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Trace the Trends of Pulse Production in Tamil Nadu

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Abstract
Between 2010 and 2020 Tamil Nadu's pulse sector showed a mixed but broadly stagnant picture: total pulse production moved unevenly (with short-term peaks around the mid-2010s) while area under pulses generally contracted and yields remained low and variable. State and national programmes (improved varieties, short-duration cultivars, input support) helped push up production in some years, but pest/disease vulnerability, competition from higher-value crops, and limited irrigation kept productivity gains modest. By 2017–18 Tamil Nadu produced about 5.5 lakh tonnes of pulses from roughly 8.2 lakh hectares, illustrating large area but relatively low per-hectare yields compared with major pulse-producing states. The decade's pattern implies that to raise pulse self-sufficiency the state must focus on raising yields (varietal adoption, plant protection, mechanisation), stabilising area through incentives, and improving market linkages.

Introduction
Pulses (gram, tur/arhar, urad, moong, lentil and others) are nutritionally and agronomically important in India. Tamil Nadu contributes to national pulse availability but is not among the highest-producing states on a per-hectare basis. This article traces area, production and yield trends in Tamil Nadu from 2010 up to the 2019–20 / 2020–21 period, outlines the main drivers behind those trends, and suggests what the patterns imply for policy.

Data sources and approach
The analysis draws on official crop-wise area/production/yield tables published by the Directorate of Pulses Development and the Directorate of Economics & Statistics (GOI) and state agriculture reports and studies that have decomposed pulse growth for Tamil Nadu. Where available, district-level dashboards and peer-reviewed studies were consulted to characterise recent structural changes. Key sources include the GOI crop-wise APY tables for 2010–11 to 2020–21, Tamil Nadu agriculture dashboards, and state/national synthesis reports.

Area under pulses
Across the decade the area under pulses in Tamil Nadu showed fluctuations but an overall pressure to decline as farmers shifted land to higher-value and more remunerative crops (e.g., maize, horticulture, groundnut in parts). State dashboards show district-level variability: some districts maintained or expanded pulse area while others contracted. The net effect was that Tamil Nadu continued to have substantial area in pulses but not a proportionate increase in production.

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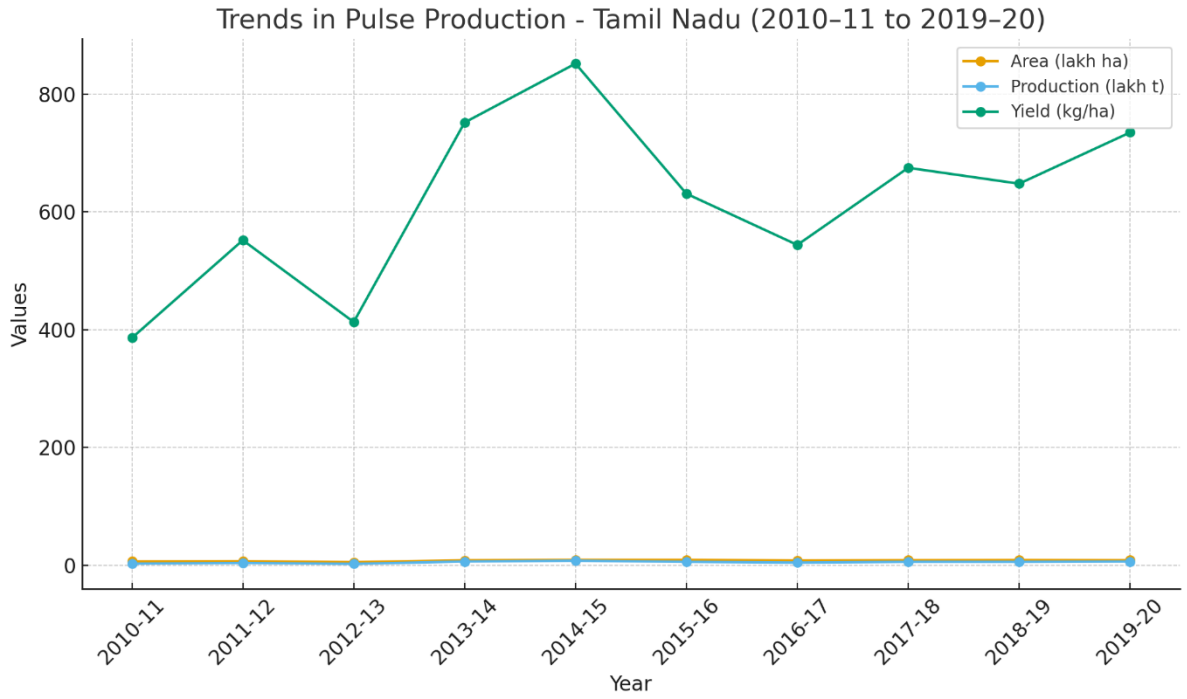

