ISSN 0972-8406
The NEHU Journal Vol. XX, No. 1&2, 2022 (2024), pp. 61-74

Contract Farming for Transformation in Agriculture with Special Reference to North-Eastern Region

Sudhanshu Jangir[1,2], K. Dujeshwer[1]*, B.K. Mishra[1]

[1]Department of Rural Development and Agricultural Production, North Eastern Hill University, Tura Campus, Meghalaya

[2]Indian Institute of Sustainability, Gujarat University, Ahmedabad, Gujarat

Abstract

One possible strategy for transforming agriculture in Northeast India is contract farming. By addressing the difficulties small farmers encounter in gaining access to markets and inputs, the region can guarantee a stable agricultural environment. By giving farmers access to markets, inputs, and public-private partnerships, this article seeks to investigate the possibilities of contract farming in northeastern India and how it can change the region's agricultural environment. This article emphasizing the benefits of institutional credit, farm size, personal transportation ownership, formal visits from extension facilities, and other factors. On the other hand, migration has a bad impact. The primary reasons of higher CF profit were higher yields and lower production costs.

Keywords: Contract farming, Agricultural transformation, Northeast India, Market access, Public-private partnerships

Introduction

Agricultural transformation is a pivotal concern for policymakers and scholars aiming to alleviate poverty and enhance food security, particularly since one-third of the workforce in low and middle-income countries depend on this sector. According to the World Bank (2007), the increasing demand and rising incomes have expanded market opportunities, potentially fostering growth in both nonfarm sectors and agriculture, thereby increasing rural incomes. However, small-scale farmers face significant challenges in these markets due to their requirements for economies of scale, timely deliveries, and high product quality (Swinnen, 2016). The efficiency of agricultural marketing systems plays a critical role in ensuring food security. Inefficient markets characterized by high transaction costs and price volatility, exacerbated by inadequate infrastructure and weak institutions, contribute to lower market performance (World Bank, 2007). Improving the efficiency of these systems could stabilize food prices and supply, benefiting both impoverished and non-poor households (Ellis, 1992; World Bank, 2007). Typically, agricultural marketing systems include primary procurement, processing, wholesale, export, and retail components, each with a diverse structure depending on factors such as product type and market dynamics (Ellis, 1992; Martinez et al., 1996). In developing countries, these systems often involve small and medium-sized traders and middlemen who facilitate the movement of goods but may struggle with financing and quality standards due to their scale and resources (World Bank, 2007).

Table 1. Scenario of major crops under contract farming in the World

Crops	**Quantity in Million Tonnes**	**Reference**
Sugarcane	100-150	ISMA, 2020
Cotton (Bales)	20-30	ICAC, 2020
Vegetables (Potato, tamato, cucumbers)	10-20	Various company reports
Fruits (e.g., apples, bananas, grapes)	5-10	Various company reports
Pulses (e.g., soybeans, chickpeas, lentils)	5-10	ITC, 2020
Corn	2-5	Various company reports
Tobacco	0.4-0.5	FAO,2020
Coffee (bags of 60 kg each)	1-2	ICO, 2020
Tea (in kg)	1-2	FAO,2020
Spices (e.g., pepper, chili, ginger)	0.5-1	Various company reports

Note: Figures are approximate and sourced from various reports, so they may not reflect the most up-to-date numbers)

Globalization and liberalization profoundly impact rural populations, influencing agricultural terms of trade, input accessibility and costs, and investments in agribusiness. While technological advancements in agriculture hold promise for increasing productivity and reducing costs, the influence of multinational corporations (MNCs) in food production and trade shapes how globalization affects rural communities, particularly small-scale farmers facing challenges like limited access to modern farming techniques and financial resources (Ola and Menapace, 2020; Balana et al., 2020).Contract farming emerges as a significant strategy in this context, where farmers enter agreements with companies for the production and marketing of agricultural products. This arrangement not only provides farmers with market access and support but also helps companies secure a stable supply of quality produce at predictable prices (Rangi and Sidhu, 2000). However, the unequal power dynamics and potential risks associated with contract farming necessitate clear regulations and dispute resolution mechanisms to ensure fairness and transparency for all parties involved (Otsuka et al., 2016). Agricultural transformation, driven by market dynamics, technological advancements, and globalization, holds promise for improving food security and rural livelihoods. However, addressing the challenges faced by small-scale farmers and ensuring equitable partnerships in initiatives like contract farming are crucial steps toward sustainable agricultural development and poverty reduction. This expanded version captures the essence of the original sentence while providing a broader context and deeper exploration of the key themes related to agricultural transformation and contract farming.

