

ANNUAL REPORT
ATTRACTING AND RETAINING YOUTH IN AGRICULTURE (ARYA), ICAR
2024-25



**Youth Empowerment through Mushroom, Poultry,
Apiary & Fish production with Fish Seed**



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Annual Report for 2024-25

(A)Introduction-

Puri, renowned as the sacred abode of Lord Jagannath, is celebrated globally for its rich cultural heritage, exquisite sculptures, and the iconic Black Pagoda of Konark. Geographically located at **19.81°N latitude and 85.83°E longitude**, the district lies within the East and South East Coastal Plain agro-climatic zone of Odisha.

Krishi Vigyan Kendra (KVK), Puri, established in August 2006 under the administrative control of ICAR-ATARI, Kolkata, has been actively supporting the farming community through location-specific trials, frontline demonstrations, need-based capacity-building training programs, and various extension activities. Its core mission is to enhance farmers' income by reducing production costs, promoting resource conservation technologies, and fostering entrepreneurship across agriculture and allied sectors.

A key initiative of KVK Puri is the **Attracting and Retaining Youth in Agriculture (ARYA) project**, which has been instrumental in engaging rural youth in sustainable, income-generating agri-enterprises. Under this project, youth have been empowered through hands-on training, technical support, and market linkage in diverse sectors such as **mushroom cultivation, apiculture, poultry farming, and fish farming**. These interventions have created significant opportunities for income generation and rural employment, contributing to self-reliant and resilient farming communities in the district.

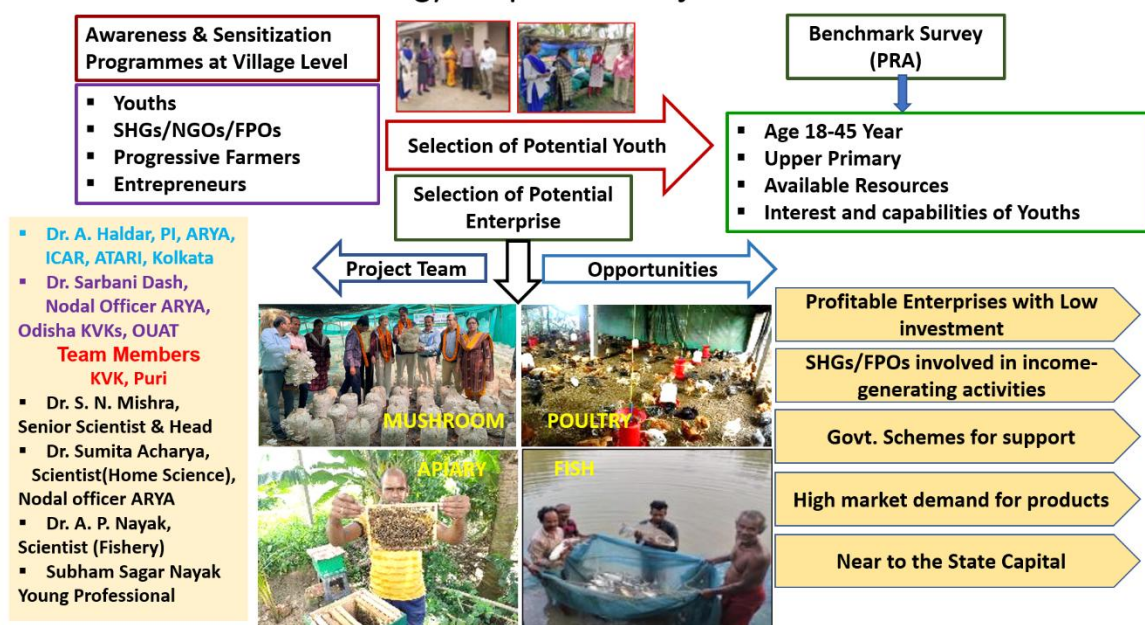
Project Initiation:

In the current scenario, rising unemployment among rural youth has become a significant concern, leading to increased migration from rural areas. Promoting Agri-based enterprises offers a viable solution by creating local employment opportunities while simultaneously strengthening the livelihoods of farming communities. The ARYA (Attracting and Retaining Youth in Agriculture) Project is a strategic initiative aimed at curbing rural migration and nurturing young entrepreneurs across various Agri-enterprises. This project was launched in the Puri district, Odisha, during the year 2018–19.

Objective:

- To attract and empower the Youth in Rural Areas to take up various Agriculture, allied, and service sector enterprises for sustainable income and gainful employment in selected districts.
- To enable the Farm Youth to establish network groups to take up resource and capital-intensive activities like processing, value addition, and marketing.
- To demonstrate functional linkage with different institutions and stakeholders for the convergence of opportunities available under various schemes/programs for the sustainable development of youth.
- More than **200 youths will be self-employed** by the project
- Puri district will be self-sufficient in **Honey Bee cultivation, Poultry, Fish with fish Sheed production, and Mushroom** production during the project period with the youth power of the district
- Integrate, composite, and relay farming system for rural Youths for their livelihood in agriculture
- Sustainable Agri-enterprises to **mitigate market demand**

