

Farm / Location:	Tarakeswar, Hooghly, West Bengal	Farmer Name:	Raj Kumar Das
Crop:	Ginger (Adrak) 1 Acre	Growth Stage:	Seedling / Early Vegetative
Plot Size:		Device ID:	AGS-NNO-0177

OVERALL SOIL HEALTH SCORE

38 / 100

NEEDS IMMEDIATE ATTENTION

3 Critical parameters | 3 Low parameters | Soil pH severely outside safe range

ENVIRONMENTAL SNAPSHOT

Temperature
28.4 °C
Normal

Moisture
44.4 %
Monitor

Humidity
62%
Adequate

Light Index
7.2 / 10
Good

NUTRIENT COMPOSITION ANALYSIS — 16 PARAMETERS

PARAMETER	MEASURED VALUE	OPTIMAL RANGE	STATUS	LEVEL
Soil pH	1.5	6.0 – 7.0	CRITICAL	
Nitrogen (N)	36 kg/ha	50 – 100 kg/ha	LOW	
Phosphorus (P)	18 kg/ha	30 – 60 kg/ha	LOW	
Potassium (K)	28 kg/ha	20 – 50 kg/ha	OPTIMAL	
EC / Salinity	1.6 dS/m	< 2.5 dS/m	OPTIMAL	
Organic Carbon	0.38 %	0.5 – 0.75 %	LOW	
Boron (B)	0.22 mg/kg	0.5 – 2.0 mg/kg	LOW	
Zinc (Zn)	0.18 mg/kg	1.0 – 3.0 mg/kg	CRITICAL	
Iron (Fe)	2.4 mg/kg	4.5 – 10 mg/kg	LOW	
Magnesium (Mg)	48 mg/kg	40 – 80 mg/kg	OPTIMAL	
Copper (Cu)	0.08 mg/kg	0.2 – 1.0 mg/kg	CRITICAL	
Sulphur (S)	12 mg/kg	10 – 20 mg/kg	OPTIMAL	
Molybdenum (Mo)	0.06 mg/kg	0.1 – 0.5 mg/kg	LOW	
Calcium (Ca)	220 mg/kg	200 – 800 mg/kg	OPTIMAL	
Sodium (Na)	0.4 dS/m	< 2.0 dS/m	OPTIMAL	
CEC	8.2 meq/100g	10 – 20 meq/100g	LOW	

AI EXECUTIVE SUMMARY

AgriScore AI has analysed 16 soil parameters for Ginger (Adrak) at the Seedling stage. The soil is in CRITICAL condition and requires immediate corrective action. The most urgent issue is extremely acidic soil pH (1.5) which is far outside the ideal range of 6.0 to 7.0 for Ginger. At this pH level, all nutrients become chemically unavailable to the plant regardless of their presence in the soil. Zinc and Copper are critically deficient. Nitrogen, Phosphorus, Boron, Iron, Molybdenum and Organic Carbon are low. Do not sow until pH is corrected. Without treatment, crop failure risk is very high.

PRIORITY ACTIONS

CRITICAL

Correct Soil pH Immediately

Apply agricultural lime (CaCO₃) at 2.5 to 3 tonnes per acre. Mix into top 6 inches of soil. Wait 21 days and re-test pH before sowing. Target pH 6.0 to 6.5.

CRITICAL

Fix Zinc Deficiency

Apply Zinc Sulphate at 10 to 15 kg per acre as basal dose. Or spray 0.5% ZnSO₄ solution as foliar twice at 7-day intervals.

CRITICAL

Fix Copper Deficiency

Apply Copper Sulphate at 5kg per acre mixed into soil. Foliar spray of 0.2% CuSO₄ also effective for quick uptake.

LOW

Boost Nitrogen

After pH is corrected, apply Urea (46% N) at 30 to 40 kg per acre in 3 split doses: 50% at planting, 25% at 30 days, 25% at 60 days.

LOW

Boost Phosphorus

Apply DAP(18:46:0) at 25 kg per acre as basal dose at sowing.

LOW

Improve Organic Carbon

Apply vermicompost or FYM at 4 to 5 tonnes per acre. Improves soil structure, water retention and microbial activity.

LOW

Correct Iron and Boron

Apply Ferrous Sulphate at 5 to 10 kg per acre and Borax at 5 kg per acre as basal doses after pH is corrected.

FERTILIZER PRESCRIPTION — PER ACRE

Input	Qty	When	How
Agricultural Lime	2.5–3 t	Now	Soil mix 6 inch deep
Vermicompost/FYM	4–5 t	Pre-sowing	Deep soil mix
DAP (18:46:0)	25 kg	At sowing	Incorporate in soil
Urea (46% N)	30–40 kg	3 split doses	Topdress + irrigate
Zinc Sulphate	10–15 kg	Basal	Broadcast in soil
Copper Sulphate	5 kg	Basal	Mix into soil
Borax (11% B)	5 kg	Basal	Broadcast in soil
Ferrous Sulphate	5–10 kg	After pH fix	Soil or foliar spray
MOP (0:0:60)	20 kg	At sowing	Incorporate in soil

CROP ADVISORY - GINGER, SEEDLING STAGE

- Do NOT sow until soil pH reaches 6.0 or above. Germination will fail at current pH of 1.5.
- After lime application, wait minimum 21 days before re-testing and sowing.
- Zinc and Boron are critical for rhizome development. Apply before sowing.
- Maintain soil moisture at 60 to 70 percent field capacity. Avoid waterlogging.
- Apply paddy straw mulch after sowing to conserve moisture and keep soil cool.
- Ginger prefers loamy, well-drained soil. Add cocopeat if soil is heavy or clay.
- Next Nano test: 21 days after lime application to confirm pH improvement.
- Subsequent test schedule: at sowing, 45 days, and at rhizome bulking stage.

RECOMMENDED NEXT STEPS

1. Apply agricultural lime today and wait 21 days.
2. Re-test soil pH with AgriScore Nano device after 21 days.
3. Once pH reaches 6.0+, apply all basal fertilizers.
4. Prepare seedbed and sow ginger rhizomes.
5. Activate monitoring schedule on your AgriScore dashboard.