

Horticulture Bytes

April / 2024

Eighth Edition



APART: Adding Value to Increase Resilience, Production And Value Addition of Horticulture Value Chain

DoH & FP is the Operational Project Implementation Unit (OPIU) under APART

Major Project Interventions

- Development of 167 clusters in APART district
- Demonstration of Climate Resilient Technology and Market-Led Activities
- Demonstration of Post-Harvest Management (PHM) Techniques
- Application of IPM systems to reduce the use of pesticides and promote vermin composting
- Market linkage through
 - Value Chain Schools
 - Cold Chain Storage Facilities
 - Provision for specially designed 4 - wheeler transport vehicles
- Formation of FFS (Farmer Field Schools) and FPCs (Farmer Producer Companies)
- Intensification of Vegetable Nursery for Seed Production
- Awareness and Capacity Building



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ASSAM AGRI BUISNESS AND RURAL TRANSFORMATION PROJECT (APART)

Message From The Director's Table

The eighth issue of Quarterly Online e-newsletter “*Horticulture Bytes*” initiated by OPIU-Horticulture and Food Processing to disseminate information and impact of APART activities in field level. This issue covered the activities performed during the quarter of January –March 2024.

During the period the major focus has been on Market linkage and Post harvest management activities of PAEP (Potatoes Area Expansion Programme) for Rabi Season 2023-24. The DHCs and DAMCs have made significant efforts in market linkage of Potatoes with buyers like Pepsico India Pvt Ltd, Haldhiram, Siddhi Vinayak Pvt Ltd etc.

This is my last editorial from Director's desk with superannuation w.e.f. 30th April 2024. I am happy to note that Horticulture sector of Assam has received considerable boost and focus during my tenure (01-02-2021 onwards) under APART especially with PAEP 2023-24, rolling out MAP (Medicinal and Aromatic Plants) sector , rolling out Assam Floriculture Mission, in building APART promoted FPCs (Farmer Producer Companies) as vehicle of market linkages, market driven product diversification , boost in export import business and in value chain development of Horticultural crops as additional source of income for farmers. I am particularly happy that DoHFP has collaborated with APART for rejuvenating the tissue culture lab , setting up CoE (Center of Excellence , Indo Israel Project) , Khetri for Vegetable seeds production, introduction and area expansion of MAP (Vettivar, Tulsi, Lemon Grass , Patchouli) in collaboration with CIMAP, Lucknow during my tenure .

I wish the project all the success in future, so that, it is judged as one of the best projects in the world funded by WB.

**Shri Triranga Bharatiya Borah , Director
Horticulture and Food Processing, Assam**

In the quarter of Jan-March 2024 we have continued our efforts in strengthening Vegetables Value Chain Development, MAP area expansion plans by setting up oil extraction units in Dhubri, Goalpara and Kokrajhar districts, Seed production in net houses , Post harvest management of Horticultural crops, PAEP 2023-24 and for rolling out Assam Floriculture Mission. We have been able to roll out the AFM in 15 districts of 1)Kamrup (2) Kamrup (M) (3) Nalbari (4) Kokrajhar (5) Chirang (6) Morigaon (7) Nagaon (8) Golaghat (9) Jorhat (10)Dibrugarh (11) Sivasagar (12)Tinisukia (13) Dima Hasao (14) Karbi Anglong (15) Sonitpur covering Glances of Anthurium suckers var. Tropical/ Fire/Red, Xavia /Dark purple, Acropolis/White (in the process of plantation under 51 protected structure units) and Tuberose bulbs var Arka prajwal, A. shinger, A.nayantara, Subhasini, Vaibhab, Calcutta double, Subarner akha (planted in open cultivation) which has been given to the Flower Growers and Floripreneurs.

We are presenting a brief glimpse of the progress in this eighth issue and we hope it will be helpful for all.

Shri Bipul Das

ADA (R/FT) cum

Nodal Officer, APART-OPIU (Horti.)

Activities carried out during Jan-Mar 2024, Cachar District

Name of DHC: Ananya Purkayastha

Activities carried out during Jan-Mar 2024:

- Technical training conducted under BMP Potato
- Technical training conducted under Potato Area Expansion Programme
- Technical training conducted under Potato Area Expansion Programme on potato seed production
- Aphid monitoring done at potato demo plot
- Field day completed for Rabi vegetables
- Field day completed for Potato demos
- No. of technical trainings completed: 9 nos.
- No. of field days completed: 4 nos.



Activity status:

POTATO: 100% harvesting of potatoes has been done under Potato area expansion programme covering an area of 130 bigha (50 beneficiaries) and under BMP 0.5 Ha each for 5 beneficiaries under Palonghat Agro Project Famers producer company.

Production details: Lady rosetta average production was 22-24q/bigha, K. surya: 20-22q/bigha, K. himalini: 22-24q/bigha, K. jyoti : 22-24q/bigha, Chipsona 3: 25-27q/bigha.

Market price: Lady rosetta market price got 18-20 Rs per kg, K.jyoti: 14-16 Rs per kg, K.himalini: 15-18 Rs per kg, K. surya : 18-20Rs per Kg, Chipsona 3: 20-22 Rs per kg.

Remarks: The farmers prefer to sell their produce in nearby local markets due to better price.

PUMPKIN: Pumpkin under IPM programme, cultivated in 1 ha land and harvesting done under Palonghat Agro Project Famers producer company. Average production of pumpkin 193 q/ha. Market price of pumpkin Rs. 30-40/kg.

CABBAGE AND CAULIFLOWER: Cabbage and cauliflower under IPM programme cultivated in 1 ha land each and harvesting done under Narsingpur Integrated Farming Farmers Producer Co. Ltd. Average production of cabbage is 270 q/ha and of cauliflower is 215 q/ha. Market price cabbage is Rs 30-40/kg and of cauliflower is Rs 40-50/kg.

Progress of MAP (Medicinal and Aromatic Plants) **cultivation in Goalpara district**

Submitted By : Shri Pranabjyoti Bharali
District Medicinal & Aromatic Plant Coordinator

Introduction: In the picturesque district of **Goalpara**, aromatic plant cultivation has emerged as a promising avenue for farmers. Let's delve into the key aspects of this thriving practice.

Advantages: Boasts fertile lands, conducive climate, and rich biodiversity.

Foundation: Traditional agricultural practices provide a solid base for aromatic plant cultivation.

Conditions Favouring Aromatic Plant Cultivation in Goalpara

Geographical Features: Abundant sunlight, well-drained soil, and moderate humidity create an ideal environment.

Promising Factors: Goalpara's unique conditions support the growth of aromatic crops.

Area Under Aromatic Plant Cultivation

FPCs Involved: Several **Farmer Producer Companies (FPCs)** operate under the **Assam Agribusiness and Rural Transformation Project (APART)**.

Cultivation Focus: **Lemongrass** and **Vetiver** dominate, covering a total area of **106 acres**.

Additional Crops: Farmers also cultivate **citronella** and **lemongrass** across an impressive **300 acres**.

Technical Support from CIMAP

Central Institute of Medicinal and Aromatic Plants (CIMAP) provides crucial technical assistance.

Expertise Areas: Crop management, pest control, and sustainable practices empower local cultivators.

Extraction Units and FPCs

Pragatishil FPC (Rangjuli):

- o**Lemongrass Cultivation:** Utilizes an extraction unit provided by APART.

- o**Achievement:** Produced over **150 kg of lemongrass oil**.

Kanaklata FPC (Jaleswar):

- o**Vetiver Cultivation:** Secondary income source; also aids in soil erosion control.

Recent Adoption: Lemongrass cultivation with APART's extraction unit.

Income Sources from Aromatic Plants

Lemongrass Oil Sales:

Revenue Stream: Two extraction units contribute significantly.

Effective Marketing: FPCs promote lemongrass oil effectively.

Slip (Seeds) Sales:

FPCs sell slips (seeds) at profitable prices, enhancing income.

Market Linkage: Strategic Partnerships:

MOU with Flower Valley Agrotech Pvt Ltd and Aromaqueen Pvt. Ltd: Ensures a steady market.

Export Prospects: Discussions underway to export lemongrass oil to the American market.

Doubling Income through Aromatic Plants

Positive Impact: Adoption by Goalpara FPCs and farmers significantly boosts overall income.

Future Outlook: Expansion and exploration of new markets promise continued success.

Conclusion: The aromatic plant sector in Goalpara exemplifies resilience, innovation, and economic growth. By harnessing the power of nature's scents, farmers are not only doubling their income but also fostering sustainable livelihoods. The sweet aroma of success lingers in the air, promising prosperity for Goalpara's agricultural community.

Progress of MAP (Medicinal and Aromatic Plants) cultivation in Goalpara district

Case Study: Pragatishil Farmer Producer Company (FPC)

Introduction: The Pragatishil Farmer Producer Company (FPC) is a remarkable example of transformation and resilience. Founded in the serene town of Rangjuli, Goalpara, this FPC has not only empowered its members but also contributed significantly to the local economy. Let's delve into their inspiring journey.



Background and Vision:

- **Chairman Dristi Rajkhowa**, a former **ULFA (United Liberation Front of Assam)** member, embarked on a path of redemption by embracing agriculture. His vision was clear: to uplift fellow farmers and create sustainable livelihoods.
- The FPC recognized the potential of **aromatic plants** as a game-changer for rural communities. These plants promised not only environmental benefits but also increased revenue for farmers.

Growth and Expansion:

- The journey didn't stop there. With the help of **APART and Central Institute of Medicinal & Aromatic Plants (CIMAP)**, the FPC expanded its cultivation area to an impressive **105 acres**. This expansion was a testament to their commitment to sustainable farming practices.
- The FPC's dedication to quality and innovation caught the attention of both national and international players.