Methodology Adopted For Project Initiation

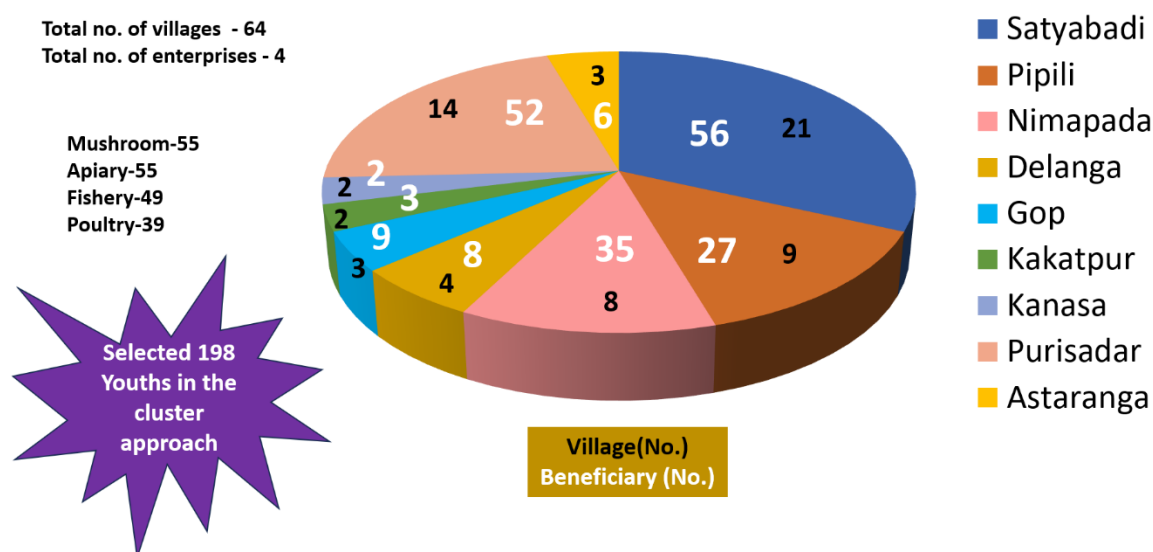


(B)KVK wise name of ARYA villages

Sl. No.	Established enterprise	Name of ARYA village	Beneficiaries (No)
1	Mushroom	Sanabhimadaspura, Talapatana, Kanhupur, Jipu,r Singhakuda, Bastapada , Itatali, Chandrabrahmapur , Bhutpada, Bhagalpur, Biswanathapur, Mathasahi, Block-Satyabadi Suhagpur, Maharipokhari Block-Pipili Tulashichura, Gopinathpur Block-Puri Sadar Resinga Block-Nimapada Gobindapur,Block-Deleanga Raulapatana-Block-Gop Madhupur-Block-Astaranga	55
2	Fish production with fish seed	Billipada, Singhbrahmapur, Janakideipur, Dalabhanapur, Akhupada, Sundara, Charishra, Paikarapur, Bijayaramchandrapur, Balipada, Biranarasinghpur, Birakesharipur, Dahan Kanalpada, Samakula, Basantapur Blocks- Satyabadi, Puri Sadar, Delanga, Gop, Nimapada, Kanas	49
3	Apiary	Dubduba, Panchukera, Jayapur, Nuasahi, Panakera, Nahala, Padmapur, Madhipur, Balikud, Muninda, Badakanjia, Block-Satyabadi Dalabhanapur, Gadatoriha Block-Nimapada Gobind pur,Block-Delanga Ankia, Biranarasinghpur, Randio Block-Puri Sadar Abalapur, Barundi, Podagun,Uttarbada Block-Pipili Dahikia, Block-Kakatpur	55
4	Poultry	Taraboisanan, Sanabhimdasapur, Gadachandapur,	39

		Talapada, jayapur, bharatipur, Raisha, Bangurusha, Hasanpur, Katunia, Gadatotihan, Gadabadaput, Resinga, Samakula, Talajanag, Kumbharpada, Bhagabansundara, Pattnaikia, Narasinghpur, Gadasanaput, Gadapadanpur, Arola Blocks –Nimapada ,Puri Sadar, Gop, Satyabadi & Kanasa	
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Project area: Location of 4 enterprises in different blocks of district



(C)KVK wise

1. District Profile

District-level data on agriculture, livestock, and farming situation

Sl. No.	Item	Detailed description		
1.	Major Farming system/enterprise	Rice-rice, rice-pulse, rice-oilseed, rice-vegetables.		
2.	Agro-climatic zone	East and South east-coastal plain		
3.	Agro ecological situation	1.Coastal alluvial command 2. Coastal alluvial non-command. 3.Coastal alluvial saline 4.Rainfed laterite 5.Rainfed red and laterite		
4.	Soil type	Red, laterite, brown forest, alluvial and saline		
5.	Productivity of major crops under cereals, pulses, oilseeds, vegetables, fruits and others	Productivity (q/ha)		
		crop	kharif (q/ha)	rabi (q/ha)

		Paddy	25.27	34.94
		Millets	5.5	5.5
		Pulses	-	2.50
		Oilseed	-	18.78
		Fibers	5.80	-
		Vegetables	91.41	85.29
		Spices	5.07	4.48
		sugarcane	-	372.10
6.	Production of major livestock products like milk, egg, meat etc.	Milk		101 TMT
		Egg		30 million
		Meat (poultry)		5 TMT
		Meat (goat & sheep)		3 TMT

2. Demographic status

Total population (2011 Census)	1697983
Male	865209(50.96%)
Female	832774(49.04%)
Sex ratio	963(Female per ,000 male)
Population density	488
Literacy rate (%)	84.67
Male Literacy (%)	90.85
Female Literacy (%)	78.28
No. of farm families	148935
Small farmer	40487
Marginal farmer	97439
Big farmer	2073

Aquatic Resources of Puri District

Freshwater resources & Brackish water resources

Freshwater ponds and tanks	No.	Area (ha)	Brackish water ponds and tanks	Area available (ha)	Area utilized (ha)
Gram panchayat ponds	2624	934.04			
Revenue/Govt. ponds	479	147.15	Revenue/Government Ponds	11916.7	3233.84
Private tanks	8891	1979.86	Private tanks	3264.3	1558.69
Total	11994	3061.35	Total	15181.0	4693.53

Production- 20583.5 MT/year

Mushroom Production in Puri District

SL No.	Name of Block	No. of small growers	No. of medium growers	No. of large growers	Production/ year (ton)
1	Brahmagiri	74	84	14	1151.76
2	Delanga	215	30	3	966
3	Gop	67	46	8	894.96
4	Kakatpur	57	10	0	258
5	Kanas	29	4	0	128.16
6	Nimapada	707	35	1	1839.12
7	Pipili	390	156	21	3017.76
8	Puri Sadar	82	35	6	763.68
9	Satyabadi	269	74	8	1494.48
	TOTAL	1890	474	61	10513.92
	Total Production in the District				10,514 ton

(Compiled from the data collected from the Horticulture Dept. and Mushroom Federation, Odisha-2023-24)

3. Name of cooperating Institutions for technical support

- ICAR-Agricultural Technology Application Research Institute, Kolkata (Zone-V)
- ICAR, Indian Institute of Water Management, Bhubaneswar
- Central Institute for Women in Agriculture (ICAR-CIWA), Bhubaneswar
- Central Institute of Freshwater Aquaculture (CIFA), ICAR, Bhubaneswar
- Central Inland Capture Fisheries Institute, Barrackpore, Kolkatta
- Centre for Tropical Mushroom Research and Training (CTMRT), Odisha
- University of Agriculture and Technology (OUAT), Bhubaneswar
- Central Poultry Development Organization, Intensive Poultry Development Project, Bhubaneswar
- All India Coordinated Research Projects on Honey Bees & Pollinators, OUAT, Bhubaneswar
- National Bank for Agriculture and Rural Development (NABARD), Puri
- Animal Husbandry Department, Puri
- District Agriculture Office, Puri
- Horticulture Department, Puri
- Fishery Department, Puri
- Agricultural Technology Management Agency (ATMA), Puri
- Agricultural Promotion & Investment Corporation of Odisha Limited (APICOL)

4. Brief Report of activities undertaken (2024 - 25)

Sl. No	Activity	Enterprise			
		Mushroom	Poultry	Fishery	APIARY
1	No. of training programmes conducted in the year 2024-25	1	1	2	1
2	No. of male and female	M: 0,	M: 20,	M: 29	M: 13,

