

## Natural Farming Going Beyond the Boundary of Zero Budget- Inspiring Tale of an ARYA Entrepreneur

Rajesh K Rana<sup>1\*</sup>, Parvender Sheoran<sup>1</sup>, Navneet Jaryal<sup>2</sup> and Sarang Monga<sup>1</sup>

<sup>1</sup>ICAR-ATARI Ludhiana-141004, Punjab

<sup>2</sup>KVK Hamirpur at Bara-177044, Himachal Pradesh

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### Introduction

India's agricultural sector has undergone a remarkable transformation, turning the nation from a food-deficit to a food-surplus country over previous five decades. This achievement not only stands as a global success story but also ensures food security for several nations. The next phase of India's agricultural development significantly depends on fostering entrepreneurship among its youth. Hence, development of entrepreneurship in agriculture is crucial in order to bring innovative solutions to boost farm income, create employment opportunities, and enhance rural prosperity (Shirur et al., 2016; 2017; 2018; 2019). However, the challenge lies in attracting rural youth to agri-entrepreneurship due to widespread belief that agriculture can't be an enterprise to deliver profitability up to their expectations due to a large number of small and marginal farm families (Rana et al., 2022).

### Arya Project

Recognizing this potential and the corresponding challenge, the Indian Council of Agricultural Research (ICAR) launched the "Attracting and Retaining Youth in Agriculture (ARYA)" initiative during 2015-16 in order to nurture entrepreneurship among the rural youth. Due to extra-ordinary strength of Krishi Vigyan Kendras (KVKs) as frontline extension agency the project was implemented through the KVKs (Rana et al., 2023). With a significant portion of India's young population under the age of 35 residing in rural areas, initiatives like ARYA play a crucial role in curbing migration to urban centres by offering viable career options and attractive livelihood in agriculture (Gowda et al., 2023; Rana et al., 2024a). This initiative underscores the transformative power of entrepreneurship in shaping the future of India's agricultural landscape and empowering its rural youth (Rana et al., 2024b).

Moreover, ARYA project has demonstrated that natural farming, traditionally seen as a low-budget option for small and marginal farmers, can also be an economically viable and

profitable endeavour when approached with high-tech methods. Educated and enterprising rural youth have shattered the bases of low-budget natural farming, cultivating high-value crops under both open and protected conditions (Chauhan et al., 2024a; 2024b). Several ARYA entrepreneurs in the ICAR-Zone-1 states and union territories have applied natural farming bio-formulations to their crops through drip irrigation in polyhouses, showcasing the potential for generation of net income comparable or beyond the chemical-based farming (Thakur et al., 2024a; 2024b). This highlights the versatility of the ARYA project in not only promoting traditional farming practices but also encouraging innovative, technology-driven approaches that can elevate natural farming to a lucrative business.

### **The Arya Entrepreneur**

Munish Kumar (Mobile No. 7018882511) is one of such educated youths and is a Bachelor in Physical Education by his academic training. He comes from Samrala village of Didwin block in Hamirpur district of Himachal Pradesh and falls under small category of farm families. He used to cultivate vegetables on a small holding of 7 Kanal area (less than 1 acre) at the time of the inception of ARYA project in the district during 2016-17.



His village is about 12 km from the district headquarters of Hamirpur and about 45 km from the KVK at Bara in Hamirpur. For the livelihood of his family, he totally used to depend on vegetable cultivation till 2015-16. He had constructed two polyhouses of 105 m<sup>2</sup> each, for

protected cultivation of vegetables, about 3-4 years before 2016-17, however, the poly sheets of both the structures were completely damaged and the structures were grossly useless. He was unable to get his polyhouses repaired for replacement of his damaged poly sheet due to his poor financial conditions. As a result, both his polyhouses were idle and he was forced to cultivate vegetable crops under open conditions with a compromised productivity and a financial disadvantage. He was losing his interest in farming due to inadequate returns.

### **Project intervention:**

Munish Kumar approached KVK Hamirpur at Bada during 2016 to have pertinent solution for ensuring himself a desirable livelihood out of his limited resources. The concerned scientist assessed his farm situation and analysed his precise needs. He was advised cultivation of vegetables in the polyhouse and the damaged polythene sheet of both his poly-houses was replaced with the financial assistance under ARYA project. After the renovation of both the poly-houses, he started growing vegetable crops inside the poly houses. Capsicum, Tomato, Cucumber, Coriander, Summer Squash, Onion, Palak, Methi, Brinjal Cauliflower and Radish etc., were some of the prominent crops which were grown by the entrepreneur. Subsequently he was advised to produce chemical free vegetables for the health-conscious consumers and also to grow nursery seedlings of the vegetable crops. Nursery seedling growing became critical component of net-income enhancement for this ARYA entrepreneur.



### Marketing:

Munish quickly became famous in his area for the quality vegetable production so in order to build upon his favourable reputation, he opted for self-marketing of his farm products. His decision proved right and he was able to sell his produce at the farm gate and nearby local markets at attractive prices. He never visited APMC Mandi for selling his farm produce. He started earning handsome income from the sale of high-quality seedlings of cucurbits and other vegetables grown under protected conditions during January and March months.