Market Linkages:

- The FPC forged strategic partnerships with companies like **Flower Valley Agrotech Pvt Ltd** and **Aroma queen Pvt. Ltd**. These linkages opened doors to wider markets. Their lemongrass oil, meticulously extracted from the aromatic leaves, found buyers across borders. In a short span, they sold over **150 kg of oil**.

Meeting the Demand:

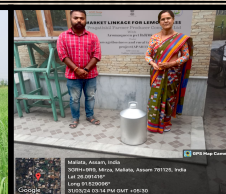
- Recently, a surge in demand for **lemongrass slips** came from Jaleshwar. Local farmers, inspired by the FPC's success, wanted to venture into lemongrass cultivation. The FPC responded swiftly, providing quality slips and sharing their expertise. This collaborative spirit strengthened the community and fueled further growth.

Conclusion:

The Pragatishil Farmer Producer Company stands as a beacon of hope, proving that transformation is possible even in the face of adversity. Chairman Dristi Rajkhowa's journey from conflict to cultivation exemplifies resilience, and the FPC's success story inspires us all. As the fragrance of lemongrass wafts through Rangjuli, it carries with it the promise of prosperity and progress.

The Role of APART:

- With the support of **APART (Assam Agribusiness and Rural Transformation Project)**, the FPC secured a **48-acre lemongrass demonstration plot**. Lemongrass, known for its aromatic oil, became the focal point of their endeavour.
- Additionally, APART facilitated the establishment of an **oil extraction unit** with a capacity of **500 kg per batch**, allowing the FPC to process lemongrass efficiently.



Reviving Hope Along the Brahmaputra

Kanaklata Farmer Producer Company (FPC), Goalpara District

Introduction

The **Kanaklata Farmer Producer Company (FPC)** stands as a testament to resilience and innovation. Nestled near the banks of the mighty Brahmaputra in Jaleshwar, this FPC faced an uphill battle against soil erosion. However, their journey took an unexpected turn, thanks to a remarkable solution and unwavering determination.

The Eroding Challenge

The Brahmaputra, both a lifeline and a force of nature, relentlessly eroded the fertile soil along its banks.

Cultivation seemed impossible, and despair loomed over the farmers.

The Role of APART

Chairman **Zel Hoque** and the FPC's Board of Directors turned to **APART (Assam Agribusiness and Rural Transformation Project)** for answers. APART introduced them to **Vetiver**, a resilient grass with deep roots. Vetiver not only stabilized the soil but also held the promise of something more—a precious oil.

Vetiver: The Guardian of Soil

Vetiver's roots anchored the eroding soil, creating a protective barrier. But that wasn't all. Hidden within its fragrant leaves lay an oil that would soon become their lifeline, the Golden Oil.

The FPC nurtured Vetiver, patiently waiting for it to mature. After **15 months**, the moment arrived.

The extraction process yielded an oil of unparalleled quality, priced at a staggering **\$20,000 per kilogram**.

Aromatic and Medicinal Plants Unleashed

The FPC's journey didn't end with Vetiver. Inspired by their neighbours, the **Pragatishil FPC**, they embraced **Lemongrass**. Lemongrass, with its citrusy aroma, promised not only revenue but also a sustainable future.

Market Linkages

Strategic partnerships bloomed. The FPC connected with **Flower Valley Agrotech Pvt Ltd** and other national and international players.

Their lemongrass oil found buyers far beyond Jaleshwar. The fragrance of success wafted across borders.

Citronella: A Market Triumph

In the midst of their journey, curiosity led them to **Citronella**. They extracted it, tested the waters, and found success. The market responded, validating their bold move.

Conclusion

The Kanaklata FPC's story echoes resilience, innovation, and community spirit. As the Brahmaputra flows, so does their determination. Chairman Zelhoque's vision transformed eroded banks into fertile ground. The fragrance of Vetiver and Lemongrass now mingles with hope, promising prosperity along the river's edge.



জলেশ্বৰৰ তাৰাংগাপুৰত কৃষি বিষয়ক সভা

প্রতিদিন বিশেষ সেৱা, গোৱালপাৰা, ২৪ জুন : গোৱালপাৰা জিলা কৃষি বিভাগ তথা অসম কৃষি বাণিজ্য আৰু গ্ৰাম্য কপাস্তৰণ প্ৰকল্পই বিশেষ পদক্ষেপ হাতত লৈছে। ইয়াৰ অংশ হিচাপে জলেশ্বৰৰ তাৰাংগাপুৰত কনকলতা এফ পি চিত এটা উচ্চ মানৰ ভেটিভাৰ আৰু সুগন্ধি-বিৰিণাৰ তেল নিষ্কাশন যন্ত্ৰ চালনাৰ কামৰ আৰম্ভ কৰে। অসম কৃষি বাণিজ্য আৰু গ্ৰাম্য কপাস্তৰণ প্ৰকল্পৰ অধীনত উদ্বোধন কৰা এই প্ৰকল্পৰ উদ্বোধনী অনুষ্ঠানত উপস্থিত থাকে টাকিমাৰী জিলা পৰিষদৰ সদস্য আফতাবুল আহিয়া মোল্লা, তাৰাংগাপুৰ গাঁও পঞ্চায়তৰ সভাপতি শহিদুল ইছলাম, গোৱালপাৰা জিলা ঔষধি আৰু সুগন্ধি উদ্ভিদ সমন্বয়ক প্ৰণৱজ্যোতি ভৰালী, জিলা কৃষি বিপণন সমন্বয়ক আব্দুল শকুৰ, সাংবাদিক বহিষ্কুল ইছলাম শেখ। প্ৰকল্পটোৰ উদ্বোধনীৰ অন্তত এখন মুকলি সভা অনুষ্ঠিত হয়। মুকলি সভাত গোৱালপাৰা জিলা কৃষি বিভাগে উন্নত মানৰ ভেটিভাৰ খেতিৰ জৰিয়তে কৃষকসকলৰ উপাৰ্জন বৃদ্ধি কৰাৰ লক্ষ্য লোৱা বুলি কৃষক তথা বাইজক এই উন্নত মানৰ ভেটিভাৰ, সুগন্ধি বিৰিণা আৰু নেমু খেতি কৰিবলৈ কৃষকসকলক আহ্বান জনায়। আনহাতে ভেটিভাৰ খেতিৰ জৰিয়তে কৃষকসকলে স্বাৱলম্বী হোৱাৰ লগতে নদীৰ খহনীয়া ৰোধ কৰাটো সহায়ক হ'ব। কৃষকসকল এই উন্নত মানৰ ভেটিভাৰ খেতিৰ জৰিয়তে স্বাৱলম্বী হ'ব বুলি আশা কৰা হৈছে। সেয়ে সকলো কৃষকক এই খেতি কৰিবলৈ আহ্বান জনাইছে কৃষি বিভাগে।



Expanding Potato Cultivation: Empowering Farmers in Karbi Anglong

Name of DHC: Sudipta kumar Das

In a bid to enhance potato production and bolster agricultural prospects in Assam, the Potato Area Expansion Programme has been making significant strides, particularly at the Jakve Farmer Producer Company (FPC) under Bakalia ADO Circle, Langsomepi Block, Karbi Anglong. This flagship initiative, aimed at optimizing potato cultivation, has been instrumental in uplifting the agricultural landscape in the region.

The programme, targeted at expanding potato cultivation approximately 1738 hectares across various districts of Assam, has garnered momentum with the selection of climate resilient potato varieties tailored for the local environment. Among the selected varieties are Kufri Chipsona 3 and Lady Rosetta for processed varieties, alongside Kufri Surya, Kufri Himalini, and Kufri Jyoti for table ones. This strategic selection ensures not only diversity in produce but also caters to different consumer preferences.

Sl. No.	Total area (Ha)	Total area (Bigha)	Variety (Kg)				
			LR	K. Chipsona	K. Surya	K. Himalini	K. Jyoti
1.	8.87	65	6850	2900	2950	2950	3900

Karbi Anglong emerged as one of the districts designated for this initiative, with an allotment area of 8.67 hectares. The successful implementation of the Potato Area Expansion Programme in Jakve FPC, covering a total of thirty beneficiaries across various Farmer Interest Groups (FIGs), underscores its efficacy in fostering community participation and engagement.

Key initiatives undertaken to support the programme include the distribution of potato seeds according to variety, targeted training sessions on seed production and cultivation techniques, meticulous monitoring, and on field technical assistance to address disease and pest challenges. Moreover, emphasis has been placed on assessing the cost-benefit ratio and yield enhancement derived from adopting improved varieties.

The cultivation of both table and processed varieties has adhered to the prescribed package of practices outlined by the Directorate of Horticulture and Food Processing initiated during the month of November, 2023. This approach has facilitated uniform growth while mitigating the incidence of pests and diseases, thereby ensuring a sustainable and resilient agricultural ecosystem.

The status of activities under the programme reflects significant progress, with various training sessions and monitoring activities already completed. Technical training on Best Management Practices of Potato, training sessions on Potato Seed Production for FPC members, aphid monitoring, and field days have been successfully conducted, signifying a concerted effort towards knowledge dissemination and capacity building among stakeholders.

As the potato crop neared the completion of its lifecycle, harvesting operations commenced in accordance with the maturation timeline of each variety, predominantly during the month of February. The harvested yield was then promptly brought to market, where traders from nearby markets, including Bakalia weekly market and Dimapur market, eagerly awaited the arrival of the fresh produce.



