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Cowpea Seed Production: Your Golden Opportunity as a Farmer in Tamil Nadu

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Imagine a crop that grows even when the rains fail, feeds your family, nourishes your livestock, and still puts more money in your pocket than almost any other pulse crop you've ever grown. That crop is cowpea, known as *karamani* across Tamil Nadu and the real secret to unlocking its full potential is not just growing it, but growing it for certified seed. This guide explains everything you need to know in plain language.

55–90	750 mm	₹1,16,245	3.94x
Days to harvest	Min. rainfall needed	Net profit per hectare	Return on investment

What Is Cowpea and Why Should You Care?

Cowpea (*Vigna unguiculata*) is not a new crop, Tamil Nadu farmers have grown it for centuries. But today, a smarter approach to cowpea farming is transforming it from a humble subsistence crop into a genuine income powerhouse. Across India it is known as lobia in the north and karamani or thattai payiru in Tamil Nadu. What makes cowpea so special for Tamil Nadu farmers is its ability to thrive where other crops struggle. Drought stress in cowpea reduces germination, growth, and photosynthesis, especially during flowering and pod filling stages. It leads to flower drop, poor pod formation, and reduced nitrogen fixation. Overall, it can cause significant yield losses (up to 30–70%). It is short-season (ready in just 55 to 90 days), handles drought well, needs little fertilizer, and actually improves the soil it grows in. As a legume, cowpea works with naturally occurring soil bacteria to pull nitrogen from the air and convert it into plant food, a process called biological nitrogen fixation. This means the field you use for cowpea is healthier and more fertile for your next crop, saving you money on fertilisers. Tamil Nadu productivity roughly averaging 564kg/ha, India's production: ~0.6 million tonnes India stand in 4th position in world producing

"Cowpea can fix up to 198 kg of nitrogen per hectare- essentially a free fertilizer application for your next crop."

A Crop for Every Season in Tamil Nadu

Tamil Nadu offers three perfect windows for cowpea seed production:

- June to August (Kharif)- rides the south-west monsoon rains; most common
- September to November (Rabi)- uses residual moisture from the north-east monsoon
- December to February (Summer)- fully irrigated; ideal in river valley areas

This flexibility means cowpea seed can be a year-round enterprise for farmers with access to water, or a reliable kharif income crop for those farming purely under rain.

Why Sell Seed, Not Just Grain?

Here is the most important question: why should you produce certified seed instead of simply selling cowpea grain at the market?

The answer is straightforward: certified seed earns you 1.5 to 2 times more money than grain for the same crop. When you produce quality seed, that is clean, pure, disease-free and tested. They pay a premium because good seed gives them better yields and fewer crop losses. Think of it this way. If grain fetches ₹70 per kg at the market, certified seed of the same variety can command ₹100 to ₹120 per kg. In plain terms: for every ₹1 you invest in cowpea seed production, you get nearly ₹3 back. Among all pulse crops grown in south India, cowpea seed production consistently ranks among the top performers for returns.

Two Income streams from One Crop

What makes cowpea even more attractive is that it earns money in two different ways at the same time:

Certified Seed	Fodder & Straw
Sell to other farmers, seed companies or government agencies. Price premium of 50–100% over grain. Core income stream.	50–60 quintals per hectare of high-protein livestock feed. Premium prices during dry season when fodder is demanding.

Which Variety Should You Grow?

TNAU (Tamil Nadu Agricultural University) has developed and tested a range of improved cowpea varieties specifically suited to different parts of Tamil Nadu. For seed production, you want a variety that is uniform in maturity, resistant to disease, and in demand from buyers. Here is a simple guide:

Variety	Days to Harvest	Best For	Why It Stands Out
CO (CP) 7	60–65 days	Rain-fed & Irrigated	High grain yield; disease-tolerant
VBN 3	55–60 days	Rain-fed	Resists Yellow Mosaic Virus; matures early
VBN 2	60–70 days	Rain-fed	Dual-purpose: grain + excellent fodder
CO 6	65–70 days	Irrigated	Uniform pod maturity; large seeds
Paiyur 1	70–75 days	Dryland zones	Drought-hardy; suits red laterite soils

FARMER'S TIP: If you are new to seed production, start with VBN 3 or CO (CP) 7. Both are short-duration, widely adapted and have strong demand from buyers under the Seed Village Programme. For vegetable markets, uniform long pods fetch excellent prices.