Advantages of Contract Farming

Direct benefit to farmers*:* Contract farming offers numerous benefits across the agricultural value chain, filling critical gaps in production, processing, and marketing that traditional farming systems often struggle to address. This organizational setup involves agreements between farmers and contracting firms, wherein farmers receive support such as loans, inputs, and technical assistance in exchange for supplying produce at predetermined quality standards. The benefits extend to all parties involved—farmers, processing companies, distributors, and consumers—yielding efficiencies that enhance overall agricultural productivity and market access.

Linkage between producer and processor*:* One of the primary advantages of contract farming is its ability to reduce inefficiencies along the agricultural value chain. By establishing direct relationships between farmers and processors, it minimizes the price gap between farm gate and retail prices, thereby benefiting both producers and consumers. This direct linkage also helps in reducing perishable commodity waste, ensuring a more efficient distribution of agricultural products from farm to market.

Market access to small farmers*:* contract farming provides smallholder farmers with access to markets that they might not otherwise reach. This is particularly beneficial for high-value or non-traditional crops where market access can be challenging without the backing of a larger entity. Research indicates that contract farmers often achieve higher yields and better income stability compared to non-contract producers, due to guaranteed output prices and access to technical expertise (Mishra et al., 2018; Kalamkar, 2012).

Regularity in raw material supply*:* For agricultural businesses, contracting with farmers ensures a steady and reliable supply of raw materials that meet specific quality requirements. This stability is crucial, especially when dealing with commodities destined for processing or export markets where consistency and adherence to stringent quality standards are paramount (Roy et al., 2021).

Food safety and security*:* Food safety is another critical aspect facilitated by contract farming. With increasing global demand for safe and traceable food products, businesses enter into contracts to ensure compliance with international standards. They provide farmers with necessary inputs and guidance on best practices to meet food safety regulations, thereby enhancing consumer confidence in the products.

Economic development*:* Contract farming also contributes to broader economic development by generating employment opportunities, improving rural infrastructure, and expanding market access for farmers. It reduces the reliance on government subsidies and programs by leveraging private sector investments in agriculture, particularly in regions undergoing economic reforms that limit public spending on agricultural support initiatives (Warning and Key, 2002).

However, the inclusivity of contract farming remains a topic of debate. While it has been instrumental in integrating small farmers into value chains in some contexts, disparities exist in its adoption and impact across different regions and crops. For instance, while significant percentages of small farmers in India and Nepal participate in contract farming for perishable commodities, disparities exist in terms of which farmers benefit most from these arrangements (Birthal et al., 2005; Kumar et al., 2019).

Concerns in Contract Farming

Contract farming, while often lauded for its benefits, also brings forth significant concerns and negative impacts, particularly for small, unorganized farmers who face challenges due to their limited negotiating power when dealing with large corporate enterprises. Research underscores that these power differentials can lead to less favourable contract terms for farmers, thereby diminishing the intended advantages of contract farming (Maertens and Velde, 2017; Kalamkar, 2012). The following major concern are associated with contract farming:

Fear of contract loss: Smallholders frequently perceive contract terms as unfair or broken, as they may find themselves coerced into accepting exploitative conditions. This can include investing in specific assets or altering cropping practices to comply with contractual obligations, which can increase their dependency on contract crops and further weaken their bargaining position (Watts, 1994). Consequently, while contracts provide businesses with protections against unforeseen risks, farmers are often expected to fulfil their contractual obligations regardless of changing circumstances (Singh, 2002).