Expanding Potato Cultivation: Empowering Farmers in Karbi Anglong

The sales transactions were conducted efficiently, with a focus on maximizing returns for the farmers. The following table outlines the yield details and average rates per quintal achieved during the sales:

Sl no.	Variety	Av. Yield (Qtl./Ha)	Av. Rate/Qtl.
1	Lady rosetta	220	14.5
2	Kufri chipsona	260	16
3	Kufri surya	275	13
4	Kufri himalini	270	13.5
5	Kufri jyoti	275	13

Sl. No.	Nature of activity	Nos.	Remarks
1	Technical training on Best Management Practices of Potato under Potato Area Expansion Programme, AWP 2023-24	1	Completed
2	Training to FPC Members on Potato Seed Production, AWP 2023-24	1	Completed
3	Aphid Monitoring of Potato (4 phases)	1	Completed
4	Field day	1	Completed

As the potato crop neared the completion of its lifecycle, harvesting operations commenced in accordance with the maturation timeline of each variety, predominantly during the month of February. The harvested yield was then promptly brought to market, where traders from nearby markets, including Bakalia weekly market and Dimapur market, eagerly awaited the arrival of the fresh produce .

By strategically timing the harvest and leveraging nearby markets, farmers were able to realize competitive prices for their produce, thereby ensuring a favorable return on their agricultural investment.

As the Potato Area Expansion Programme continues to unfold, it holds the promise of not only elevating potato cultivation but also fostering economic empowerment and food security in the region. Through collaborative efforts and strategic interventions, initiatives like these pave the way for a thriving agricultural sector and sustainable rural development.



APART, Lakhimpur District

Name of DHC: Haribhakta Khanikar

Potato is one of the most important and widely cultivated vegetable crops of Assam and ranks fourth in terms of acreage under individual crop in the state. To support the Potato producing farmers of the state of Assam with an advance method of production technologies, a grand Potato Area Expansion Programme has been initiated by the World Bank Finance project “Assam Agri Business and Rural Transformation Project” (APART) with the help of ARIAS, Society an autonomous body under Govt. of Assam. Under the Programme, 5 nos. of Potato varieties *i.e.* K. Chipsona, Lady Rossetta, K. Surya, K. Himalini and K. Jyoti were distributed to selected FPCs. A total of 977.50 quintals of Potato tubers has been allocated to 5 nos. of selected FPCs of Lakhimpur district namely, Pub Dhakuakhana Red Rice FPC (Dhakuakhana), Obonari FPC (Ghilamora), Boginodi Pineapple FPC, Taba Tate FPC (North Lakhimpur) and Aai Dharitri FPC (Narayanpur) which covered around 326 bigha of land.



The potato tubers were received in time and distributed to the selected FPCs after providing proper capacity building and training programme as per APART guideline. The planting of potato tubers were started in the beginning of the November and completed in the mid of December, 2023. All the beneficiaries of the FPCs planted tubers after following proper agronomical practices like ploughing, depth of planting, Row to Row distance and Plant to Plant distance etc and applied recommended fertilizers and irrigation as per Potato Crop Calendar. Most of the beneficiaries planted Pumpkin as a intercrop in between each 7 numbers of row of potato to maximize the farm profit and for proper utilization of land resources which also increase the B:C ratio of the product.

The quality potato tubers with standard size and shape have been distributed to all the selected FPCs. The APART staff of Lakhimpur district along with officials of



DAO, Lakhimpur actively participated and motivated the farmers towards the cultivation of the potato and make the programme grand success. A total of 7 nos. of one day Technical Training on “Potato Area Expansion Programme” along with the help of Expert from DAO, Lakhimpur were conducted phase wise *i.e.* before planting and 30 days after planting to maximize the profit of the farmers. Concerned APART staff and officials of DAO, Lakhimpur visited the potato field in different stage of crop growth and guide the farmers by providing potato crop calendar as per APART guidelines. A total 5 nos. of “Technical Training on Aphid management of potato in different stages of crop growth” and one number of “Field day of Potato” have been conducted as a part of PAEP AWP 2023-24. A total around 300 numbers of farmers were provide training and capacity building programme under PAEP, 2023-24 and farmers were very enthusiasm about the APART initiative and ready to accept the technologies to increase the production and productivity of the crop. Most of the beneficiaries of the FPCs were very happy with the total average yield and size of the harvesting products. The farmers sold their products in the local as well as distance market with a good price and stored the tubers in cold house for next season cultivation as the production per bigha of the product is much higher than the local cultivated landrace. The total production from 326 bigha of cultivated land is 6244 quintals with a average production of 1915 kg per bigha of land. The average farm selling price of the potato tuber is Rs.13 per kg.



Expanding Potato Cultivation: Empowering Farmers in Jorhat District

Name of DHC: **Atrika Mudoi**

Runjun Borah

Potatoes Area Expansion Programme (PAEP) initiated by OPIU-Horticulture for Rabi season AWP 2023-24, This program aims to cover 1700 ha in 18 districts through 126 FPCs, promoting double cropping to enhance farmers' income. In a bid to enhance potato production and bolster agricultural prospects in Assam, the Potato Area Expansion Programme has been making significant strides, particularly in Jorhat district 11 numbers of FPC and VCS covered under this flagship initiative, namely they are namely Krishi Vikash Value Chain School (Dhekorgorah Dev Block), Jhanji Agri Horti FPC (Dhekorgorah/ Koliyapani Dev Block), Kachadhali FPC (Titabar Dev Block), Bhugdoi Velly FPC (Dhekorgorah Dev Block), North west FPC (dhekorgorah Dev Block),Kakojan FPC (Chipahikhola Dev Block), Gibon FPC (Selenghat Dev Block), Basundhara FPC (Selenghat Dev Block), Nabajagaran FPC (Selenghat Dev Block), Mahalaxmi Nari FPC (Dhekorgorah Dev Block), Mahura FPC (Kaliyapani Dev Block) . Aimed at optimizing potato cultivation, has been instrumental in uplifting the agricultural landscape in the region.

The programme, targeted at expanding potato cultivation approximately 1700 hectares across various districts of Assam, has garnered momentum with the selection of climate resilient potato varieties tailored for the local environment. Among the selected varieties are Kufri Chipsona 3 for processed varieties, alongside Kufri Surya, Kufri Himalini, and Kufri Jyoti for table ones received by Jorhat District. This strategic selection ensures not only diversification in produce but also caters to different consumer preferences.

Sl. No.	Total area (Ha)	Total area (Bigha)	Variety (Kg)			
			K. Chipsona 3	K. Surya	K. Himalini	K. Jyoti
1	30	225	6900	18650	18600	24850

Jorhat district has emerged as one of the districts designated for this initiative, with an allotment area of 30 hectares. The successful implementation of the Potato Area Expansion Programme in 11 FPCs, covering Krishi Vikash Value Chain School 10 bigha area, Jhanji Agri Horti FPC 56 Bigha area, Kachadhali FPC 20 Bigha area, Bhugdoi Velly FPC 42 bigha area, North west FPC 4 Bigha area, Kakojan FPC 22 bigha area, Gibon FPC 20 bigha area, Basundhara FPC 20 bigha area, Nabajagaran FPC 20 bigha area, Mahalaxmi Nari FPC 16 bigha area, Mahura FPC 5 bigha area. A total of 225 bigha area covered under all FPCs. underscores its efficacy in fostering community participation and engagement.

Key initiatives undertaken to support the programme include the distribution of potato seeds according to variety, targeted training sessions on seed production and cultivation techniques, meticulous monitoring, and on-field technical assistance to address disease and pest challenges. Moreover, emphasis has been placed on assessing the cost-benefit ratio and yield enhancement derived from adopting improved varieties.



Expanding Potato Cultivation: Empowering Farmers in Jorhat District

The cultivation of both table and processed varieties has adhered to the prescribed package of practices outlined by the Directorate of Horticulture and Food Processing initiated during the month of November, 2023. This approach has facilitated uniform growth while mitigating the incidence of pests and diseases, thereby ensuring a sustainable and resilient agricultural ecosystem.

The status of activities under the programme reflects significant progress, with various training sessions and monitoring activities already completed. Technical training on Best Management Practices of Potato, training sessions on Potato Seed Production for FPC members, aphid monitoring, and field days have been successfully conducted, signifying a concerted effort towards knowledge dissemination and capacity building among stakeholders.

As the potato crop neared the completion of its lifecycle, harvesting operations commenced in accordance with the maturation timeline of each variety, predominantly during the month of February. The harvested yield was then promptly brought to market, where traders from nearby markets, including weekly markets of the Jorhat District, eagerly awaited the arrival of the fresh produce.

The sales transactions were conducted efficiently, with a focus on maximizing returns for the farmers. The following table outlines the yield details and average rates per quintal achieved during the sales

Sl no	Variety	Av. Yield (Q./Ha)	Av. Rate/Kg.	Sl. No.	Nature of activity	Nos.	Remarks
1	Kufri Chipsona	220	16	1.	Technical training on Best Management Practices of Potato and FPC members on potato Seed Production under Potato Area Expansion Programme, AWP 2023-24	20	Completed
2	Kufri Surya	240	13				
3	Kufri Himalini	200	13.5				
4	Kufri Jyoti	190	13				
				2.	Aphid Monitoring of Potato (4 phase)	1	Completed
				3.	Field day	1	Completed

By strategically timing the harvest and leveraging nearby markets, farmers were able to realize competitive prices for their produce, thereby ensuring a favorable return on their agricultural investment.

As the Potato Area Expansion Programme continues to unfold, it holds the promise of not only elevating potato cultivation but also fostering economic empowerment and food security in the region. Through collaborative efforts and strategic interventions, initiatives like these pave the way for a thriving agricultural sector and sustainable rural development.