How to Grow Certified Seed: A Step-by-Step Guide

Seed production follows largely the same practices as normal cowpea farming but with extra attention to quality, purity, and record-keeping. Here is what you need to do, step by step.

Choose the Right Field

Use well-drained sandy loam soil with a pH of 5.5 to 7.5.

- Do NOT use a field where cowpea was grown last season, this avoids mixing old plants with your new variety.
Keep at least 5 to 10 metres of distance from any other cowpea field. This is called an isolation distance and protects your genetic purity.
Add 5 tonnes of good farmyard manure (FYM) before planting.

Prepare Your Seed Before Sowing

- Use foundation seed (certified base seed) from TNAU, a KVK, or TANSEDA never use grain from the market.
Treat your seed with fungicide (Carbendazim/ Thiram 2 g per kg) to kill seed-borne diseases.
Then coat with Rhizobium bacteria inoculant (5g per kg of seed), this boosts nodule

formation and nitrogen fixation.

Wait 30 minutes after the fungicide treatment before applying Rhizobium.

Seed rate: 25 kg per hectare. Spacing: 45 cm between rows × 30 cm within plants.

Apply Fertilizer Wisely

Cowpea does most of the nitrogen work itself, so you need very little N fertilizer.

- 3 Apply at sowing: 15–20 kg Nitrogen/ha + 40–60 kg Phosphorus (P₂O₅)/ha as basal dose. Phosphorus is the most important nutrient, it drives root nodule development and seed filling.

On light soils: add 25–30 kg Potassium (K₂O)/ha as well.

No top-dressing of nitrogen is needed if Rhizobium inoculation was done correctly.

Water, Weed & Protect

Give 4–5 carefully timed irrigations: at germination, early branching, flowering, and pod-filling.

Never let the crop go dry during flowering — this is the biggest cause of yield loss.

- 4 Spray pre-emergence weedicide (Pendimethalin 1 kg a.i./ha) at 3 days after sowing.

Do one hand weeding at 3 weeks after sowing.

Remove any off-type or diseased plants (called 'rouging') during the crop essential for certification.

For pests: use neem-based sprays (NSKE 5%) first; apply chemical insecticide only if needed.

Harvest at the Right Time

Harvest when 70–80% of pods turn brown/tan- not too early, not too late.

Dry harvested pods for 2–3 days before threshing.

- 5 After threshing, dry seeds until moisture content is below 11%.

Clean and grade the seed carefully to remove broken, small or discoloured seeds.

Store in hermetically sealed bags (HDPE moisture-proof bags) to keep seeds viable for 12–18 months.

Add neem oil (5 ml/kg) or Actellic 50 EC (3 ml/kg) before sealing bags to prevent weevil damage.

Getting Your Seed Certified: Easier Than You Think

Certified seed is seed that has been checked and approved by the State Seed Certification Agency (SSCA). It carries an official tag that tells buyers: this seed is pure, clean and tested. Certified seed sells at a premium and under the Seed Village Programme, much of the process is supported and fee waivers are often available.

What Certification Involves

- Register your seed crop with the SSCA before sowing- a simple process, low cost and often free under the Seed Village Programme
- 2 to 3 field visits from an SSCA inspector during the crop (at flowering, pod set and before harvest)
- The inspector checks: isolation distance, variety uniformity, diseased/off-type plants
- After harvest: laboratory test of your seed lot for germination rate (must be ≥75%), purity (≥98%) and moisture (≤9%)
- If your seed passes: you receive certified seed tags and can sell at premium price
- Online seed certification: www.seedcertification.tn.gov.in.

Not ready for full certification? No problem. The Quality Declared Seed (QDS) system, promoted by the FAO and increasingly accepted in Tamil Nadu's seed policy, offers a simpler pathway. You follow the same good practices but with a lighter inspection process - perfect for farmers starting their seed enterprise and supplying within their village or district.

