1. Brief History

Chickpea (*Cicer arietinum* L.) is among the world's oldest cultivated crops, with archaeological evidence from over 7,000 years ago in the Fertile Crescent and the Indian subcontinent. Originating in the Near East, it spread east into South Asia and west into the Mediterranean. Two major types emerged: small, angular brown *desi* chickpea (dominant in South Asia and East Africa) and larger, cream-coloured *kabuli* chickpea (common in West Asia, North Africa and Europe). India has long been the global centre of chickpea production and consumption, shaping farming systems, food cultures and breeding priorities.

2. Uniqueness

Chickpea stands out because it:

1. Serves multiple roles: food, cash crop, soil improver and fodder source.
2. Has deep cultural and culinary roots—central to Indian cuisines (chana, chana dal, besan), and increasingly popular worldwide (e.g. hummus, snacks).
3. Fixes atmospheric nitrogen, improving soil fertility and reducing the need for synthetic N-fertilizers.
4. Performs reasonably well under low-input, rainfed conditions and fits diverse rotations and intercropping systems.

This combination of **nutritional value, agro-ecological benefits and market relevance** gives chickpea a strategic place in sustainable food systems.

3. Climate-Resilient and Sustainable

Chickpea is naturally aligned with climate-smart agriculture:

1. **Low water demand:** Frequently grown on residual soil moisture as a post-rainy crop, including in rice fallows, with minimal irrigation.
2. **Stress adaptation:** Modern breeding has delivered lines with improved tolerance to drought, heat and key diseases (e.g. Fusarium wilt, dry root rot).
3. **Input efficiency:** As a legume, chickpea reduces dependence on nitrogen fertilizers, lowering costs and greenhouse gas emissions.
4. **System benefits:** It improves soil structure and fertility, breaks cereal disease/pest cycles and supports more diverse, resilient farming systems.

For dryland and climate-vulnerable regions, chickpea is a practical lever to enhance both resilience and sustainability.

4. Nutrition Profile and Protein

Chickpea is a nutrient-dense "Smart Food":

1. **Protein:** Typically 18–22% protein—an affordable, accessible source of plant protein where animal foods are limited.
2. **Amino acids:** Rich in lysine, complementing lysine-poor cereals and improving overall protein quality in cereal-based diets.
3. **Micronutrients:** Good source of iron, zinc, folate, magnesium and B-vitamins.
4. **Fibre and glycaemic index:** High dietary fibre and low glycaemic index, supporting better blood sugar control and cardiovascular health.
5. **Bioactives and healthy fats:** Contains unsaturated fatty acids and bioactive compounds with additional health benefits.

Scaling chickpea in household diets and public food programmes can help close India's protein and micronutrient gaps while addressing rising NCDs.

5. Applications

1. **Staples:** Whole grain curries, chana dal, sprouts.
2. **Flours and ingredients:** Besan for batters, baking, snacks, gluten-free products.
3. **Processed and novel foods:** Ready-to-eat snacks, extruded products, breakfast cereals, chickpea pasta, plant-based protein foods, hummus-type spreads.
4. **Feed and fodder:** Haulms and by-products as quality fodder in mixed crop–livestock systems.
5. **Emerging uses:** Protein isolates/concentrates for plant-based meat, nutraceuticals and fortified foods.

This versatility creates opportunities from village-level enterprises to large food industries.

6. From India to the Globe: Way Forward

India, as the largest producer and consumer of chickpea and a global hub for chickpea research, is well placed to lead the next phase of its transformation:

1. **Breeding the next generation:** Develop high-yielding, climate-resilient, high-protein and biofortified varieties tailored to specific ecologies (e.g. central Indian drylands, rice fallows, NEH, Africa, Europe, Middle East, Latin America, North America, Australia).
2. **Scaling seed systems:** Strengthen public, private and community-based seed systems to ensure rapid, equitable access to improved cultivars.
3. **Mainstreaming in nutrition programmes:** Integrate chickpea systematically into PDS, ICDS, school feeding and state nutrition schemes.

4. **Driving innovation and trade:** Partner with MSMEs and industry to create attractive chickpea-based products for domestic and export markets.
5. **South–South collaboration:** Share germplasm, technologies and lessons with Africa, West Asia and other regions where chickpea can boost nutrition and resilience.

Positioned at the intersection of **nutrition, livelihoods and climate adaptation**, chickpea is a key crop for India's food system transformation, with growing relevance for global food and nutrition security.