	youths trained in the year 2024-25	F:16	F: 0	F: 1	F: 07
3	No. of units established in the year 2024-25	05	05	05	05
4	No. of enterprises established till 2024-25	34	27	34	35
5	No. of enterprises running successfully in the year 2024-25	34	23	34	30
6	No. of discontinued entrepreneurial units in the year 2024-25	Nil	4	Nil	5
7	Reason for their discontinuation	-	4 nos. of ARYA youths joined Govt. Jobs I outside of the district.	-	Due to the uncontrollable spread of sac brood disease, which caused colony swarming and viral transmission to other hives, despite multiple unsuccessful control trials.
8	No. of employment/manpower generated in the year 2024-25	Avg. employment: 2300 days/ person	Avg employment: 175 days/ person	Avg employment: 2123 days/ person	Avg employment: 127 days/ person
9	No. of groups formed in the year 2024-25	2	1	2	1
10	Gross and Net Income of ARYA youths in the year 2024-25	Avg. GR: 5,88,000/5000Be ds NR: 3,66,000	Avg. GR: 3,02,895/2000 Birds NR: 1,44,670	Avg. GR: 4,56,500/ha NR: 2,58,900	Avg. GR: 51,000/10 Boxes NR: 27,000
11	Enterprise wise Maximum and Minimum income calculation along with the BC ratio (B: C)	Max Net income: 4,32,000, BC: 3.2 Min Net Income:1,44,000, BC: 2.1	Max Net income: 98,000, BC: 2.1 Min Net Income:42,000, BC: 1.98	Max Net income: 2,70,000, BC:2.7 Min Net Income:1,90,000, BC: 2.2	Max Net income: 1,33,000, BC: 2.6 Min Net Income:24,000, BC: 1.4
12	Horizontal spread/ No. of non-ARYA youth started the enterprise after watching the	28	12	14	07

	success of ARYA youth				
13	No. of products branded (local/ fssai) in the year 2024-25	2	0	2	1
14	Linkages established with market, banking institutions, and other organizations in the year 2024-25	14	4	7	8
15	No. of ARYA entrepreneurs submitted the DPR (Detailed Project Report) in the year 2024-25	1	1	1	1

5. Enterprise details (For each enterprise)-

i. Detailed description

Enterprise Domain- Mushroom

Puri district has emerged as a hub for mushroom cultivation, with around 400 commercial growers producing approximately 10,514 tons annually. The sector is supported by 54 spawn production units, abundant bundle straw, favorable climatic conditions, and the presence of KVK. Opportunities include utilizing 9,990 ha of coconut orchards, proximity to Odisha's capital, and support from government schemes and institutions like CTMRT and OUAT. Entrepreneurial activities span mushroom and spawn production, post-harvest management, marketing, value addition, and service provision.

ii. Input /Support provided to youths:

Sl. No.	Inputs	Quantity
1	Mushroom Spawn	5@ 100 Spawn /Unit
2	Shed Net for Mushroom House (75%)	5 nos.
3	Digital Weighing Machine	5 nos.

iii. Progress made (Avg.)

Measurable indicators	Before 2018-19	2024-25	% Change
Avg. production paddy straw mushroom kg/bed	0.6	0.9	50
Avg. annual Production Mushroom (kg/unit/year)	864	4480	490.27
Avg. Cost of production (Rs. /unit/year)	69120	222000	221.18
Avg. Gross Return (Rs. /unit/year)	86400	588000	580.55
Avg. Net Return (Rs. /unit/year)	17280	366000	2018.05
B: C Ratio	1.25	2.58	106.4

Photographs of KVK Interventions



Skill Training on Mushroom Spawn Production



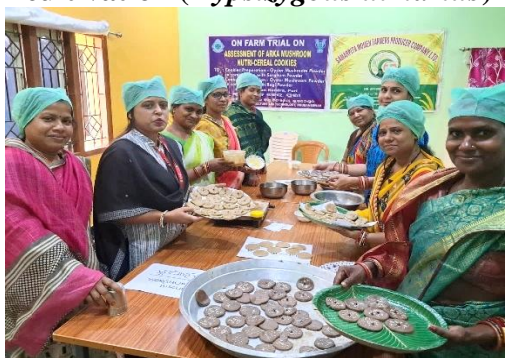
Straw Cutter for Oyster Mushroom



Popularization of Oyster Mushroom cultivation (*Hypsizygous ulmarius*)



Mushroom Spawn Unit



Skill Training on Mushroom Value-added products



Use of shade net house for PSM cultivation

Enterprise Domain- Fish production with fish seed

i. Detail description

Fish farming in the Puri district spans an area of 5,323 hectares, with an annual production of 20,583.5 metric tons. The sector benefits from key strengths such as 70% lowland availability, adequate annual rainfall, numerous perennial ponds, the presence of KVK, and strong coordination with stakeholders like CIFA. Its proximity to the state capital, supportive government schemes, and growing market demand offer significant expansion opportunities. Entrepreneurial activities in the sector include spawn and yearling production, input supply, marketing, and providing technical services.

ii. Input /Support provided

Sl. No.	Inputs	Quantity
1	Probiotics for Bio floc Unit	05
2	Stunted yearlings of IMC	5,000 nos.
3	Fry Drag net (60 ft ×18 ft)	2 nos.
4	Fish Feed	5 Units

iii. Progress made:(Avg.)

Measurable indicator of output in a suitable unit		% increase
Before 2018-19	2024-25	
Avg. body wt. of fish (kg)- 0.520	Avg. body weight of fish (kg)- 0.830	59.61
Avg. fish production (q/ha/year)- 28.75	Avg. fish production (q/ha/year)- 41.50	44.34
Avg. gross return (Rs. /ha/year)- 2,87,500	Avg. gross return (Rs. /ha/year)- 4,56,500	58.78
Avg. employment generation/ annum- 97	Avg. employment generation/ annum-123	26.80
Net return –Rs. 1,27,000 (B: C Ratio-2.2)	Net Return-Rs. 2,58,900 (B: C ratio-2.31)	103.8

Photographs of KVK Interventions (Fishery):



Supply of Fingerlings to Youths from KVK



Preparation of water probiotics for application into the pond



Bio floc Unit



Feed Preparation from Locally Available Ingredients



Transportation of live fish yearlings by using a water storage tank & O₂ cylinder

Enterprise Domain- Poultry production

i. Details description

Poultry farming in the Puri district involves approximately 9,75,430 birds, yielding an annual production of 0.45 TMT. The sector is supported by active SHGs, the presence of KVK, the participation of landless and marginal farmers, and a functional hatchery unit. Proximity to institutions like CPDO and IPDP Bhubaneswar further enhances growth prospects. Entrepreneurial opportunities include hatchery operations, input supply services, poultry production, paravet services, and bird marketing.

ii. Input /Support provided



Sl. No.	Inputs	Quantity
1	21 days old chicks Var. (Vanaraja/ Sonali/Pallishree)- 250 Nos.	05@50 chicks/unit
2	Feeder	10 nos.
3	Drinker	10 nos.
4	Poultry Feed	5 units

iii. Progress made

Measurable indicators	Before 2018-19	2024-25	% Change
Avg. body weight (kg/bird)	1.8	2.25	25
Mortality (%)	24	4	-83.33
Avg. Cost of production (Rs. /annum)	14800	158225	969.08
Avg. Gross Return (Rs./annum)	21600	302895	1302.29
Avg. Net Return (Rs./annum)	6800	144670	2027.5
B: C Ratio	1.45	1.91	31.72

Photographs of KVK Interventions Poultry:



Poultry Unit	Brooding Unit
	
Supply of 21 days of brooded chicks by Youths	Aseel In the Backyard

Enterprise Domain- Apiary

i. Detail description

Beekeeping in the Puri district is practiced by 45 entrepreneurs, with a total production of 62 quintals. The enterprise is supported by institutions like AICRP on honey bees, CDB, and KVK, along with rich floral diversity. With high market demand and government schemes promoting apiculture, there is significant scope for growth. Entrepreneurial activities include input supply, technology adoption, honey production, processing, and marketing.