বৰপেটা জিলাত আলুৰ এলেকা সম্প্ৰসাৰণ কাৰ্যসূচীৰ ২০২৩-২০২৪ বৰ্ষৰ এক চমু আভাস

ড° মিনচুৰা বেগম
জিলা উদ্যানশস্য সমন্বয়ক
এপাৰ্ট, বৰপেটা

উদ্যান শস্য আৰু খাদ্য সংসাধন সঞ্চালকালয় আৰু জিলা কৃষি বিভাগ, বৰপেটা উদ্যোগত এপাৰ্টৰ অধীনত ২১৩০ বিঘা মাটিত ১১ টা কৃষক উৎপাদক কোম্পানী (এফ.পি.চি.) যথাক্ৰমে বৰপেটা লুইতপৰীয়া এফ.পি.চি., গোমাফুলবাৰী কৃষি কল্যাণ এফ.পি.চি., বামধেনু এফ.পি.চি., আৰ'ণাই এফ.পি.চি., নৱ প্ৰয়াস এফ.পি.চি., মন্দিয়া মিলন জ্যোতি এফ.পি.চি., বেতবাৰী প্ৰগতি এফ.পি.চি., পূৱ-জনীয়া এফ.পি.চি., হাউলী এগ্ৰো ফিছ এফ.পি.চি., পলুমৰা এফ.পি.চি. আৰু সৰভোগ এফ.পি.চি. য়ে আলুৰ খেতি হাতত লয়।



উল্লেখ্য যে, আলুৰ এলেকা বৃদ্ধিৰ লগতে একেডৰা মাটিতে ধান চপোৱাৰ পিছত ছন পৰা মাটিত আলুৰ খেতি কৰি মাটিৰ সুব্যৱহাৰেৰে কাৰ্যক্ষমতা বৃদ্ধিৰ লগতে কৃষকসকলৰ আয় বৃদ্ধি কৰিবলৈ বৈজ্ঞানিক পদ্ধতিৰে উত্তম ব্যৱস্থাপনা পদ্ধতি ব্যৱহাৰ কৰা হয়। এফ.পি.চি.ৰ সদস্য তথা বৰপেটা জিলাৰ কৃষক সকলৰ মাজত উন্নত মানৰ বিধান (Generation-3) আৰু উন্নত জাত (Variety) যথাক্ৰমে লেডী ৰ'জেটা, চিপ চোনা-৩, কুফ্ৰী হিমালিনী, কুফ্ৰী জ্যোতি আৰু কুফ্ৰী সূৰ্য্যৰ খেতি কৰি অধিক উৎপাদনৰ লগতে উপযুক্ত বজাৰ মূল্য লাভ কৰি যথেষ্ট উৎফুল্লিত হোৱা দেখা গৈছে। ইয়াৰে ভিতৰত লেডী ৰ'জেটা আৰু চিপ চোনা-৩ চিপছ জাত (Variety) আৰু উদ্যোগিক চাহিদা যথেষ্ট বেছি। উন্নত জাত (Variety) সমূহৰ উৎপাদন ক্ৰমে লেডী ৰ'জেটা ১৭-২০ মেট্ৰিক টন প্ৰতি হেক্টৰ, কুফ্ৰী জ্যোতি ২০-২৬ মেট্ৰিক টন প্ৰতি হেক্টৰত, চিপ চোনা-৩ ১৯-২৫ মেট্ৰিক টন, কুফ্ৰী সূৰ্য্য ১৯-২৩ মেট্ৰিক টন আৰু প্ৰতি কেজিত বজাৰ মূল্য ক্ৰমে লেডী ৰ'জেটাৰ ১২ ৰ পৰা ১৫ টকা, চিপ চোনা-৩ ১২-১৩ টকা আৰু অন্যান্য জাতৰ মূল্য ১০.৫০ টকাৰ পৰা ১২.৫ টকা পাবলৈ সক্ষম হৈছে।

Contract Farming and Area Expansion Programme of Potato in Morigaon District

Name of DHC: Shyam Borgohain

During the Rabi Season of the financial year 2023-24 three of the Farmer Producer Companies of Morigaon district done contract farming of Processing variety Potato through availing credit from Rang De under Xamahar Project of APART with Siddhi Vinayak Foods. The companies were Seugee Farmer Producer Company Ltd., Poohar Agro Producer Company Ltd. and Suntali Maize Producer Company Ltd. The details are given below:

Sl. No	Name of FPC	Area (Bigha)	Potato variety-Ganesh			Potato variety-Winner			Potato variety-Lady Rosetta		
			Seed (Kg)	Buy back Quantity (Kg)	Buy back Rate (Rs./Kg)	Seed (Kg)	Buy back Quantity (Kg)	Buy back Rate (Rs./Kg)	Seed (Kg)	Buy back Quantity (Kg)	Buy back Rate (Rs./Kg)
1	Suntali	20	6000	25000	12.4						
2	Seujee	40	5000	22000	12	5100	20000	12	1900	8000	12
3	Poohar	20				6000	24000	12.5			
4	Total	80	11000	47000		11100	44000		1900	8000	

This Rabi season under Potato Area Expansion programme of APART 14 no.s of FPCs cultivated Potato across 782 bigha of land with a aim to increase potato growing area in the district. Farmers cultivated potato following best management practices of Potato cultivation with seed support from APART. Details are given below:

Sl No	Name of the FPCs	Area in Bigha	Variety wise quantity of Seed (kg)					Production (qtl.)
			LR	Chipsona 3	K. Surya	K. Himalini	K. Jyoti (Kg)	
1	Nomami Farmer Producer Company Limited	139	25000	12050	4500	0	0	1300
2	Seugee Farmer Producer company ltd,	137	25000	12050	0	4000	0	1150
3	Luite FPC Ltd.	14	0	0	0	0	4150	150
4	Akhuj FPC Ltd.	65	12450	3050	0	4000	0	590
5	Karmajyoti FPC Ltd.	25	0	0	3500	4000	0	200
6	Karatipam Goraimari FPC Ltd.	17	0	0	0	3000	2000	170
7	Pakaria F.P.C Ltd.	12	0	0	0	0	3500	110
8	Adarsha Organic FPC	10	0	0	0	0	3000	100
9	Suntali Agro Producer Company Ltd, Mayong	137	27000	10050	500	0	3500	1290
10	Mayong Block Pathar FPC ltd.	20	0	0	0	3000	3000	200
11	Buraburi FPC Ltd.	25	0	0	4500	0	3000	250
12	Gagalmari Agro Producer company ltd.	20	0	0	0	3100	3000	150
13	Sonaipuria FED Agro Producer Company Ltd.	17	0	0	5000	0	0	140
14	Poohar Agro Producer Company,Ltd	144	25500	12050	3150	0	3000	1440

Most of the surplus produce was sold at local markets with price ranging from Rs. 10 to 15/ kg. Besides local markets Farmers also sold their produce to Siddhi Vinayak Foods with price ranging from Rs. 12 to Rs. 15/Kg.



A brief write up on Potato Area Expansion Programme 2023-24 in Dhemaji District**Name of DHC: Shri Manoj Panging**

Dhemaji district is coming up as an important Potato growing district after the intervention of APART project since AWP 2022-23 till date through technology transfer both varietal interventions (mainly through introduction of new Processing and table varieties) and technology transfer. In current Physical financial year 2023-24 under APART, the DoH & FP has implemented Potato Area Expansion program (PAEP) with an immediate objective to increase the production and productivity along with introduction of Processing Varieties in larger scale. This program aimed to increase farmers income and making them self dependent in seeds by encouraging storage of tubers below 35mm for seed purpose for next season. Emphasis on production of processing potato varieties has been given for assured market linkage with Multi National Companies like PepsiCo, Kislay,

Haldiram, Siddhi Vinayak etc who were buyers of bulk tubers sizing from 40mm-65mm.

In Dhemaji district, 3 FPCs (Sille Sikor FPC Ltd. Purana Jelom, Jonai, MSTD Block, Subansiri FPO, Gogamukh, Bordoloni Block, Madhuban FPC Ltd., Latak Gogamukh, Dhemaji, Assam) were identified for implementing the PAEP 2023-24. They were identified based on the production cluster with paddy as primary and potato as secondary commodity.

APART conducted potato demonstrations to disseminate the production technology to the farmers with Processing Variety at MSTD Block keeping in view to merge the Farmers with a existing FPC/FPO, MSTD, Block. The idea of production clusters, value chain development and aggregating farmers for collective marketing in FPC/FPO mode is a new concept in these areas.

Sl No.	Year (AWP)	Demo Area Under APART	Seed Kit Demo	Remarks
1	2022-23	2 nos @ 0.5 hac each	20 Nos	Zero Tillage was introduced for the first time under APART.
2	2023-24	10 Nos @ 3.5 Bigha each		

Potato Area Expansion Programme with Sille Sikor FPC under AWP 2023-24

Sl No	Name of the FPCs	Area in Bigha	Total production (MT)	Marketable Surplus (MT)	Variety Alloted
1	Sille Sikor FPC	52	107 (avg)	90	K. himalini, K jyoti K. Chipsona 3, K. Surya
2	Subansiri FPO	45	102 (Avg)	95	LR
3	Madhuban FPC	65	105(Avg)	100	LR, Chipsona 3,

APART-Horticulture, Hailakandi District**Name of DHC: Afzal Hussain Mazumdar**

In order to support the area expansion programme of potato cultivation, the following initiatives has been undertaken by the District Horticulture Coordinator (DHC) under the supervision of District Agricultural Officer, Hailakandi.

1. Conducting training to FPC's and farmers.
2. Visited potato cultivated areas of FPC share holders and local farmers.
3. Distributed pesticides and insecticides.

