

# High Input Costs Pressure U.S. Crops as China and India Surface Practical Resilience Models

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U.S. row-crop margins remain weak as fertilizer costs and China demand uncertainty complicate planning. Meanwhile, examples from China, India, and Virginia show practical gains from intercropping, bio-inputs, and tighter livestock management.

### Market Movers

- **United States — row-crop margins:** Farm Journal said row-crop profits are expected to stay near **half of their 2021-22 peak** because of high input costs. Net farm income is being supported more by **government payments** and **cattle** than by row crops [1].
- **United States / China — soybean demand:** China remains a wild-card for soybean acreage, and U.S. exports to China in **2025-26** rank as the **second-lowest in eight years** [1].
- **United States — eggs and beef:** USDA said egg-laying hen inventory is up **7%** in 2026 [2]. Separately, Joel Salatin said the U.S. beef herd is the smallest since **1950**, while arguing that market structure keeps farmers from fully capturing high beef prices [3].

### Innovation Spotlight

- **Guangdong, China — medicinal intercropping under oil tea:** In Huadu District, He Shou Wu is being intercropped under oil tea to expand production on limited mountain land. The reported system uses planting holes about **20 cm** deep, **3,000-3,200 seedlings per mu**, and a **2-3 year** harvest window in shady, moist understory conditions [4]. Reported output is **1,000-1,500 jin per mu**, adding about **6,000-9,000 yuan per**

**mu** without reducing oil tea yield; the company also provides technical guidance and guaranteed buy-back agreements [4].

- **Virginia, United States — low-input livestock system:** Joel Salatin described Polyface as a compost-based, non-chemical system that was unaffected by the **400% fertilizer jump** he associated with the Ukraine invasion [3]. Operationally, chickens are moved to fresh pasture **daily**, with **600 birds** covering an acre over several weeks; pigs rotate through grass, forest, and acorn paddocks; cattle are grass-finished with an emphasis on pasture diversity [3].
- **Uttar Pradesh, India — bio-fertilizer substitution:** A farmer in Gonda district said he replaced chemical **NPK 12-32-16** with a Zaytonic bio-fertilizer package on **maize, wheat, and soy**, reporting better water-holding capacity, lower disease and insect pressure, more flowers and fruits, and stronger production and long-term soil health [5]. He said the mycorrhiza product helps solubilize phosphorus and activate NPK in the soil [5].

## Regional Developments

- **United States:** High fertilizer costs and availability concerns remain important enough that Farm Journal raised them as a possible driver of **2026 acreage shifts** [1]. That comes alongside weak row-crop returns and softer China pull on soybeans [1].
- **Guangdong, China:** The medicinal-crop base tied to this intercropping model has expanded to **more than 3,000 mu** under a company-plus-base-plus-farmer structure, pointing to broader commercialization of understory planting in mountain areas [4].
- **Hebei, China:** A sheep farm in Kangbao County saw weak-lamb rates rise to **15-20%**, versus a normal rate below **5%**, showing how quickly housing moisture and feed quality can cut lamb performance [6].

## Best Practices

- **Lamb housing in humid conditions:** In the Hebei case, the main correction was to reduce manure bedding from nearly **20 cm** to **under 5 cm**, turn it regularly, and add **5-8 cm** dry grass pads along walls where lambs rest. The rationale was that overly thick bedding trapped moisture and created cold stress, diarrhea, and poor digestion [6].
- **Feed inspection for pregnant ewes:** Advisors in the same case said even localized mold in hay can be hard to catch at scale, but chronic intake by pregnant ewes can weaken nutrient absorption and increase weak-lamb risk. Their recommendation was tighter hay inspection and, for recently bred ewes, fetal-protection herbal supplements containing ingredients such as angelica, perilla, and yellow celery [6].
- **Pasture and soil management:** Salatin cited plant diversity as the key determinant of beef nutrient density in a Bionutrient Food Association

study, which is why his system pushes more diverse swards while keeping cattle grass-finished and poultry moving daily [3]. In India, the Gonda farmer’s bio-fertilizer program across maize, wheat, and soy was reported to improve water retention and reduce pest and disease pressure [5].

- **Barn monitoring:** New sheep barns in the Hebei case are adding real-time monitoring so small growth changes can be detected earlier and checked before they turn into larger losses [6].

## Input Markets

- **United States — fertilizer and energy:** Farm Journal flagged fertilizer pricing and availability as open questions for acreage decisions, noting that farmers responded during a period of high oil and fertilizer prices that stayed elevated [1]. Successful Farming separately noted recent increases in energy and fertilizer prices since early March and pointed readers to longer-run input inflation trends [7].
- **United States — margin effect:** High inputs are already visible in farm economics, with row-crop profits projected near **half** of 2021-22 peaks and net farm income relying heavily on payments and cattle [1].
- **Input substitution:** Two contrasting responses stood out. Polyface said its compost-based system was insulated from a past **400%** fertilizer spike [3], while the Gonda farmer said bio-fertilizers delivered better soil function and crop response than chemical NPK on his farm [5].

## Forward Outlook

- **United States — acreage remains sensitive to both costs and demand:** Farm Journal said soybeans may carry a larger question mark than some other crops because China is still a wildcard, while high corn stocks keep risk broad rather than crop-specific [1].
- **United States — profit mix matters:** With ad hoc payments and cattle doing much of the cushioning, producers should watch whether crop returns improve on their own or remain dependent on outside support [1].
- **Farm software and data tools are becoming more accessible:** Bushel’s 2026 State of the Farm report points to more younger farmers and wider tech use, even though agronomists, lenders, and peers still shape key decisions [8]. In parallel, Nick Horob is opening another **AI on Your Farm** cohort and building tutorials on using **AI coding tools** with the **John Deere Ops Center API** to create custom farm applications and databases [9, 10, 11].
- **Small dairy operations remain an underserved software segment:** One U.S. dairy operator is testing demand for a simple herd-management app for farms under **100 head**, including auto-generated **Schedule F** summaries for about **\$9/month** [12].

## Sources

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