicides like Mancozeb or Propiconazole.
* 🔹 Termite Control: Apply Chlorpyrifos to the soil before sowing.

**7. Harvesting & Storage**

* Harvest after 110–140 days of sowing, when the ear heads turn golden-yellow and grains harden.
* Use sickles for manual harvesting or a combine harvester.
* Dry the grains thoroughly in sunlight and store at moisture levels below 14% to prevent spoilage.

# 📦 Resources Required for 1 Acre Wheat Farming

🔹 Seeds: 40–50 kg (certified variety like HD-2967 or PBW-343)

🔹 Fertilizers:

• DAP (Di-ammonium Phosphate) – 50 kg

• Urea – 45–50 kg in 2 split doses

🔹 Irrigation: 3–4 irrigations required based on weather

🔹 Pesticides/Herbicides: Approx ₹500–₹800 depending on pest presence

🔹 Equipment: Tractor for ploughing, seed drill (optional), sickle or harvester

# 👨‍🌾 Manpower Requirement

• Land Preparation: 2 laborers for 1 day with tractor OR 4 laborers manually

• Sowing: 2 laborers for half a day

• Irrigation: 1 person per irrigation (2–4 times)

• Weeding & Fertilizer: 1–2 laborers

• Harvesting: 4–5 laborers for 1–2 days OR use machine harvester

# 💰 Detailed Cost Breakdown for 1 Acre Wheat Farming (Uttar Pradesh)

🔹 **Land Preparation (tractor + operator)**: ₹1,200 – ₹1,800 (Includes 2 rounds of tractor ploughing)

🔹 **Seed Cost (40–50 kg @ ₹25–₹30/kg)**: ₹1,200 – ₹1,500

🔹 **Fertilizers**:

* Urea: ₹300
* DAP: ₹1,200
* MOP: ₹500

🔹 **Irrigation (4–5 rounds)**: ₹800 – ₹1,200

🔹 **Pesticides/Insecticides**: ₹300 – ₹500

🔹 **Labour Costs**:

* Sowing: ₹500
* Fertilizer application (2 rounds): ₹400
* Irrigation labour: ₹500
* Harvesting: ₹1,000 – ₹1,200

🔹 **Miscellaneous (transport, rent, tools)**: ₹500 – ₹700

🔹 **✅ Total Input Cost**: ₹8,500 – ₹11,000

# 📊 Average Yield & Income

• Average Yield: 16–18 quintals per acre

• Market Rate: ₹2,000–₹2,300 per quintal

• Gross Income: ₹32,000 – ₹41,400

• Input Cost: ₹10,000 – ₹14,000

• Net Profit: ₹18,000 – ₹30,000 per acre (approx.)

## 👨‍🌾 Notes on Farming Manpower

Small farmers (<1 acre) often use family labour

Medium to large-scale farmers hire seasonal labour

Mechanization is rising: tractors, seed drills, harvesters

## ✅ Final Summary

* UP farming revolves around **seasonal crop planning**: Rabi, Kharif, and Zaid.
* With proper land preparation, certified seeds, irrigation management, fertilizers, and pest control, even 1-acre wheat farming can be profitable.
* **Mechanization** (tractors, seed drills, harvesters) reduces manual load.
* **Net profit of ₹18,000 – ₹30,000 per acre** is achievable with efficient practices.