Between 2010–11 and 2019–20, Tamil Nadu's pulse sector exhibited stability in sown area but significant fluctuations in production and yield. The area under pulses remained within the range of 6–9 lakh hectares, with a brief decline in 2012–13 followed by recovery and stability around 8 lakh hectares in later years. Production, however, showed sharp volatility: it was as low as 2.10 lakh tonnes in 2012–13 but rose to a peak of 7.53 lakh tonnes in 2014–15 before moderating to about 5–6 lakh tonnes in the latter half of the decade. Yields followed a similar pattern, improving from just 386 kg/ha in 2010–11 to 852 kg/ha in 2014–15, then declining to the 544–675 kg/ha range before partially recovering to 735 kg/ha in 2019–20. These fluctuations highlight the sector's vulnerability to rainfall variability, pest/disease outbreaks, and inconsistent adoption of improved practices. The broad stability in area offers scope for consistent production, but raising productivity through better seed technology, irrigation, and market incentives remains critical for strengthening Tamil Nadu's pulse economy.

Production levels and key years

Total pulse production in Tamil Nadu rose in some mid-decade years but was variable year-to-year because of weather and pest events. A notable data point: for 2017–18 Tamil Nadu's pulse production was reported around 5.56 lakh tonnes from about 8.24 lakh hectares (showing large area but modest total output), highlighting the low average productivity challenge. Nationally pulse production increased in the 2010s as well, but Tamil Nadu's contribution did not show a clear sustained upward trend comparable to a few leading states.

Yields (productivity)

Yield per hectare for pulses in Tamil Nadu remained below the potential offered by improved varieties in many districts. Yield variability was caused by limited irrigation for many pulse crops, pest/disease incidence, late adoption of short-duration high-yielding varieties, and fragmented land holdings that constrained mechanisation. Government statistics and thematic studies through the decade record modest yield gains in some years but high instability overall.

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Drivers behind the trends

- **Crop competition and cropping choices:** Pulses often compete for area with more remunerative options (maize, horticulture, cash crops) — farmers shift based on relative returns and risk. This reduced the area devoted to pulses in some districts.
- **Technology adoption and seed systems:** Where short-duration and disease-resistant varieties were promoted, production improved; however, adoption was uneven, limiting statewide yield gains.
- **Irrigation and weather variability:** Pulses in Tamil Nadu are grown under both rainfed and irrigated conditions; rainfed pulses are vulnerable to monsoon variability, which caused inter-annual production swings.
- **Pests, diseases and agronomy:** Pulses are sensitive to pests and diseases, and plant protection constraints reduced realized yields in poor years. Studies recommend integrated pest management and better extension to address this.

Regional patterns within the state

District-level reports (state dashboards) show that certain districts consistently contributed more to pulse output — often those with suitable soils and access to irrigation or stronger extension networks — while others saw falling area and production. The state dashboard and district-wise publications provide the detailed spatial breakdown useful for targeting interventions.

Policy responses during 2010–2020 and their effects

Central and state schemes in the 2010s promoted improved varieties, seed distribution, and some price support measures for pulses nationally. These measures helped increase national pulse production overall, and pockets in Tamil Nadu benefited where schemes were effectively implemented. However, the structural constraints (cropping choices, small farms, input constraints) limited large-scale transformation in Tamil Nadu within the decade. Implications and recommendations (short list)

1. **Raise yields where area exists** — accelerate adoption of short-duration, disease-resistant varieties with strong seed systems and demonstration farms.
2. **Stabilise and incentivise area** — agro-ecological zoning and incentives (minimum support, market links) to make pulses a competitive choice for farmers.
3. **Improve irrigation and risk management** — expand micro-irrigation and crop insurance coverage for pulse growers to reduce weather risk.
4. **Strengthen extension & plant protection** — integrated pest management rollouts and mechanisation support to raise realized yields.

Conclusion

Up to 2020 Tamil Nadu's pulse sector showed pockets of progress but overall an uneven trajectory — production rose in some years but was constrained by limited yield improvements and shifting cropping patterns. To convert area into reliable increased output the state needs targeted interventions focused on productivity, risk mitigation and market incentives.

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