EPISODE 5

Who Does Agricultural Innovation Actually Feed?

Whose interests it serves

Well-capitalized farmers, seed and equipment companies, PE funds

Each link in the financing chain has an incentive to make the transition work for itself.

Inputs - Capital sources

Private equity capital
Agri-tech funds, agri-investors

Public sector funding
Government subsidies, R&D

Equipment financing
Loans, leasing, working capital

AGRICULTURAL INNOVATION SYSTEM: capital requirement is the design gate at every layer

Layer	Blocked	Capital gate	Passes	Result
SEEDS Hybrid varieties	✕ BLOCKED Cash unavailable	CAPITAL GATE Annual repurchase + patent costs	✓ PASSES Annual seed purchase	→ Larger consolidated farms get higher yield.
WATER Drip and precision irrigation	✕ BLOCKED Monsoon-dependent	CAPITAL GATE Pipes, pumps, electricity	✓ PASSES Electrified, capitalized farm	→ Year-round irrigation. Crop reliability.
DRONES Spraying, sensing	✕ BLOCKED Priced out of service	CAPITAL GATE Per-acre fees + equipment	✓ PASSES Pays for drone service	→ Precision spraying, faster crop sensing.
DATA Prices, weather, guidance	✕ BLOCKED No device, no signal	CAPITAL GATE Smartphone + digital literacy	✓ PASSES Smartphone-enabled	→ Market prices, weather, advisory daily.

Outputs

- Higher yields
- Larger consolidated farms
- Smallholder exit from agriculture
- Returns to capital

Capital is not separate from the system being audited. It is the system. The technology is largely fine. The financing infrastructure decides who reaches it.

Excluded: three populations, three different mechanisms

Marginal smallholder farmers

Stopped at every layer's capital gate

Hybrid seed unaffordable. Drip irrigation out of reach. Drone service priced out. Data networks require devices they do not have.

Village women in drone didi programs

Inside the program, paid as if their labor cost zero

Government and NGO drone-training programs treat household labor as scalable infrastructure. The labor is not zero. It is unpaid.

Accountability for closing the gaps

Located by Deepak in actors who are not the fund

Government, agricultural universities, NGOs, panchayats. The investor sees the gaps and points away from the capital reshaping the system around them.