Training / Field day Status:

- Conducted three (3), Training on best management practices of potato.
- Conducted six (6), Technical training on potato area expansion.
- Conducted eight (8), Technical training on potato seed production.
- Conducted one (1), Field day on potato area expansion.
- Conducted one (1), Field day on best management practice of potato.
- Monitored demos. (Per demo three times).

Sl. No.	FPC Name	Block	Area (Ha)	Area (Bigha)	Varity(Kg)				
					LR	Chipsona 3	K. surya	K. himalini	K. Jyoti
1	Hailakandi FPC	Hailakandi	8.27	33	350	150	2800	2800	3750
2	Meen Unnayan FPC	Lala	8.02	32	300	150	2750	2750	3700
3	Lala FPC	Lala	8.27	33	350	150	2750	2750	3750
4	Katlicherra FPC	Katlicherra	8.27	32	350	150	2800	2800	3700
Total			32.60	130	1350	600	11100	11100	1490



APART-Horticulture, Biswanath District**Name of DHC: Bhusanjyoti Boruah****Status of the Demos -**

Sl. No.	Crop	Demo Nos.	Total Demo Area	Present Status
1	Potato BMP	7	3.5 ha	Harvesting Complete.
2	Cabbage	1	1 ha	Harvesting Complete.
3	Tomato	1	1 ha	Harvesting Complete.
4	Pumpkin	1	1 ha	Harvesting Complete.

Status of the Potato Area Expansion -

Sl. No.	Block	Name of the FPC	Total Area (Bigha)	Status
1	Sootea	Jeuti A Garaka FPC	530	Harvesting Complete.
2	Sootea	Sootea FPC	66	
3	Biswanath	Biswanath Jaibik FPC	140	
4	Sakomatha	Fehujali FPC	67	
5	Baghmara	Burhigang Valley	241	
6	Bihali	Gangmou FPC	64	
7	Chaiduar	Chaiduar FPC	65	
Total		1173 Bigha (156.4 Ha)		

Status of the Potato Net House -

Sl. No.	Block	Variety	Status
1	Baghmara	K. Surya	Harvesting Complete. Seeds are stored at Suniti Prova Cold Storage, Gingia for next year net house seed production.
2	Baghmara	K. Surya	
3	Sootea	Lady Rosetta	

**SUCCESS STORY(POTATO AREA EXPANSION PROGRAMME)****JEUTI A GARAKA FPC****Barabhuyan, P.O.-Sootea, Sootea block, Biswanath, Assam**

In Assam, most of the farmers are small or marginal farmers, which makes it crucial to bring them together on a common platform in order to reduce the costs of mechanized cultivation, to improve post-harvest management and to engage in agribusiness activities for better income generation. It is from this point of view that Farmer Producer Companies (FPCs) are formed and supported by APART so as to increase farmer's incomes and assist them in developing their businesses.

In Biswanath, a FPC called JeutiA Garaka has been formed at Sootea and supported by APART based on the production cluster that had been identified under APART as being primarily concerned with the cultivation of rice and potatoes. The details of the FPC is given below.

Name: Jeuti A Garaka FPC**Incorporation (CIN) no:** U01100AS2021PTC021336

Contd.....

APART-Horticulture, Biswanath District

Potato Demonstration Details:

APART had conducted potato demonstrations to disseminate the production technology to the farmers at Sootea before the formation of the JeutiA Garaka FPC and had provided trainings to the farmers from time to time to encourage the farmers to adopt the technology. The details of the demonstration were given below-

SI No.	Year (AWP)	Demo Area Under APART (Bigha)	Contract Farming Area	Total Area Under FPC (Bigha)
1	2019-20	6.75		
2	2020-21	21.5		280 (FPC area)
3	2021-22	26.5	160 (PepsiCo)	450
4	2022-23	25	250 (PepsiCo)	670
5	2023-24	11.25 (demo)	70 (Siddhi Vinayak Pvt. Ltd.)	1050
		530 (PEAP)		

Production Details of POTATO AREA EXPANSION PROGRAMME

SI No.	Year	Name of the Variety	Total Demo Area (Bigha)	Total Yield (q) (Approx)	Marketable Quantity (q) (Approx)	Price (₹)	
						Maximum	Minimum
1	2023-24	Lady Rosetta K. Chipsona 3 K. Himalini K. Surya	530	12000	9500	14	9

Market Linkage of Potato through APART:

Sl. No.	Marketed to	Qty (q)	Variety	Rate (Avg.)
1	Siddhi Vinayak Pvt. Ltd.	2000	Lady Rosetta, K. Chipsona 3	13.50
2	Local Market. (Gingia, Hojai)	3000	K. Himalini, LR, K. Chipsona 3	9-12
	Total	5000		



Market Linkage of Potato

Potato Area Expansion Programme Plot

Activities and progress in market linkage of Medicinal & Aromatic Plant at Kokrajhar district

Kokrajhar, located in the state of Assam has tropical climate with heavy rainfall, fertile soil and some classified as wasteland. The region's soil is primarily composed of alluvial and loamy soil, suitable for agriculture. However, there are also areas of degraded or barren land that may be considered wasteland, often rehabilitation efforts for productive use. The climate is characterized by high humidity and temperature, with monsoon rains from June to September.

Under Medicinal and Aromatic Plants, APART, two crops mainly Tulsi (var. Cim- Saumya) and Lemongrass (var. Cim -Krishna) demonstrations were taken up in Kokrajhar district mainly to generate additional income for the farmers targeting to utilize waste land. As many of the wasteland and up land areas were remain barren due to interference of wild animals like elephants so in those areas Lemongrass and Tulsi cultivation would provide additional income to farmers.

Farmers get additional income by cultivating Tulsi (var. Cim- Saumya):

1. Twenty one (21) bigha of Tulsi was cultivated by farmers of Swmkhwr Agro Producer Company Ltd. and from 2 bigha area around 5.5 liter oil was extracted and from that 5 liter oil is sold in Rs. 5000 (Rs.1000/liter) to Ashri Naturals Private Limited, Barabanki (Uttar Pradesh) with the help CSIR-CIMAP, Lucknow
2. Again, 106 kg of Tulsi seed was sold by Swmkhr Agro Producer Company Ltd. to Arunudai Suppliers @Rs.1500/kg. and total income generated Rs.1,59,000 from it.
3. Additional 2 kg seeds of tulsi was purchased by local farmers to cultivate from the FPC.



Tulsi Oil



Tulsi seed selling

Oil Extraction Plant

Two oil extraction plants have been successfully set up under APART at Kokrajhar District which mainly encourage the growers as well as farmers of nearby areas. In coming years, most of the farmers are going to grow Lemongrass in wastelands and fellow upland areas.



Swmkhwr Agro Producer Company Ltd.
(Kachugaon block)



Bodoland Agro Organic Producer
Company Ltd. (Kokrajhar block)

Buyer -Seller Meet, 2023

Buyer-Seller Meet of Medicinal and Aromatic Plant was successfully held on 9th November, 2023 under APART at Kokrajhar district.

Buyer -Seller Meet helped growers and farmers to get awareness regarding cultivation of medicinal and aromatic crops, market demand, market support by buyers and gain knowledge of storage facilities to maintain quality of oil.



TULSI:

Tulsi cultivated area 198 bigha under Swmkhwr Agro Producer Company Ltd., Kachugaon block.



Eliza Boro, DMAP Coordinator, Kokrajhar

POTATO AREA EXPANSION PROGRAMME UNDER APART, AWP 2023-24, KOKRAJHAR DISTRICT**Name of DHC: Kabita Mushahary Narzary**

INTRODUCTION: In the last four years of APART project implemented in the Kokrajhar district, different interventions had been conducted on Potato crop, e.g. Potato Cluster demonstrations, Potato Crop Cafeteria, Technical Trainings on Best Management Practices (BMP) and different Plant Protection Measures, Potato Value Chain Schools etc. In this interventions we have introduced many new varieties and Best Management Practices. Traditionally potato farmers were dependent on few varieties only and were adopting limited cultivation practices. In the present scenario, APART cluster farmers in the district have been brought to the stage where they can now choose most promising potato varieties with short durations, processing varieties, blight tolerant varieties etc. They have been given trainings on various plant protection measures and Best Management Practices on potato production. In the Annual Work Plan (AWP) 2023-24, Potato Area Expansion Programme (PAEP) of total 326 bigha (43.466 ha) area was implemented successfully under APART in the Kokrajhar district. This programme of PAE was very necessary for the farmers. The objectives were:

1. To give the farmers opportunity for measuring their capability of large scale or at commercial scale potato production.
2. To adopt or go for Mechanization in Potato productions, because, previously in small scale of cultivations our farmers were not adopting the Mechanized farming in potato. In the Kokrajhar district under PAE Programme, full Mechanization in Potato cultivations were done for the first time by the FPCs under APART: Jwlwi farmers Producers Company Ltd. Of Dotma block and Mugani Thandwi Farmers Producers Company Ltd. under Kachugaon block.
3. Farmers have been successfully linked to the reputed Potato processing companies e.g. Siddhivinayak Agri. Processing Pvt. Ltd., PepsiCo etc. for marketing the large scale productions.
4. We had covered most of the fallow lands under PAEP from which farmers could gain additional income of double or triple cropping.

VARIETIES: The selections of varieties for Potato Area Expansion Programme were done on the basis of outcome of the Potato Cluster demonstrations and Potato Crop Cafeteria conducted under APART in previous years. The three numbers of promising table purpose varieties, namely, Kufri Surya, Kufri Himalini and Kufri Jyoti and two numbers of processing varieties, namely, Kufri Chiposona -3 and Lady Rossetta were taken under the programme. These five varieties were having extensive farmers preferences and market demands. They have properties like blight tolerance, Good keeping quality and high productions.