ii. Honey Bee Rearing start-up unit input for 10 Beneficiaries

Sl. No.	Inputs	Quantity
1	Bee Box	10 nos.
2	Bee Colony	10 nos.
3	Bee Box Stand	10 nos.

iii. Progress made

Before adopting ARYA	After adopting ARYA (2023-24)	% increase	Economic of enterprise		
			Gross cost (Rs.)	Gross return (Rs.)	B:C Ratio
Avg. annual employment generation per year-12	Avg. annual employment generation per year-27	125	Rs. 40000/- Avg. box/unit- 10 nos. (1 st Year)	Rs. 51000/ Unit (3 rd year)	2.12
Avg. honey production/box- 2kg No colony	Avg. honey production/box- 4.5 kg Bee colony- 1no./box	50			
Avg. annual gross income- Rs.1800/box	Avg. annual gross income- Rs.5100/box	161			

Photographs of KVK Interventions APIARY:

	
Bee Colony Division: <i>Apis cerana indica</i>	Introduction of <i>Apis mellifera</i>
	
Skill Training on Scientific Bee-keeping	Demonstration on Comb Honey

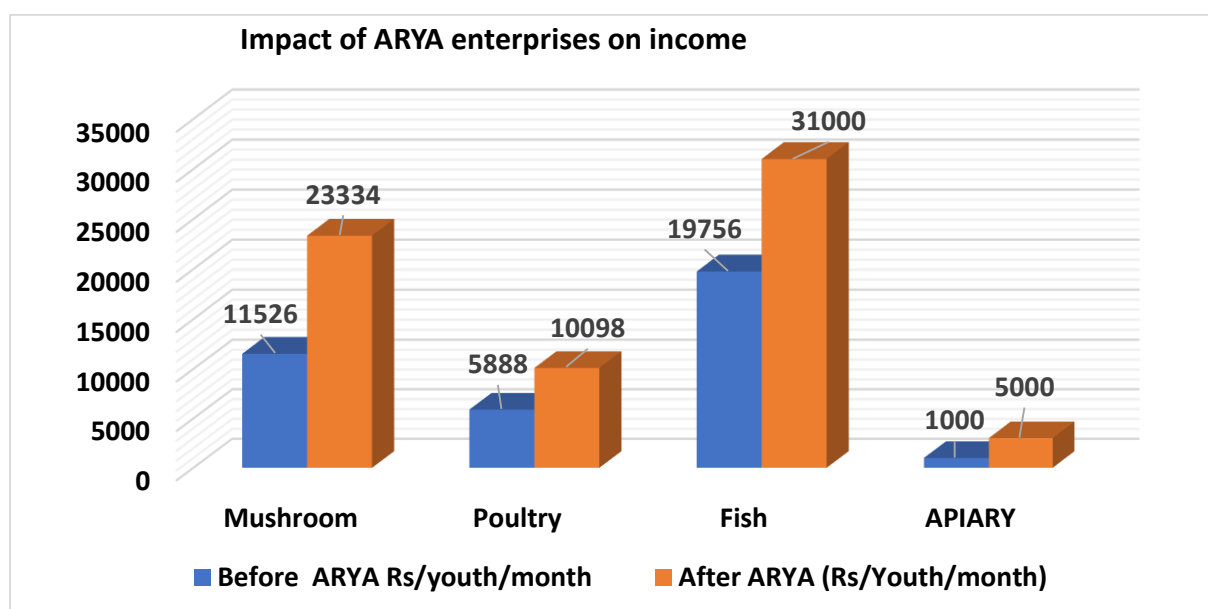
V. Capital Generation: Nil

VI. Income level

Key Success Indicators	Mushroom Production & Value Addition	Fish production with fish seed	Backyard Poultry	APIARY
The average size of each entrepreneurial unit (e.g., No. of goats/poultry birds/ beehive boxes/pigs, etc., per enterprise unit)	5,400 Beds	1 ha	400 poultry	10 Boxes
Average net income earned (Rs/unit/year)	3,66,000	2,58,900	1,44,670	27,000
Average no of youth employed (per unit)	2	2	1	1
Average no of days employment (per person/year)	300	123	75	27
Average income generation (Rs/person/year)	90,000	61,500	37,500	13,500

VI. Impact since the inception of the ARYA project

The ARYA Project has made a transformative impact in the Puri district, driving rural youth toward sustainable agri-entrepreneurship in mushroom cultivation, fishery, poultry, and apiary enterprises. Spanning four fiscal years (2018–19 to 2024–25), the project has empowered hundreds of youths through targeted interventions, intensive skill-based training, and continuous hand-holding support, leading to the successful establishment of vibrant entrepreneurial units. The consistent rise in average net returns is a strong testament to the project's effectiveness in boosting income, ensuring economic resilience, and fostering long-term sustainability in the agricultural sector. Importantly, the impact study underscores the project's role in not just improving livelihoods but also addressing socio-economic disparities by promoting inclusive participation across gender and caste lines. The ARYA initiative has proven to be a powerful model for generating local employment, retaining youth in agriculture, and creating a new generation of agri-based entrepreneurs in the Puri district.



Vii. Achievements of ARYA Youths

Success Story (Mushroom)

Transforming Rural Livelihoods through Mushroom Cultivation – The Journey of Santosh Kumar Bastia

Location: Suhagpur village, Pipili Block, Puri District

Entrepreneur: Santosh Kumar Bastia

Age: 26 years

Cultivation Area: 0.56 acre

Santosh Kumar Bastia, a young and dynamic entrepreneur from the Suhagpur village of the Pipili block, has emerged as an inspiring figure in the field of mushroom cultivation. Harnessing scientific methods, institutional support, and sheer determination, he transformed a modest 0.56-acre land into a highly productive mushroom unit that now serves as a model for rural entrepreneurship.

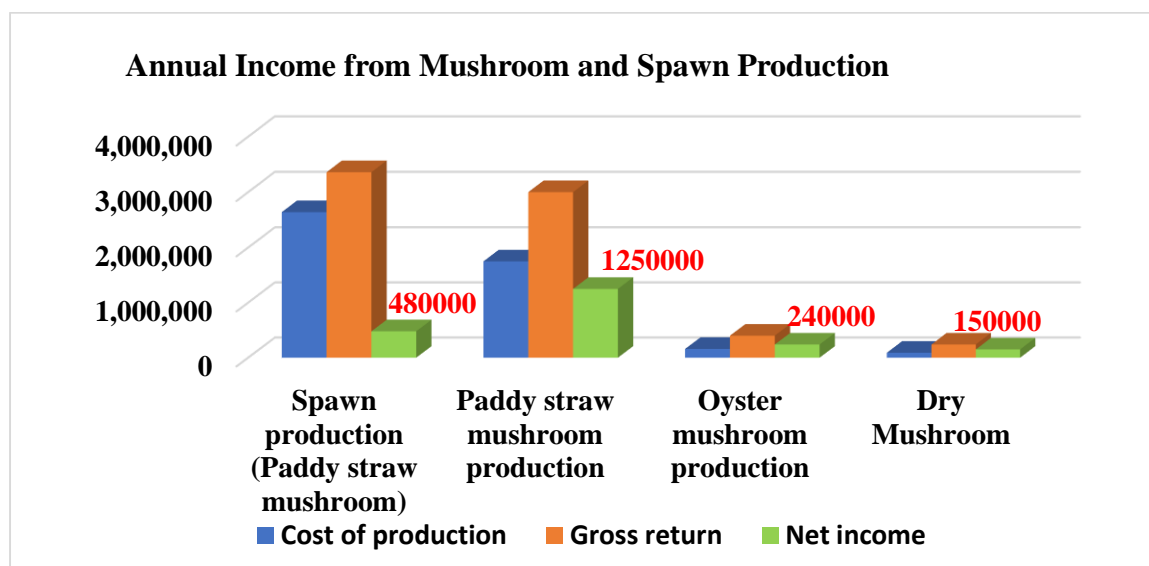
Initiatives and Interventions

Recognizing the potential of mushroom farming, Santosh adopted innovative interventions under expert guidance:

- Construction of a shade net house for optimal growing conditions
- Temperature and humidity regulation for year-round cultivation
- Introduction of Oyster Mushroom (*Hypsizygous ulmarius*) cultivation in winter
- Value addition through dry mushroom production
- Establishment of a quality spawn production unit for paddy straw mushrooms.

Economic Impact

With the implementation of focused interventions, Santosh's integrated mushroom unit achieved remarkable production levels, including 24,000 bottles of spawn, 200 quintals of paddy straw mushrooms, 100 quintals of oyster mushrooms, and 5 quintals of dry mushrooms annually. This diversified model resulted in a total production cost of ₹46,40,000 and a gross return of ₹70,00,000, yielding a net income of ₹ 21,20,000. Notably, the dry mushroom component recorded the highest benefit-cost ratio of 2.66, highlighting its superior profitability.



Social Impact

The mushroom unit not only transformed Santosh's livelihood but also emerged as a hub of local employment, currently engaging 15 SHG women members and 8 rural youths, thereby fostering empowerment and economic stability within the village. Its success story and innovative model drew international recognition, with dignitaries such as Dr. U.S. Nagothu (NIBIO, Norway), Dr. I.H. Kristensen (NIBIO, Norway), and Dr. T.N. Bwana (TARI, Tanzania) visiting the unit and commending its impactful contribution to rural development and sustainable livelihood generation.

Conclusion:

Santosh Kumar Bastia's journey showcases how scientific interventions, training, and dedication can turn challenges into opportunities. His story serves as a beacon of hope and a replicable model for rural youth and SHG women seeking sustainable livelihoods through climate-resilient agriculture.



Oyster Mushroom in Winter



Paddy straw Mushroom production



Dr. U. S. Nagothu, Director, Centre for International Development, NIBIO, Norway; Dr. I. H. Kristensen, DG, NIBIO, Norway; Dr. T. N. Bwana, DG, TARI, Tanzania visited Suhagpur of Pipili Block

Success story: Enterprise- Fish production with fish seed

Success Story: A Hub of Aquaculture Technologies – Gyan Swarup Sahoo's Journey under the ARYA Project

Name: Gyan Swarup Sahoo

Village: Subarnapur

Post: Ganeswarpu

Block: Gop, District: Puri, Odisha

Mobile: 9438648687

Under the aegis of the Attracting and Retaining Youth in Agriculture (ARYA) project, Gyan Swarup Sahoo transformed his small-scale fish farming enterprise into a thriving aquaculture hub. Initially dependent on the procurement of carp spawns from outside sources, he reared them to larger sizes for sale. Operating with just 7 ponds (5.0 acres water spread area), his annual net return stood at Rs. 42,00,000.

Technological Interventions under ARYA:

With technical guidance and support from Krishi Vigyan Kendra (KVK), Puri, and ICAR-CIFA, Kausalyaganga, Gyan Swarup Sahoo successfully adopted and implemented a range of

advanced aquaculture technologies that revolutionized his fishery enterprise. These included the establishment of a Chinese circular carp hatchery, quality fish seed production involving stunted fingerlings and yearlings, a mash fish feed mill, and a large biofloc unit. To strengthen logistics and accessibility, he introduced a live fish seed transport vehicle and set up a new fish seed rearing unit at Ganeswarpur. Additionally, he established a newly constructed one-stop aqua shop to cater to the input needs of fellow farmers. These strategic interventions enabled him to scale up his operations from 7 ponds to 12 ponds, covering a total of 12.0 acres of water spread area. As a result, his productivity and profitability witnessed a remarkable boost, with his annual net return soaring to Rs. 2,40,00,000.

Recognition and Milestones:

- Established a complete value chain from broodfish selection and procurement to live fish & fish seed transport and marketing.
- Constructed an aqua input outlet to provide a one-stop solution for other farmers.
- His exemplary journey from a nondescript village, Subarnapur, to the Rashtrapati Bhavan, Raisina Hill, New Delhi, is a source of inspiration.
- Invited to the 'At Home' Reception Ceremony by Her Excellency, the President of Bharat, on Republic Day, 26.01.2025 – a proud moment recognizing his contribution to aquaculture and rural entrepreneurship.

Impact:

Gyan Swarup's enterprise serves as a model fishery unit, demonstrating the potential of youth-led entrepreneurship in aquaculture. Through innovation, hard work, and institutional support, he has created employment opportunities, inspired fellow youth, and contributed significantly to the local economy.

A journey from a nondescript village Subarnapur to Rashtrapati Bhavan, Raisina Hill, New Delhi



New fish seed rearing unit



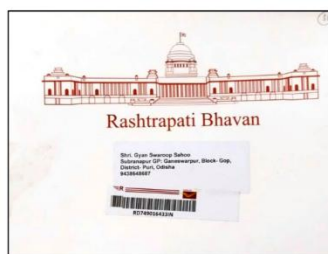
Selection of Brood-fish



Live fish seed vehicle



Newly constructed One-stop Aqua shop



Invitation to the ARYA farmer to attend the 'At Home' Reception Ceremony by Her Excellency, President of Bharat on the occasion of the celebration of Republic Day on D.26.01.25

Success story: Enterprise-Poultry

A Way for Success – Backyard Poultry

Partha Sarathi Behera, At– village-Samakula, Block–Gop, Mobile No. 7326866423

Partha Sarathi Behera, a young and aspiring farmer from Samakula village under the Gop block of Puri district, initially practiced conventional backyard poultry farming with 800 coloured poultry birds. Despite his hard work, the income from this activity was limited, as the birds were sold only after 5 to 6 months, yielding a modest return. Realizing the potential of scientific poultry farming, Partha sought guidance to improve his livelihood.

KVK Interventions

With the technical support of Krishi Vigyan Kendra (KVK), Puri, Partha was exposed to a series of capacity-building interventions. These included hands-on training, method demonstrations, field and exposure visits, and startup inputs. KVK also facilitated linkages with input suppliers and markets. Under the guidance of experts, he adopted improved dual-purpose poultry breeds like Vanaraja and Kadaknath and expanded his poultry unit to a capacity of 2000 birds. He also introduced Azolla production as a low-cost feed supplement and implemented free-range rearing practices to minimize feed expenses. Furthermore, he diversified his enterprise by selling eggs at Rs. 10 and 21-day-old chicks at Rs. 55–60.