Disparity in profit share: The unequal distribution of benefits between businesses and farmers is another contentious issue. Research indicates that while both parties benefit, larger farming operations tend to profit more from contract farming arrangements due to their greater market influence and ability to negotiate in more favourable terms (Little and Watts, 1994; Glover and Kusterer, 1990). This disparity can lead to marginalization of small farmers and exacerbate poverty and inequality within rural communities (Guo et al., 2005; Warning and Key, 2002).

Disparity in farmer’s preference: Moreover, the preference of contracting firms for larger farmers with more extensive resources further marginalizes smallholders. Factors such as landholdings, access to irrigation, additional assets, and membership in cooperatives often determine which farmers are chosen for contracts, leaving smaller farmers at a disadvantage (Ton et al., 2018).

Fear of contract obligations: Contract farming can also lead to financial risks for farmers. They may face penalties or defaults if they cannot meet contract obligations regarding quantity or quality, especially when market prices fluctuate unfavourably compared to fixed contract prices (Glover and Kusterer, 1990; Singh, 2002). Instances of businesses failing to honour contracts, such as not purchasing agreed-upon produce or imposing stringent quality controls during abundant harvests, further highlight the vulnerabilities faced by farmers (Swain, 2011; Warning and Key, 2002).

Fear of land loss: There are also concerns about land tenure and control. While there is little evidence of farmers losing land titles directly due to contract farming, there is apprehension regarding farmers' autonomy in land management under contract terms. In many cases, farmers provide labour and land while companies supply inputs, leading to indirect control over farming practices and potentially compromising farmers' long-term land use decisions (Singh, 2002).

Environmental concern: Environmental sustainability is another critical issue associated with contract farming. Intensive cultivation of cash crops under contract, often without adequate crop rotation, can lead to soil depletion and pest outbreaks, exacerbating environmental degradation (Glover and Kusterer, 1990). Moreover, the higher use of water, pesticides, and fertilizers in high-value crops can further strain natural resources and contribute to environmental deterioration.

Socio-economic concerns: There are broader socio-economic concerns. Over-reliance on cash crops under contract can increase vulnerability to food shortages and price fluctuations, affecting household food security. Additionally, influential agribusiness companies may leverage their power to influence government policies and resource allocation in ways that prioritize corporate interests over the welfare of smallholder farmers (Watts, 1994).

Policy Status for Contract Farming in India

The Government of India has been actively promoting the liberalization of State Agricultural Produce Marketing Committees (APMCs) and establishing a legal framework to facilitate direct sales and contract farming across the country through initiatives such as the Model APMR (Agricultural Produce Marketing Regulation) Act of 2003. This legislation mandates the registration of contracting organizations, the documentation of contract agreements, the resolution of disputes, and exempts contracted produce from market fees levied by APMCs, thereby ensuring farmers retain custody over their contracted property. Furthermore, it permits the sale of farm produce directly from fields to contracting companies, bypassing APMC-regulated markets. Since the adoption of the Model Act, sixteen states have removed fruits and vegetables from APMC control, while Punjab enacted its own Punjab Contract Farming Act in 2013. By 2016–17, fourteen states had implemented rules pertaining to contract farming, and twenty states had amended their APMC Acts in alignment with the Model Act of 2003 (GoI, 2003). Subsequently, the Government introduced the Model Agriculture Produce and Livestock Contract Farming (Promotion & Facilitation) Act, 2018 (GoI, 2018), aimed at boosting farmers' confidence in contract farming and incentivizing businesses to engage in it. This Act, building on its predecessor, emphasizes safeguarding farmers' interests and establishes a state body to oversee contract farming regulations impartially. It mandates the registration of contracting firms, records contracts at district and block levels, prohibits permanent structures on farmers' lands, supports Farmer Producer Organizations (FPOs) and Farmer Producer Companies (FPCs), protects land ownership, and ensures purchase of pre-agreed quantities of produce under contract, all while covering contracted produce under crop and livestock insurance.As of July 2020, thirty-one states and union territories had implemented marketing reforms, reflecting a positive reception to these legislative efforts (GoI, 2020b). Contract farming has been extended to twenty-nine commodities across sixteen states, demonstrating its growing importance in Indian agriculture (Swain, 2016).