The details of implementations of PAEP in the district :

The planting of potato under PAEP started from 15/ 11/2023 and continued upto 12/12/2023. Therefore, farmers started harvesting in very early season i.e. from last week of January to catch the high prices of early local market. This is one of the reason for the FPCs that they aggregate much of the produces under different FIGs for market linkages to processing industries.



Site selection : rice fellow land



A Mechanized Potato Plot at 35 DAP



Harvesting of Potato with Machine

POTATO AREA EXPANSION PROGRAMME UNDER APART, AWP 2023-24, KOKRAJHAR DISTRICT

Name of FPC	Variety	Area (in bigha)	Total Productions (MT)	Market Linkages (MT)	Name of Buyer	Min. Price (Rs.)	Max. price (Rs.)	Remarks
Najar Farmers Producers company Ltd.	Lady Rosetta	160	352.00	16.25	Siddhivinayak Agri. Processing Pvt. Ltd.	14.20	14.20	20.00 MT in Cold storage
				100	Kartik Barman, Kokrahar ph no. 7577071902	15.00	18.00	Local traders of Kokrajhar
				200	Kashem Ali & other traders of Basugaon, ph : 8723987766	15.00	18.00	Local traders of Chirang district
	Kufri Chipsona -3	32	72.96	2.30	Siddhivinayak Agri. Processing Pvt. Ltd.	14.20	14.20	
				65.00	Kasem Ali & other traders of Basugaon, ph : 8723987766	14.00	16.00	
	Kufri Jyoti	39	78.00	72.00				
Mugani Thandwi Farmers Producers Company Ltd.	Kufri Chipsona-3	35	72.80	13.10	Siddhivinayak Agri. Processing Pvt. Ltd.	14.00	14.00	
				52.00	Saidul Hokh, Kajigaon, ph no. 8453709736	12.00	15.00	
	Kufri Himalini	30	62.64	55.00	Saidul Hokh, Kajigaon, ph no. 8453709736			
Jwlwi Farmers Producers Company Ltd.	Kufri Surya	30	69.60	60.00	Kartik Barman, Kokrahar, Ph no. 7577071902	12.00	14.00	5 MT stored in cold storage
Total		326	708.00	636.61		12.00	18.00	

The above table shows that from 326 bigha of total cultivation area under Potato Area Expansion programme, total 708 MT potato production were obtained and a marketable surplus of total 636.61 MT were recorded. The Najar FPC could store 20 MT of Lady Rosetta Potato variety in cold storage for seed purpose and Jwlwi FPC has stored 5 MT of Kufri Surya variety in the cold storage for seed purpose. The farmers of Kokrajhar district got a minimum price rate of Rs.12 per Kg and maximum Rs. 20 per kg for the produces from PAEP.

Conclusions : The Potato Area Expansion Programme has remained successful for the district with an average productivity of about 16.50 MT to 18 MT per hectare from minimum investments. The cultivations under the PAEP were done in different groups of farmers, BODs of FPC together, in FIGs as a group. The FPCs under APART have experienced and started doing commercial cultivations in different Farmers Interest Groups (FIGs) with this programme. The farmers got exposure to large scale buyers and processing companies. Further the farmers got additional income of double or triple cropping from the same piece of land as most of the farmer groups had adopted the suggestions of using paddy fellow lands for growing Potato under PAEP. Then, along with the potato our farmers have cultivated Pumpkin, from which they are harvesting large scale of pumpkin in the month of April.



Field Day of PAE Plot



Training on Field Day



Packaging Potato for Market Linkage



Technical training on BMP



Market Linkage of Processing Potato

SUCCESS STORY (POTATO AREA EXPANSION PROGRAMME)**NOIPAM AGRO PRODUCER COMPANY LIMITED****C/o Naba Jyoti Borah, Sukatiputa, PO-Tulashimukh, Nagaon- Assam****Name of DHC: Pankaj Hazarika****Santanu Kalita**

The Nagaon district has been playing a vital role in Potato growing after the intervention of APART project since 2018 till date through technology transfer both varietal and technical aspects. In current Physical financial year 2023-24 under APART, the DoH & FP has decided to implement Potato Area Expansion program (PAEP) under APART project with an immediate objective to increase the production and productivity. This program also aims at boosting up farmers income and making the farmers of the state self sufficient in potato seed production. Emphasis has been given on growing processing potato varieties with a view to the needs of the Chips making companies like PepsiCo, Kislays, Haldharam, Siddhi Vinayak etc which created a win-win situation for the stakeholders and the growers.

In Nagaon district, 10 FPCs were selected for implementing the PAEP 2023-24, and Noipam FPC has emerged as successful organization, fulfilling the criteria both in production and market linkage. Noipam FPC has been formed at Pakhimoria block, supported by APART based on the production cluster that had been identified under APART as being primarily concerned with the cultivation of paddy as primary and potato as secondary commodity.

Name: Noipam Agro Producer Company limited**Incorporation (CIN) no: U01119AS2022PTC022606****Date of Incorporation: 25 February 2022.****Email: surjakrdas123@gmail.com**

APART had conducted potato demonstrations to disseminate the production technology to the farmers at Pakhimoria block before the formation of the Noipam FPC and had provided trainings to the farmers from time to time to encourage the farmers to adopt the technology

The details of the demonstration under Noipam FPC are given below-

Sl No.	Year (AWP)	Demo Area Under APART (Bigha)	Contract Farming Area (Bigha)	Total Area Under FPC (Bigha)
1	2019-20	---	7.5	25
2	2020-21	---	23	37
3	2021-22	7.5	45	45
4	2022-23	2.5	53	60
5	2023-24	283	350	100

Potato Area Expansion Programme for Noipam FPC under AWP 2023-24

Sl No	Name of the FPCs	Area in Bigha	Total production (MT)	Marketable Surplus (MT)	Variety Alloted
1	Noipam Agro PCL	283	735	514	LR, K. Chipsona 3, K. Surya

Market Linkage of Potato through APART for Noipam FPC

Sl. No.	Marketed to	Qty (MT)	Variety	Rate (Avg.)
1	Siddhi Vinayak Pvt. Ltd.	120	Lady Rosetta, K. Chipsona 3	13.00
2	Nagaland and Dimapur	22.50	Lady Rosetta, K. Chipsona 3	18.50
3	Local Market.(Nagaon Paikari Bazar, Rangaloo Bazar, Kampur)	150	K. Surjya	16.00
	Total	292.50		

Sl No.	Year	Name of the Variety	Total Demo Area (Bigha)	Total Yield (q) (Approx)	Marketable Quantity (q) (Approx)	Price (₹)	
						Maximum	Minimum
1	2023-24	Lady Rosetta K. Chipsona 3 K. Himalini K. Surya K Jyoti	1955	4603	3223	22	10.5

SUCCESS STORY (POTATO AREA EXPANSION PROGRAMME)

NOIPAM AGRO PRODUCER COMPANY LIMITED

C/o Naba Jyoti Borah, Sukatiputa, PO-Tulashimukh, Nagaon- Assam

The details of the production and marketable surplus of the FPCs of Nagaon District are given below:

District wise Potato Expansion Programme under AWP 2023-24

Sl No	Total Area (Bigha)	Name of the FPCs	Area in Bigha	Total production (MT)	Marketable Surplus	Variety Allotted
1	1955	Sankar Azan Agro PCL	324	665	495	LR, K. Chipsona 3
2		Noipam Agro PCL	283	735	514	LR, K. Chipsona 3, K. Surya
3		Luitporia Agro PCL	173	392	304	LR, K. Chipsona 3
4		Brahmaputra Anchalik Farmer Agro PCL	174	417	313	LR
5		Panchajanya Farmer PCL	130	273	205	K. Surya
6		PatiaChapari Agro PCL	174	400	280	LR, K. Chipsona 3
7		Bajiagaon Kolongpar Farmer PCL	174	382	287	LR, K. Surya
8		Kaliabor Greenvelley PCL	176	404	303	K. Himalini
9		Laokhowa Agro PCL	173	398	301	K. Jyoti
10		Kaliabor MinPalon ou Krishi Farmer PCL	174	417	354	LR, K. Chipsona 3



Mechanization On Potato Area Expansion Programme



Plots under Potato Area Expansion Programme



Potato Market Linkage

Potato Area Expansion Programme 2023-24, Golaghat District

Name of DHC: Dr. Nilasree Borah

As we all know that potato is named as **Poor man's food** and it is considered as the most important crop in the state of Assam, where it is grown in all the districts. In the state, **Golaghat** securing renown position under major potato growing districts of Assam.

On the basis of the findings of the potato cafeteria study, it has been recommended that Kufri Surya have been the best table purpose potato variety for Golaghat district. Under processing variety LR (Lady Rosette and Kufri Chipsona – 3 both are widely adopted by the farmers and getting better market price and it is selling at higher prices than the table varieties. Lady Rosetta looks more promising and widely preferred by the farmers because of its suitable size, sphericity red skin, medium maturity, good storability and resistant to many diseases.

Under the advanced technologies, the production is found to be higher than traditional method. As the APART aims on dissemination of various technologies, It is important to mention here is that the Department of Agriculture, Golaghat is conducting field demonstrations on various new variety and advanced production technology of potato under the banner of APART project in the district for the last four years like new variety introduction, zero tillage potato cultivation, potato mechanization, dehauling practices for post harvest quality controls, better storage method, etc. Such technologies are largely adopted by the farmers for better yield and more income generation as compared to old traditional practices. We are happy that under PAEP 2023-24, FPCs/FIGs of Golaghat district are adopting technologies like mechanical planting of Potato, cultivation of potato in the method of zero tillage, adoption of new processing varieties very positively and also mechanical harvesting of potato which seems to be a huge success for us.