Economic Impact

Before the intervention, Partha earned a net return of Rs. 57,600 per year from around 1600 birds. Post-intervention, his improved practices and enterprise expansion resulted in a significant rise in income. His net return increased to Rs. 1,93,000 per year envisages over threefold growth. The use of cost-effective feed (Azolla), value addition through chick sales, and adoption of superior breeds were key contributors to this economic transformation.

Social Impact

Partha Sarathi's success has not only improved his family's standard of living but also made him a role model in the village. His transition from traditional to scientific poultry farming has inspired several fellow youths and farmers in and around the village to adopt improved practices. He has become an active resource person during KVK training programs, motivating others to pursue backyard poultry as a viable livelihood option. His venture also supports local employment and contributes to nutritional security through egg and meat availability.

Conclusion

Partha Sarathi Behera's journey from a modest poultry keeper to a successful poultry entrepreneur is a testament to the power of knowledge, institutional support, and entrepreneurial spirit. The proactive intervention by KVK, Puri, combined with Partha's determination, has resulted in a sustainable and profitable backyard poultry model. His story stands as an inspiration for rural youth aiming for self-reliance and prosperity through scientific agriculture.



Poultry Unit of Partha Sarathi

Success story: Enterprise-APIARY

The Nature-Friendly Man – Mr. Susanta Kumar Sahoo

Mr. Susanta Kumar Sahoo, a progressive youth from Mangalpur village in Pipili block, Puri district, has emerged as a successful entrepreneur in apiculture (honey bee farming) through his dedicated efforts and active involvement in the ARYA (Attracting and Retaining Youth in Agriculture) project, implemented by KVK, Puri.

Economic Impact:

Before joining the ARYA project, Mr. Susanta Kumar Sahoo was managing only 7 bee boxes and had sold just 18 bee colonies. He faced several challenges, including limited technical skills, poor market linkage, and minimal exposure to advanced apiculture practices. These constraints significantly affected his productivity and income, resulting in a modest net income of ₹37,400. With the continuous support of KVK, Puri, **after joining the ARYA project**, Mr. Susanta Kumar Sahoo significantly expanded his beekeeping enterprise. He increased his capacity to 255 bee boxes and produced 382.5 kg of honey. In addition to selling 480 bee colonies, he also supplied 760 bee boxes and accessories to other budding entrepreneurs. The regular training, handholding, and exposure visits he received played a crucial role in this transformation. His enterprise not only scaled up in production but also generated employment for five individuals, resulting in an impressive net income of ₹8,98,500.

Recognitions and Outreach

- Recognized as a "**Master Trainer**" and **Service Provider** for honey bee cultivation
- Conducted practical demonstrations and training for SHGs, farmers, and youth
- Played a crucial role in expanding the **Apiary Model Unit** to other districts

Outreach of Input Supply with KVK Linkage

Through strong linkage and support from Krishi Vigyan Kendra (KVK), Puri, Mr. Sahoo played a key role in scaling the outreach of input supply to neighboring districts. His enterprise successfully supplied 60 bee boxes to the Nayagarh district, 100 boxes to Odisha Livelihoods Mission (OLM) in the Puri district, and 50 boxes to Vedanta in the Jharsuguda district. Additionally, under the ICRISAT project, he facilitated the supply of 500 bee boxes to districts including Puri, Khordha, Gajapati, Rayagada, and Ganjam—further expanding the impact of scientific bee-keeping and entrepreneurship across Odisha.

Social Impact

Mr. Sahoo's entrepreneurial journey from a small bee farmer to a regionally recognized apiculture entrepreneur and trainer under the ARYA initiative reflects the true spirit of self-reliance, green enterprise, and rural employment generation. His impactful presence was

evident during the Capacity Building Training hosted from 15–21 January 2025 under ICRISAT, supervised by KVK, where he played a key role in knowledge dissemination. The significance of his work was further acknowledged when the Principal Secretary, MSME, Odisha, visited the APIARY Unit, recognizing it as a model for rural enterprise and youth engagement in sustainable livelihoods.

Conclusion

Mr. Susanta Kumar Sahoo's success story reflects how skill development and support under the ARYA project transformed him into a leading apiculture entrepreneur and trainer. His efforts have inspired many rural youths to take up bee farming as a sustainable livelihood. Looking ahead, he aims to expand his enterprise further through a new apiary project with support from APICOL, strengthening his role in promoting scientific beekeeping and rural entrepreneurship in Odisha.



**Visit of the Principal Secretary, MSME to
APIARY Unit**



**Recognized as “MASTER TRAINER” &
Service Provider of Honey Bee
Cultivation**



Supplied Bee Boxes to OLM Puri of District

(F) Profile of ARYA youths earning more than Rs. 10000 and more than Rs. 50000

Sl. No.	Names & addresses of entrepreneurs (Mobile No.)	Brief description of the enterprise	
		Before (2018-19)	After (2024-25)
1	Manoj Kumar Behera	12000	Paddy straw Mushroom-10 Months

	Mob. No. 9937130988		Oyster Mushroom- 4 Months Income/Month-Rs.26700/-
2	Ranjan Behera .No.9777788896	14000	Mushroom Marketing, Input Supply, Value addition, Mushroom Production Income/Month-Rs.33000/-
3	Kamalini Rout Mob. No. 7735853367	4000	Paddy straw Mushroom Production throughout the year Income/Month-Rs.10650/-
4	Sujata Swain Mob. No. 7008828370	6700	Paddy straw Mushroom Production throughout the year Income/Month-Rs.12550/-
5	Renubala Das Mob. No. 7978661280	19000	Mushroom Processing Unit Mushroom Spawn Production Oyster Mushroom Production Income/Month-Rs.28000/-
6	Binapani Behera Mob. No. 9668462128	12000	Paddy straw Mushroom-10 Months Oyster Mushroom- 4 Months Income/Month- Rs.21000/-
7	Radheya Bhoi Mob. No. 7653056906	4000	Paddy straw Mushroom Production throughout the year Paddy straw supply to mushroom growers. Income/Month-Rs.18000/-
8	Rajkishor Sethi Mob. No. 6371006451	24000	Paddy straw Mushroom Production throughout the year Paddy straw supply to mushroom growers. Income/Month-Rs.34000/-
9	Kurshanchandra Pradhan Mob. No. 8018128530	10000	Paddy straw Mushroom-10 Months Income/Month-Rs.14562/-
10	Sardhanjali Gil Mob. No. 8658098875	18000	Paddy straw Mushroom-10 Months Mushroom Spawn Production Income/Month-Rs.28400/-
11	Damburudhar Behera Mob. No. 8117024243	13000	Paddy straw Mushroom-10 Months Income/Month-Rs.17800/-
12	Pratap Behera Mob. No. 9938518823	7000	Paddy straw Mushroom-10 Months Income/Month-Rs.14500/-
13	Sadashib Behera Mob. No. 9937325522	11600	Paddy straw Mushroom-10 Months Income/Month-Rs.12,600/-
14	Purnachandra Behera Mob. No. 8917387010	8700	Paddy straw Mushroom-10 Months Income/Month-Rs.16000/-
15	Aswini Baral Mob. No. 8337993108	20000	Paddy straw Mushroom-10 Months Input supply to mushroom growers Mushroom marketing Income/Month- Rs.24000/-
16	Satyabrat Sahoo Mob. No. 8249912462	16000	Paddy straw Mushroom-10 Months Income Month- Rs.20500/-
17	Karttik Behera Mob. No. 6371285818	4500	Paddy straw Mushroom-10 Months Income/Month- Rs.14500/-
18	Chhabi Bhoi	19200	Paddy straw Mushroom-10 Months