You Are Not Alone: Government Support Available to You

One of the best things about cowpea seed production in Tamil Nadu is the strong institutional support network available to participating farmers. You do not have to figure this out alone or invest heavily upfront.

Seed Village Programme (SVP)	Free or subsidised foundation seed + training + certification fee waiver + buy-back of your certified seed. Run under the National Food Security Mission.
TNAU & TANSEDA	TNAU provides breeder and foundation seed of recommended varieties. TANSEDA handles certification, quality testing and distribution coordination across Tamil Nadu.
Krishi Vigyan Kendra (KVK)	Present in every district of Tamil Nadu. Your first point of contact. Provides free training, demo plots, variety-specific advice, and connects you to buyers and programmes.
NABARD & Bank Loans	Kisan Credit Card (KCC) and priority sector loans at low interest rates are available for seed production enterprises. Cowpea is also accepted as collateral crop in many dryland districts.

What Farmers Are Saying: Real-World Results

Across Tamil Nadu, Karnataka, and Rajasthan, farmers who have shifted to certified cowpea seed production report remarkably consistent results:

Income up by 50–100%
compared to grain-only cultivation- documented across multiple states by NFSM surveys

- Farmers become trusted technology leaders in their communities- neighbours come to buy seed and seek advice, creating social recognition alongside income
- Women farmers are increasingly participating in seed enterprises in Tamil Nadu's dryland districts, gaining independent income and community standing
- Cowpea is now recognised in dryland Tamil Nadu and Karnataka as a 'bankable' crop- accepted as collateral for agricultural credit
- Villages designated under the Seed Village Programme report improved access to quality seeds across the whole community, not just for participating farmers

The benefits spread beyond individual households. When one farmer produces certified seed, the whole community gains access to improved varieties. Seeds sold locally mean improved yields for every neighbouring family who buys them.

Be Aware: Challenges to Plan For

Cowpea seed production is genuinely profitable, but it is important to go in with realistic expectations. Here are three challenges to plan for:

Getting Foundation Seed	Price Fluctuations	Storage Quality
Foundation seed from TNAU and government farms sometimes runs short during peak demand. Register early with your KVK or TANSEDA first come, first served.	Certified seed prices vary by season and programme. Try to secure a buyer or forward agreement before harvest. Joining a Farmer Producer Organisation (FPO) helps negotiate better prices.	Keeping seed dry and pest-free at home is the most common challenge. Invest in good hermetic storage bags available through KVKs. This protects your income for up to 18 months.

How to Get Started: Your Action Plan

Ready to try cowpea seed production? Here is a simple four-step action plan to begin:

Visit Your Nearest KVK or Agriculture Office This Week

- 1 Tell them you are interested in cowpea seed production under the Seed Village Programme.

Ask about the current season's variety availability and training schedules.
Collect the TNAU Crop Production Guide for cowpea- it is free.

Attend at Least One Training Before You Sow

- 2 KVKs and TNAU centres run free seed production training workshops regularly. You will learn rouging, isolation, seed treatment, and storage from an expert. Connect with other farmers already doing seed production, learn from their experience.

Start Small - Even 0.5 hectare Is Enough

- You do not need to convert your whole farm in the first season.
3 A trial plot of half a hectare lets you learn the process before scaling up. Keep detailed records of your costs, inputs, and sales this makes next year's planning easier.

Register With SSCA Before You Sow

- 4 This is the step most farmers forget but it is essential for certification. Registration before sowing is required. You cannot certify a crop you registered after planting.

The Bottom Line

Cowpea seed production is one of the most accessible, low-risk, and high-reward farm enterprises available to smallholder farmers in Tamil Nadu today. The crop is forgiving of difficult weather, the government support system is well-established and the return on investment nearly four times your input cost speaks for itself. Start with a single good variety. Follow the steps. Register with the SSCA. Store your seed properly. And connect with your nearest KVK, they are there to help you succeed.

Your farm. Your seed. Your future. One pod at a time.