Another important context of potato farming under PAEP is Potato Value Chain management, that harvested product should reach right hand at right time to lower the loss and value of the commodity. Regarding this we have conducted many trainings in collaboration with the members of Siddhi Vinayak Agri Processing Pvt Ltd and Rang de finance, which helps the farmers to know more about financing criteria, assurance on buyback of potato, and providing facilities for potato tubers storage. As per the knowledge many farmers of Golaghat district regardless of PAEP, started to buy quality seeds from Siddhi Vinayak Agri Processing Pvt Ltd in collaboration with Rang de finance.

In recent years many farmers of Golaghat district benefited under APART and able to find a solution for most challenging problem like marketing through proper market linkage and potato value chain. Processing varieties introduced in the district created a new era of profitable potato production. Recently a private small scale potato processing plant was also set up in Dergaon, Golaghat district which extend a helping hand for buying the processing varieties from APART FPCs like Disoi Farmer Producer Company Ltd with a good market price.

BMP training under APART has helped a lot in better management practices of Potato production. Adoption of such practices by the farmers is clearly reflected in the yield and quality of potato cultivation.

Besides selling to the companies and other organizations, they are selling the potatoes locally at very high price mainly the processing varieties in a range of @Rs. 20-40/kg and table varieties Rs. @15-25/kg. A total of approximately 15% of total PAEP potato production are subjected for next season seed storage. Due to lack of cold storage facilities in our district and non economic storage in distant cold storage facilities, many farmers are trying to store the seed by some traditional method and other storage techniques.



Adoption of Zero tillage technology at Kakodonga FIG under PAEP (Athkhelian FPC)



Adoption of Mechanical transplanting of potato seed under PAEP at Disoi FPC



Adoption of mechanical harvesting of potato



Trainings on Potato Area Expansion Programme



Potato Area Expansion Programme 2023-24, Golaghat District

Details of potato varieties received in different FPCs under PAEP:

Sl. No	Name of the FPC	Area (Bigha)	LR (Kg)	Chipsona- 3 (Kg)	K. Surya (Kg)	K. Himalini (Kg)	K. Jyoti (Kg)
1	Brihangam Krishi Producer Company Ltd.	326	41100	41050	15650	0	0
2	Disoi Agri Farmer Producer Company Ltd.	52	13700	0	1950	0	0
3	Athkhelia Agri Farmer Producer Company Ltd.	33	1950	0	0	0	7850
4	Dhansiri Pathar Farmer Producer Company Ltd.	33	1950	0	0	7850	0
5	Sarupathar Agro Farmer Producer Company Ltd.	98	17600	0	0	0	11750
6	Brahmaputra Valley Farmer Producer Company Ltd.	26	3900	0	0	0	3900
7	Varasun Krishi Producer Company Ltd.	32	7800	0	0	1950	0
8	Hompriti Farmer Producer Company Ltd.	13	1950	0	0	1950	0
9	Morongi Krishi Producer Company Ltd.	13	1950	0	0	1950	0
10	Sangrami Mahila Farmer Producer Company Ltd.	13	1950	0	0	1950	0
11	Nabarupa Farmer Producer Company Ltd.	13	1950	0	0	1950	0
Total		652	95800	41050	17600	17600	23500



Training in collaboration with Sidhi Vinayak Agri Processing Pvt Ltd. and Rang de financing



Few glimpses of Potato Area Expansion Programme

Success Story of Contract Farming of Potato, Dhubri District

Najmul Hoque is a farmer of Sagolia, Dhubri district have approx 15 bigha of land. Earlier he has cultivated potato in his land but didn't get too much profit like this year. He has decided to cultivate in the coming year in 15 bigha of land and also will motivate to other farmers to do this. His total expenditure was 66,000 (sixty six thousand) for 3 bigha of land and his profit was 1,22,160 (one lakh twenty two thousand and one hundred sixty only).

Sl No	Item	Particulars
1	Name of the farmer	Najmul Haque
2	Village	Kaem Mati, Sagolia
3	ADO Circle	Halakura
4	Block	Agomani
5	District	Dhubri
6	Category (Sc/St/Obc)	General
7	Name of crop	Potato
7	Variety	FC 11
8	Contract farming with	Pepsico Holding India Pvt Ltd
9	Area cultivated	3 bigha
10	Year	2024

Sl No	Particulars	Qty/ amount/ area
11	Yield /bigha (quintal)	54
12	Total Expenditure (per bigha)	23000
13	Sale Price (per quintal) in Rs.	1180
14	Total value of the crop (per bigha) in Rs.	63720
15	Net Income (per bigha) in Rs.	40720
16	Total income in 3 bigha in Rs.	122160



Linkage of Potato from Farmers to Market under Potato Contract Farming and Expansion Initiated by APART in Dhubri District, Assam for 2023-24

With a firm commitment by PepsiCo Holding Pvt Ltd to enhance agricultural productivity and raise the level of farmer livelihoods, Dhubri District in Assam has embarked on ambitious initiatives in potato contract farming for the fiscal year 2023-24. This joint effort, arranged by OPIU-Horticulture, APART, ARIAS Society (Govt. bodies), Agricultural Experts, and Farmer Producer Companies (FPCs), individual farmer aims to streamline to produce potato by ensuring market access, and strengthen the social economic condition of the farmers of Dhubri district.



Contract Farming Dynamics:

This initiative has been undertaken by PepsiCo India Holding Pvt Ltd, supported through the Project APART of Dhubri district. Formal contractual agreements have been established with 2 (two) Farmer Producer Companies (FPCs) and individual farmers in Dhubri District:

1. Halakura Farmer Producer Organization Co-operative Society Ltd.
2. Debitola Farmer Producer Company Ltd.
3. Individual farmers.

The commitment of both PepsiCo India Holding Pvt Ltd and the FPCs and farmers to transparent and accountable business practices is evidenced by their diligent registration of contacts.



Pricing and Negotiation:

In a bid to ensure fair returns for farmers while maintaining market competitiveness, Potatoes' buyback price has been meticulously set at Rs. 11.80 per unit. This pricing structure has been carefully negotiated to safeguard the interests of farmers amid market fluctuations.

Collaboration with District Agriculture Office:

Recognizing the pivotal role of regulatory compliance and operational efficiency, PepsiCo India Holding Pvt. Ltd. and the FPCs and farmers have expressed eagerness to closely collaborate with the District Agriculture Office. Such collaboration aims to facilitate seamless operations and ensure adherence to agricultural regulations.

Contd.....

Success Story of Contract Farming of Potato, Dhubri District

Potato Area Expansion Programme:

In parallel with the contract farming initiatives, the World Bank-funded APART Project has spearheaded a Potato Area Expansion Programme in the Rabi season 2023-24. Variety such as FC11 was introduced in Dhubri. The farmers achieved an average production of 35-40 quintals, fetching an average rate of Rs. 12-13 per kg. They sold their produce in both local and wholesale markets, with prices reaching Rs. 12.50 per kg.

Production Challenges and Harvest Status:

Despite challenges posed by the outbreak of Late Blight disease, resulting in compromised produce quality, harvesting activities are ongoing. PepsiCo India Holding Pvt Ltd has already bought back 120 metric tons of potatoes.

Key Players in Action:

Key officials and organizations instrumental in advancing the potato contract farming endeavor include Shri Nirmal Ch Ghosh, District Agricultural Officer, DAMC APART, Dhubri, Mr. Bijoy Sankar Goswami (former CIP-APART Official), Manager, PepsiCo Holding India Pvt Ltd, Dr Brijesh Kumar (former CIP-APART Official), Agronomist and representatives from their respective offices.

Crop Cutting:

With the suggestion and cooperation of Azim Ahmed, DAO, Dhubri, crop cutting operation has been done at Sagolia pt-I.

Future Prospects:

With the potato contract farming initiative gaining momentum, stakeholders remain optimistic about its long-term benefits for Dhubri District's agricultural landscape. Ongoing efforts to mitigate production challenges and enhance market access are poised to ensure a sustainable and prosperous future for the farming community.

This collaborative endeavor underscores the pivotal role of public-private partnerships in catalyzing agricultural development and empowering farmers to thrive in a dynamic market.



Submitted by

Dipak Kumar Biswas

**District Agriculture Marketing Coordinator
APART, Dhubri**

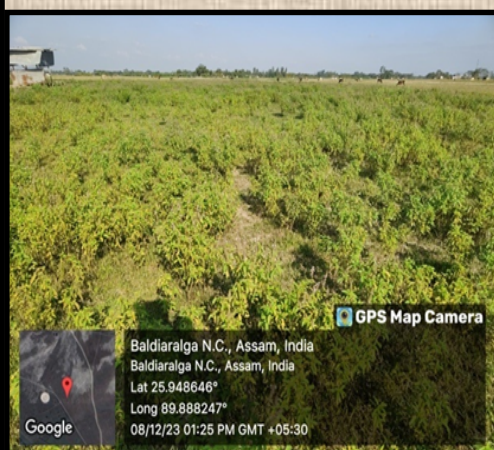
Potentiality of Medicinal and Aromatic Plants in Dhubri District

Dhubri district is the gateway of the western Assam. It falls in the Lower Brahmaputra Valley Zone, which is situated between 26°02' N and 25°28' N latitude and 89°42' E and 90°12' E longitude. The topography of the land is mostly plain with isolated small portions of hills. The soils of the district are sandy, silty loam, and clayey loam in nature. The presence of rivers Brahmaputra, Gangadhar, Gadadhar, Tipkai, Jinjiram etc. has large reservoirs of water. The agro-climatic condition of the district is conducive to different agricultural activities. Most people are related to the farming activities for their livelihood. So, there is a potential for growing a wide range of crops in the district. The land and climatic conditions are also suitable for the growing of different medicinal and aromatic plants.