	Mob. No. 8917374684		Income/Month- Rs.30000/-
19	Anil Sethy Mob. No. 9776239161	8000	Paddy straw Mushroom Production throughout the year Income/Month- Rs.24000/-
20	Sukanta swain Mob. No. 9348491616	13900	Paddy straw Mushroom-10 Months Oyster Mushroom- 4 Months Income/Month- Rs.28000/-
21	Mahabir Swain Mob. No. 8144515436	23000	Paddy straw Mushroom-10 Months Oyster Mushroom- 4 Months Mushroom Spawn production Income/Month-Rs.32000/-
22	Prashant Kumar Sethy Mob. No. 7504062725	14000	Paddy straw Mushroom-10 Months Income/Month-Rs.20000/-
23	Ratnakar Kandi Mob. No. 9348241053	11200	Paddy straw Mushroom-10 Months Income/Month-Rs.22000/-
24	Parsuram Baral Mob. No. 7692637675	17000	Paddy straw Mushroom-10 Months Vermicompost from spent mushroom substrate Income/Month-Rs.19500/-
25	Kahnu Charan Bhoi Mob. No. 9348952818	28000	Paddy straw Mushroom-10 Months Oyster mushroom-4 Month Vermicompost from spent mushroom substrate Income/Month-Rs.36000/-
26	Sarbeswar Swain Mob. No. 6370501007	17300	Paddy straw Mushroom-10 Months Oyster mushroom-4 Month Vermicompost from spent mushroom substrate Income/Month-Rs.24000/-
27	Jitendra Swain Mob. No. 6371704034	12000	Paddy straw Mushroom-10 Months Income/Month-Rs.16000/-
28	Milimani Swain Mob. No. 9337130346	20400	Paddy straw Mushroom-10 Months Oyster Mushroom- 4 Months Mushroom Spawn production Income/ Month-Rs.32000/-
29	Karan Bhoi Mob. No. 6372446322	17000	Paddy straw Mushroom-10 Months Oyster Mushroom- 4 Months Income/Month-21500/-
30	Keshab Swain Mob. No. 9861859206	16100	Paddy straw Mushroom Production throughout the year,Income/ Month-Rs.22000/-
Enterprise-Backyard poultry			
1	Tapan Kumar Behera 9556909081	2000	Backyard poultry-Kadaknath,Banaraja Income/ Month-Rs.10000/-
2	Dipti ranjanChhatoi 6372874418	8500	Backyard poultry-Kadaknath,Banaraja, Sonali Income/ Month-Rs.12000/-
3	Rupali Patra 9937703801,	8000	Backyard poultry-Kadaknath,Banaraja Income/ Month-Rs.12000/-

4	Rajalaxmi Mohanty 9861313681	5600	Backyard poultry-Kadaknath,Banaraja, RIR, Sonali,Quail,Hatchery Unit Income/ Month-Rs.15000/-
5	Sangaram Kishore Patra 9937741915	7800	Backyard poultry-Kadaknath, Banaraja, Quail Income/ Month-Rs.15000/-
6	Sujit kumar Nanda 993761955	6200	Backyard poultry- Banaraja, Sonali Income/ Month-Rs.12000/-
7	Chandan Pradhan 9556044179	4300	Backyard poultry- Banaraja, Sonali Income/ Month-Rs.12000/-
8	Prasanta Rout 6372798943	Nil	Backyard poultry-Kadaknath,Banaraja, RIR, Sonali Income/ Month-Rs.10000/-
9	PrathaSarathi Behera 7326866423	2000	Backyard poultry-Kadaknath,Banaraja, RIR, Sonali Income/ Month-Rs.10000/-
10	Suchitra Patra 6370317323	Nil	Backyard poultry-Banaraja Income/ Month-Rs.15000/-
11	Rajat Behera 8018233214	Nil	Backyard poultry-Banaraja Income/ Month-Rs.10000/-
12	Ranjita Nayak 7064877869	Nil	Backyard poultry-Banaraja, Kadaknath Income/ Month-Rs.10000/-
13	Rudra narayan Patra 7327985139	Nil	Backyard poultry-Banaraja Income/ Month-Rs.10000/-
14	Akash kumar Biswal 9949931826	Nil	Backyard poultry-Banaraja Income/ Month-Rs.10000/-
15	Sanatan Behera 9861156720	4000	Backyard poultry-Kadaknath,Banaraja, RIR,Sonali, Quail Income/ Month-Rs. 14000/-
16	Biswajit Jena 7809446566	Nil	Backyard poultry-Banaraja Income/ Month-Rs. 12000/-
17	Biswaranjan Bhoi 9348191783	Nil	Backyard poultry-Banaraja Income/ Month-Rs. 10000/-
18	Jyoti Ranjan Biswal 9861603635	Nil	Backyard poultry-Banaraja, Sonali Income/ Month-Rs. 10000/-
Enterprise-Fishery			
1	Prakash Chandra Parida 6374864313	34600	Income/ Month-Rs.68000/-
2	Swapna Ranjan Mishra 9937010655	20000	Income/ Month-Rs.25000/-
3	Baban Das 8249271980	7000	Income/ Month-Rs.10000/-
4	Suresh Das 8249778445	22000	Income/ Month-Rs.25000/-
5	Santosh kumar Das 8249087691	19600	Fish & fish seed production One stop Aqua shop Income/ Month-Rs.30000/-
6	Rasmi Ranjan Routaray 9348940081	14800	Income/ Month-Rs.20000/-
7	Chinmaya Sankar Patra 6370689118	27100	Fish & fish seed production Pond based IFS