However, in 2020, the Government passed three farm laws, including the Farmers’ Empowerment and Protection Agreement on Price Assurance and Farm Services Act, 2020 (GoI, 2020a), aimed at creating a unified regulatory framework and promoting contract farming. This Act simplified registration processes, guaranteed prices, inputs, and services for farmers, and shifted market risks from farmers to firms. Despite these efforts, the laws faced opposition and were repealed in 2021 amidst concerns from farmers about corporate exploitation and fears regarding the future of Minimum Support Price (MSP) based procurement.

Table 2. Scenario of major crops under contract farming in India

Crops	Quantity in Million Tonnes	Reference
Sugarcane	50-60	ISMA, 2020
Cotton (Bales)	10-15	CAI, 2020
Potato’s	2-3	NPCS, 2020
Tomato’s	1.5-2.5	NPCS, 2020
Chili peppers	1-2	NPCS, 2020
Corn	0.5-1	Various company reports
Ginger	0.5-1	Spices Board India, 2020
Turmeric	0.3-0.6	Spices Board India, 2020
Spybean	0.2-0.5	SOPA, 2020
Apples	0.1-0.3	Various company reports

Note: Figures are approximate and sourced from various reports, so they may not reflect the most up-to-date numbers)

Contract Farming in North-East Region of India

Contract farming holds significant promise for transforming agriculture in the North-East region of India, known for its scenic landscapes and agricultural potential. However, the region faces several challenges such as low agricultural productivity, inadequate infrastructure, and high poverty rates. Contract farming can address these issues by providing farmers with access to markets, inputs, and technical support, thereby improving livelihoods and fostering economic development. The North-East boasts fertile land, abundant water resources, and a climate conducive to agriculture. Yet, the lack of modern inputs and infrastructure hampers agricultural productivity. Initiatives promoting high-value agriculture through contract farming, coupled with revitalizing village institutions and fostering public-private partnerships, could play a pivotal role in revitalizing the agricultural landscape. By enhancing productivity, diversifying crop varieties, and integrating with national markets, contract farming can catalyse inclusive growth and economic transformation in the region (Krishi ICAR, 2015). To fully harness the potential of contract farming in the North-East, it is crucial to raise awareness among farmers about its benefits and ensure attractive and timely payments. Guaranteeing market support during price crises and empowering farmers as active participants rather than mere price takers are essential for sustaining these arrangements in the long term. However, the region faces significant challenges including low agricultural productivity, vulnerability to natural disasters like floods and landslides, inadequate infrastructure, and a predominance of small and marginal farmers. Subsistence farming practices and limited access to modern inputs further constrain productivity. Additionally, insurgency in certain areas poses security challenges that impact agricultural economies and overall development (Sunanda, 2005).

Despite these challenges, the North-East presents opportunities for contract farming, particularly in high-value crops like tea and coffee. The region's favourable climate and soil conditions make it ideal for these globally demanded commodities. Established tea and coffee industries provide a solid foundation for scaling up contract farming initiatives, ensuring stable incomes for farmers and bolstering regional economic growth. Government initiatives to promote contract farming and the involvement of organizations like NABARD in providing financial and technical support are crucial for fostering an enabling environment. By addressing these challenges and leveraging its agricultural strengths, the North-East can unlock its full potential through sustainable and inclusive contract farming practices (TNAU, 2015).