### COVID Opportunities:

While COVID doomed finances of very large number of farmers in India, it proved a lucrative opportunity for Munish. His reputation of high-quality nursery seedlings induced him to increase area under nursery seedlings of vegetables just before the COVID lockdown in January 2020 shifting some of his polyhouse space from main crops cultivation to nursery production. Subsequent COVID lockdown proved to be a boon for his farm business as buyers used to visit his place to purchase the nursery seedlings. Resultantly, his net income increased 60% during COVID ridden year 2020. He started gradually increasing open fields cultivation of vegetable nursery as well as main crop by increasing land under cultivation. During second COVID affected year 2021 his net income further increased to Rs. 6.7 lakh from the previous year's net income of Rs. 4.57 lakh. During this year, this hard-working agri-entrepreneur started earning additional income by becoming master trainer in various trainings on Mushroom cultivation and natural farming for which he himself was trained at KVK Hamirpur under ARYA project and other programmes.

**Impact on livelihood:**

Munish Kumar experienced tremendous improvement in his financial performance after the ARYA intervention. The details of his economic performance are present in the Table 1. The net-income from conventional cultivation of vegetable under open field conditions stagnated in the range of Rs. 58000 to 68000 over the years for him. Though he started increasing area under open fields cultivation of vegetables during 2020 but it would not have been possible without ARYA intervention as his net income from conventional farming was too meagre to enable him expand area. During 2021 he earned Rs. 38000 (increased 2.76 times during 2022) by being the master trainer for various training programmes on mushroom

cultivation or natural farming. The net-income of Rs. 94000 (out of which more than one third was ARYA income) increased to Rs. 8.47 lakh during 2022.



**Table 1: Component and year wise net-income of Munish Kumar**

Year	Cultivation of vegetable crops@			Nursery raising of vegetable crops@		Mushroom cultivation	Master trainer%	Total Income
	In polyhouse (ARYA intervention)	In open fields& Conventional	ARYA intervention	In polyhouse (ARYA intervention)	In open fields (ARYA intervention)			
2016	33000	61000	--	--	--	--	--	<b>94000</b>
2017	160000	68000	--	14000	--	--	--	<b>242000</b>
2018	150000	58000	--	33000	--	--	--	<b>241000</b>
2019	165000	63000	--	58000	--	--	--	<b>286000</b>
2020	125000	63000	42000	215000	--	12500	--	<b>457500</b>
2021	115000	63000	97000	270000	52000	35000	38000	<b>670000</b>
2022	95000	63000	117000	312000	111000	44000	105000	<b>847000</b>

@=Cultivation of Capsicum, Tomato, Cucumber, Coriander, Cauliflower, Onion, French beans, Radish, Palak, Methi and Summer Squash etc.  
 %=Master trainer for trainings on mushroom cultivation and natural farming  
 &=In 7 Kanals from 2016 to 2019 and then he gradually increased area to 14 Kanals; one Kanal=384 m<sup>2</sup>

An interesting analysis about role of ARYA project in the enhanced net-income of Munish Kumar has been carried and presented in Table 2. The contribution of ARYA intervention in the total net income of the entrepreneur ranged from 35 per cent during 2016 to 92.56 per cent during 2022. In terms of multiple times enhancement of net income due to ARYA intervention the farm income of the entrepreneur increased in the range of 1.54 times during 2016 to 13.44 times during 2022. Interestingly, COVID pandemic has proved to be a boon for this ARYA entrepreneur on every financial parameter. The success story of Sh. Munish Kumar is an example worth emulation by the youth not only from his area but from other parts of the country also.

**Table 2: Proportion and multiple times enhancement of net-income of Munish Kumar due to ARYA intervention**

Particulars	2016	2017	2018	2019	2020	2021	2022
Proportion (%) of income due to ARYA intervention	35.11	71.90	75.93	77.97	86.23	90.60	92.56
Income enhancement due to ARYA (multiple times)	1.54	3.56	4.16	4.54	7.26	10.63	13.44

#### Way forward:

Munish Kumar has been recipient of various national level recognitions and awards. His outstanding success story, created with the help of ARYA project, provides several insights and lessons to the educated rural youth exploring possibilities of entrepreneurship development in the field of agriculture. The hard work, focus and ability to receive technical and financial support from various public institutions constitute core competency of entrepreneurship and he proved to a winner everywhere. How innovativeness in self-marketing of the farm produce by building a quality reputation can convert adversities into opportunities is a great lesson for the budding rural young entrepreneurs to secure not only sustainability but also a tremendous growth in the farm business (Rana et al., 2022; Gowda et al., 2024a; 2024b). This enterprising rural youth has several business experiences in his story not only to learn but to emulate also.

#### Declaration:

Other developmental agencies, especially the Department of Agriculture, Himachal Pradesh, also have contribution in shaping the success of this ARYA trained entrepreneur through technical and financial support.

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