With greater number of rivers in the plain, heavy rainfall during the rainy season creates flooding situation in the district every year. So, the areas near the river are not suitable for cultivation of the vegetables and some other crops. In those areas, we can go for cultivation of Vetiver, which can tolerate waterlogged situations for a considerable period. Moreover, vetiver helps in the prevention of soil erosion and the roots have a potential source of aromatic oils. Tulsi can be cultivated in the upland areas of the district. The leaves of the tulsi can be used for the extraction of essential oils, which have potent medicinal properties. The upland areas, which are not under cultivation, can be utilized for growing lemongrass, citronella etc.

In Dhubri district, Vetiver was grown under the scheme of Medicinal and Aromatic plants, APART, AWP 2022-23 and supported by the Directorate of Horticulture and Food Processing (DoHF&P). Tulsi was also cultivated under the scheme of Medicinal and Aromatic plants, APART, AWP 2023-24, and supported by DoHF&P last year. As there was no extraction unit last year, so the farmers were not able to extract the oil, but they have harvested the seeds and will be grown this season. Moreover, some of the farmers have cultivated citronella in their fallow land.

The extraction unit was installed, and the trial run was completed on 04/04/2024 at Baniyamari Pt. IV, Dhubri under Mohabbat Krishi FPC facilitated by OPIU-Horticulture and DoA under APART. The extraction unit was much needed in the district and will help the farmers with area expansion under Medicinal and Aromatic plants and help the farmers get additional income in the long run. Both the land and climatic conditions are suitable for growing of the Medicinal and Aromatic plants in the district which will help for better growth of the crop and help the farmers to increase income from the unutilized land.



Submitted by

BEDANTA PATHAK

District Medicinal & Aromatic Plant Coordinator

POTATO AREA EXPANSION PROGRAMME AS A SUCCESSFUL PROGRAMME UNDER APART IN BONGAIGAON DISTRICT

Name of DHC: Makibar Rahman

FPCs were supported with good quality potato tubers under APART in Bongaigaon district in collaboration with OPIU-Horti, Khanapara. Accordingly tubers were distributed to the shareholders of FPCs. Five varieties namely Chipsona-3, Lady Rosetta, Kufri Himalini, Kufri Surya & Kufri Jyoti. Crop cutting cum field day conducted at different sites. Potato produced from the FPCs captured markets of Bongaigaon district including Bajitpara market and able to sell within short time. It is also observed that potatoes brings for sell from other sources other than APART beneficiaries unable to sell as buyer prefers APART one due to its quality, size & its taste to eat. Most of the BOD cum beneficiary appreciated APART activities like potato area expansion program and they have decided to cultivate the varieties in the upcoming year. That is why, they have started to store their potatoes in cold storage. Market linkage also possible due to its quality and good demand in processing industries. This year 83.55 MT potato also market linked with Siddhivinayak Agri Processing Pvt. Ltd.. Marketing in the local market were easy and beneficiaries got good price rate at the local market itself starting from rupees thirteen to thirty per kilogram of potato

Dalim Chandra Nath, BOD of Aie Valley FPC, a resident of village Rashigaon, Gaon Panchayat Bidyapur, Bongaigaon district who was a beneficiary under potato expansion program had able to sell potatoes at rupees thirty per kilogram of potato which was the highest price among the potato sold under AWP 2023-24 and got maximum profit from his field. Recently he has stored potato in the cold storage of Kajalgaon. After selling he bought 250 nos. of duckling and expanded his area of boro paddy cultivation area upto 35 bigha for the first time after motivation. He is rearing paddy cum duck where he observed less pesticide requirement. He also cultivated pumpkin after harvest of potato as intercropping. He has started cultivation of ash gourd & buckwheat for motivation, inspiration and continuous visit to field of district horticulture of Bongaigaon district.



Field Day of Processing Variety (Chipsona-3)



Potato Market Linkage

POTATO AREA EXPANSION PROGRAMME AS A SUCCESSFUL PROGRAMME UNDER APART IN SONITPUR DISTRICT

Name of DHC: Durlove Borah

Shyamanta Bora

There is a craze in potato cultivation among the farmers in Sonitpur district. Farmers Producer Companies were supported with good quality potato tubers under APART in Sonitpur district in collaboration with OPIU-Horti under Director of Horticulture & Food Processing, Khanapara. Accordingly Chipsona-3, Lady Rosetta, Kufri Himalini, Kufri Surya & Kufri Jyoti good quality potato tubers varieties were distributed to the shareholders of FPCs. Potato produced from the FPCs captured markets of Sonitpur district including Arunachal market and able to sell within short time. It is also observed that potatoes brings for sell from other sources other than APART beneficiaries unable to sell as buyer prefers APART one due to its quality, size & its taste to eat. All the FPC member cum beneficiary appreciated potato area expansion program under APART and they have decided to cultivate the varieties in the upcoming year. Therefore farmers were store their potatoes in cold storage. Market linkage also possible due to its quality and good demand

in processing industries. This year 60 MT potato also market linked with Siddhi vinayak Agri Processing Pvt. Ltd.. Marketing in the local market were easy and beneficiaries got good price rate at the local market itself starting from Rs.15/- in January and Rs. 12/- in the month of March at field level and in the retails starts from Rs. 30/- in the month of January and Rs. 25/- in the month of March per kilogram potato.



Kamal Kumari Boro, BOD of Jaymoti FPC, a resident of village Bapubheti, Puthimari, Sonitpur district who was a beneficiary under potato expansion program had able to sold potato to Siddhi vinayak Agri Processing Pvt. Ltd under AWP 2023-24 and got maximum profit from her field. After selling she bought pumpkin seed arjuna variety and cultivated as intercropping after potato. She was able to sell pumpkin at Rs. 16 per kg at local market of sonitpur. She has started cultivation of ash gourd & Ridge gourd too.



SHOWCASING POTATO AREA EXPANSION UNDER KAMRUP DISTRICT

Name of DHC: Mitali Bordoloi

Archita Kumbang

Potato is always a demandable crop throughout the season .In Assam after Sali rice cultivation, land can be utilized by growing different table and Processing potato varieties like Lady Rosetta ,Kufri Chipsona 3, Kufri Surya,Kufri Himalini , Kufri Jyoti etc. which can increase the income as well as livelihood of the farmer .Due to lack of knowledge about varieties suitable for Assam climatic condition and non availability of quality seed, potato production in Assam is low compared to Punjab and WB and we have to depend on other states for Potato.

A World bank Funded project –Assam Agribusiness and Rural Transformation Project (APART) had initiated potato area expansion programme in the year 2023-24 for different varieties which was implemented by District Agriculture Office Kamrup and DoH& FP Khanapara. Four FPCs namely Ampri Orange FPC, Pokhila FPC, Uttaran Krishi Producer Company Ltd. & Sonali FPC were involved in this programme covering a total area of 912 bighas of rice fallow land. The programme was showcased with five varieties viz Kufri Surya, Lady Rosetta ,Kufri Himalini, Kufri Jyoti and Kufri Chipsona 3 for getting a good market with profitable price realisation.. The FPCs are advised to keep 20% of the total production for seed purpose.

The practices followed for this programme was mostly Best management Practices(BMP) through technical trainings provided to the FPCs / FIGs. Trainings on seed production were given to the FPCs by showcasing aphid monitoring activity in some of the randomly selected field for all the varieties.

This Potato Area Expansion Programme has brought the knowledge for the farmers about the utilization of rice fallow land by cultivation of potato with good production followed by profit making. With successful implementation of this programme the farmers were able to keep the seeds for next year cultivation and also they know about the cropping system suitable for our climatic condition

NAME OF THE FPCs	AREA IN BIGHA	LR(KG)	CHIPSONA 3 (KG)	K. SURYA (KG)	K. HIMALINI (KG)	K. JYOTI (KG)	SOWING DATE
AMPRI ORANGE FPC LTD.	270	40250	17250	7050	7050	9400	15th NOV TO 20th NOV
POKHILA FPC LTD	206	26800	11450	7050	7050	9400	16th NOV TO 20th NOV
UTTARAN KRISHI FPC LTD.	300	44335	18996	6790	10550	9250	17th NOV TO 20th NOV
SONALI FPC LTD.	136	22765	9754	3760	0	4750	18th NOV TO 21th NOV

NAME OF THE FPCs	TOTAL PRODUCTION		Stakeholder name	MARKETED QUANTITY OF PROCESS VARIETY (qtl)	RATE (RS.)/ Kg	MAR-KETED QUANTITY OF TABLE VARIETY (qtl)	RATE (RS.)/Kg
	Process variety (qtl)	Table variety (qtl)					
AMPRI ORANGE FPC LTD.	3006.50	3121.00 quintal	Local market	2104.55	Rs. 18 to Rs.20	2184.70	Rs. 10 to Rs. 12
POKHILA FPC LTD	2802.00	795.50 quintal	Local market	1961.40	Rs. 18 to Rs.20	556.85	Rs. 10 to Rs. 13
UTTARAN KRISHI FPC LTD.	2581.00	1881.60	Local market	1806.70	Rs. 18 to Rs.20	1317.12	Rs. 10 to Rs. 14
SONALI FPC LTD.	1927.00	475.00 quintals	Local market	1348.90	Rs. 18 to Rs.20	332.50	Rs. 10 to Rs. 15



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