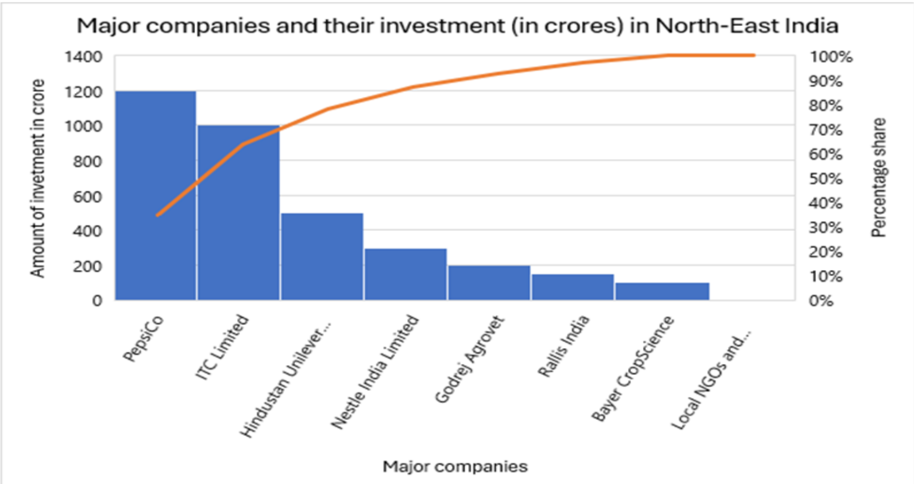

Figure 1. Companies involved in contract farming in North-East India, along with their monetary share

(**Source**: Contract Farming in India" by Indian Council for Research on International Economic Relations) (**Note:** The figures are approximate and sourced from various reports, articles, and websites)

Opportunity of Contract Farming in North-East Region

The NE state has a suitable climate and fertile soil for growing a variety of crops, including oranges, pineapple, banana, jackfruits, temperate fruits like plums, peaches, and pears, turmeric, ginger, black pepper, areca nut, and strawberry. Farming in NE is traditionally organic, with very little use of agrochemicals. This provides ample opportunity for expanding organic markets and for farmers to take advantage of these new and profitable opportunities. There is a growing demand for organic products, both locally and globally. NE state can capitalize on this trend by promoting organic contract farming of high-value crops like pineapple, banana, turmeric, ginger, black pepper, areca nut, strawberry and jackfruits can diversify the state's agricultural landscape. Contract farming can help address the challenges of low agricultural productivity in NE by providing farmers with access to modern inputs, technical guidance, and assured markets. Contract farming can help small and marginal farmers of NE, access markets, inputs, and technical support, which they often lack. This can lead to improved livelihoods and economic development for these farmers.

Table 3. Scenario of major crops under contract farming in North-Eastern region of India

Crops	Quantity in Million Tonnes	Producing states	Reference
Tea (Kg)	100-150	Assam	Tea Board of India, 2020
Potato	0.5-1	Assam, Meghalaya	NPCS, 2020
Chilli	0.1-0.2	Assam, Meghalaya, Nagaland	NPCS, 2020
Ginger	0.1-0.2	Meghalaya, Arunachal Pradesh	Spices Board India, 2020
Turmeric	0.1-0.3	Assam, Meghalaya	Spices Board India, 2020
Black pepper	0.005	Nagaland, Assam	
Sugarcane	2-3	Assam	ISMA, 2020
Jute	0.5-1	Assam, Meghalaya	Jute Corporation of India, 2020
Pineapple	0.2-0.5	Meghalaya	Various company reports
Arecanut	0.05-0.1	Assam, Meghalaya	Various company reports
Coffee	0.01-0.05	Assam, Meghalaya	Coffee Board of India, 2020

(**Note:** Figures are approximate and sourced from various reports, so they may not reflect the most up-to-date numbers)

Conclusion

Contract farming serves as a vital mechanism for enhancing agricultural productivity, ensuring food safety, and integrating small farmers into global markets. It offers a framework where collaboration between farmers and agribusinesses leads to mutual benefits, driving efficiency, sustainability, and economic growth in the agricultural sector. As global food systems evolve, the role of contract farming is likely to become even more critical in ensuring food security and economic resilience in agricultural communities worldwide. Contract farming offers benefits such as market access and risk mitigation for businesses and some farmers, it also poses significant challenges and risks, particularly for smallholders. Addressing these concerns requires careful consideration of power dynamics, environmental impacts, and socio-economic implications to ensure equitable and sustainable outcomes for all stakeholders involved in contract farming arrangements. India has made significant strides in reforming agricultural marketing and promoting contract farming, challenges remain in addressing farmers' apprehensions and ensuring equitable benefits from these reforms. Ongoing dialogue and stakeholder consultation are crucial for refining policies and building consensus towards sustainable agricultural practices that benefit all stakeholders involved.

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