			Income/ Month-Rs.35000/-
8	Manoj kumar Pradhan 9124916279	7800	Income/ Month-Rs.12000/-
9	Smitanjali Swain 8763938803	14000	Income/ Month-Rs.18000/-
10	Sidhartha Sankar Behera 8114981979	Nil	Income/ Month-Rs.10000/-
11	Ramakurshana Pradhan 9556873726	14000	Fish & fish seed production Income/ Month-Rs.30000/-
12	Prafulla Behera 9556972102	Nil	Income/ Month-Rs.10000/-
13	Deepak kumar Pradhan 9337892544	Nil	Income/ Month-Rs.12000/-
14	Gyanedra Swarup Sahoo 9438648687	Nil	Income/ Month-Rs.40000/-
15	Bichitrakumar Pradhan 8144391411	10000	Income/ Month-Rs.25000/-
16	Gyanaranjan Behera 9437544038	Nil	Income/ Month-Rs.13000/-
17	Gyanaranjan Sahoo 8270308478	Nil	Income/ Month-Rs.10000/-
18	Manas ranjan Mishra 9439855685	13000	Income/ Month-Rs.20000/-
19	Abhijit Sahoo 8339008441	Nil	Income/ Month-Rs.15000/-
20	Rajat Baral 7894279460	Nil	Income/ Month-Rs.10000/-
21	Abinash Jagadev 9348150277	Nil	Income/ Month-Rs.12000/-
22	Sukanta Kumar Dalabehera 9937565189	24000	Income/ Month-Rs.32000/-
23	Jajnaseni Mishra 7873220144	Nil	Income/ Month-Rs.15000/-
Enterprise-APIARY		Net Income/ annum	
1	Basanti Biswal 7205229041	Nil	No. of Boxes-4 Net Income-Rs.10000/-
2	Sujata Biswal 7978757460	Nil	No. of Boxes-6 Net Income-Rs.12000/-
3	Rajesh Biswal 9348314116	43000	No. of Boxes-26 Supply of Bee colonies, bee boxes Master Trainer, Net Income-200000/-
4	Santosh kumar Behera 9777521004	Nil	No. of Boxes-4 Net Income-Rs.10000/-
5	Sarbeswar Maharana 9348900544	4000	No. of Boxes-12 Supply of Bee colonies Net Income-Rs.21000/-
6	Somyaranjan Mahapatra	Nil	No. of Boxes-10

	7326948714		Net Income-Rs.14000/-
7	Prasanna kumar Pradhan 6370022738	Nil	Net Income-8 Net Income-Rs.12000/-
8	Sanjay Bhanja 9556804829	Nil	No. of Boxes-24 Net Income-Rs.42000/-
9	Dama Maharana 9776152456	64000	No. of Boxes-86 APIARY Input Supply Unit Net Income-270000/-
10	Babuli Muduli 8637203499	Nil	Net Income-8 Net Income-Rs.12000/-
11	Sahadeb Pradhan 7377853877	16000	Net Income-12 Net Income-Rs.22000/-
12	Dibakar Maharana 9583801806	7500	Net Income-8 Net Income-Rs.14000/-
13	Sima Mishra 9438340379	Nil	No. of Boxes -25 Net Income-Rs.30000/-
14	SusantaKu.Sahoo 9658980187	46000	No. of Boxes-55 APIARY Input Supply Unit Master Trainer Net Income-200000/-
15	Biranchi Narayan Mahapatra 9937345207	8200	No. of Boxes -8 Net Income-Rs.14000/-
16	Sibaprasad Sahoo 8260429608	Nil	No. of Boxes -8 Net Income-Rs.16000/-
17	Anu Maharana 8658653349	17000	No. of Boxes -18 Net Income-Rs.40000/-
18	Kanchanbala Choudhry 8763039887	6000	No. of Boxes -12 Net Income-Rs.18000/-
19	Bibhudatta Pradhan 9861857855	Nil	No. of Boxes -6 Net Income-Rs.14000/-
20	Subhashree Panda 7847045796	Nil	No. of Boxes -100 Net Income-Rs.44000/-
21	Arun Ku.Pradhan 8144165638	Nil	No. of Boxes -8 Net Income-Rs.14000/-
22	Sambit Ku.Sahoo 9437282619	Nil	No. of Boxes -10 Master Trainer Net Income-Rs.18000/-
24	Prasanna Kumar Pradhan 7751036847	Nil	No. of Boxes -6 Net Income-Rs.14000/-
25	Anusaya Jena 773598773	Nil	No. of Boxes -15 Net Income-Rs.24000/-
26	Annanta ku. Sahoo 9777573802	Nil	No. of Boxes -7 Net Income-Rs.12000/-
27	Amiya Ku.Jena 9178059182	Nil	No. of Boxes -5 Net Income-Rs.10000/-
28	Sudam Maharana 7873057373	11000	No. of Boxes -16 Net Income-Rs.14000/-
29	Ashok Kumar Kandi	Nil	No. of Boxes -14

	8260429608		Net Income-Rs.24000/-
30	Dillip Kumar Maharana 7873305526	Nil	No. of Boxes -6 Net Income-Rs.14000/-

(G) Dignitaries visited ARYA Units



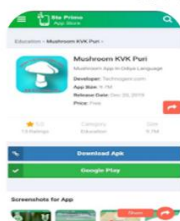
Director ATARI and Dr. Trilochan Mohapatra visited the Mushroom Unit



Hon'ble Vice Chancellor and Deans, OUAT visited Bio floc Unit

(H) Newspaper/Media coverage:

ICT SUPPORTED INFORMATION & KNOWLEDGE



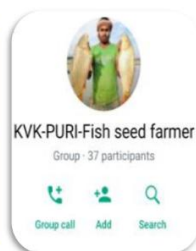
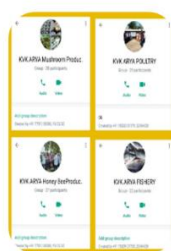
Developed one App namely
'MUSHROOM KVK PURI' in Odiya



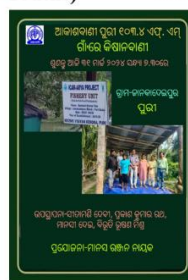
Doordarshan Pallishree
Programme(KVK Scientist & 8 Youths)



Doordarshan Phone-In
Programme



05 nos. of enterprise-based WhatsApp group



Interaction programme By AIR, Puri –ARYA Mushroom Unit, Fishery Unit at Kahnapur and Janakideipur village

(I) Publications (Research Publications)

Sl. No.	Name of the Journal	Title	Author's Name	Item
1	Indian Research Journal of Extension Education 24 (1), January - March 2024	Fostering Rural Entrepreneurship and Curbing Migration: The ARYA Project's Impact on Youth and Agriculture in Puri, Odisha	S. Acharya, M. Sahoo, A.P. Nayak & S.N. Mishra	Research Paper

2	Journal of Krishi Vigyan 2024, 12(1): 65-69	Empowering Rural Youth in Puri District through Mushroom Cultivation for Sustainable Livelihoods	S. Acharya, M. Sahoo & D.N. Sarangi	Research Paper
3	International Journal of Social Sciences 13(2): 81-89, June 2024	Enhancing livelihood security via mushroom production: A case study of technological support and farmers' ingenuity	S. Acharya, & D.N. Sarangi	Research Paper
4	Vigyan Varta an International E-Magazine for Science Enthusiasts, Vol. 4, Issue 9	Women Entrepreneurship through Apiary: A Success Story	S. Acharya & D. N. Sarangi	Article
5	Indian Farmer Volume 10, Issue 08, 2023, Pp. 396-398	A successful mushroom grower: Inspiration for retaining youth in agriculture	S. Acharya & D. N. Sarangi	Article

(J) Migration status

Migration Scenario of Puri District

Total no. of househo lds surveye d	Migrant Househo lds	Percent age of Househo ld Migrati on	Total Number of Rural Househol ds*	Estimate d Number of Migrant Househo lds	Average Number of Migrant s per Pancha yat	Number of Panchayat s**	Estimat ed Numbe r of Migran ts
7820	2099	26.8	312855	83975	347.8	230	79688.0

As per the census 2011 ** as per Panchayat directory

(K) Quality Action Photographs