



**WELCOME**



# Challenges and Strategies for youth in Agriculture



# Flow of presentation

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# Introduction

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Agriculture provides the principal means of livelihood for over 52 per cent of our population which lives in the rural areas.

In rural areas, agriculture continues to be the dominant employer (52 per cent), followed by construction (7.2 per cent), manufacturing (6.7 per cent), and community services (6.3 per cent).

# Objectives



To know the challenges and strategies for youth in Agriculture



To know about the ARYA project



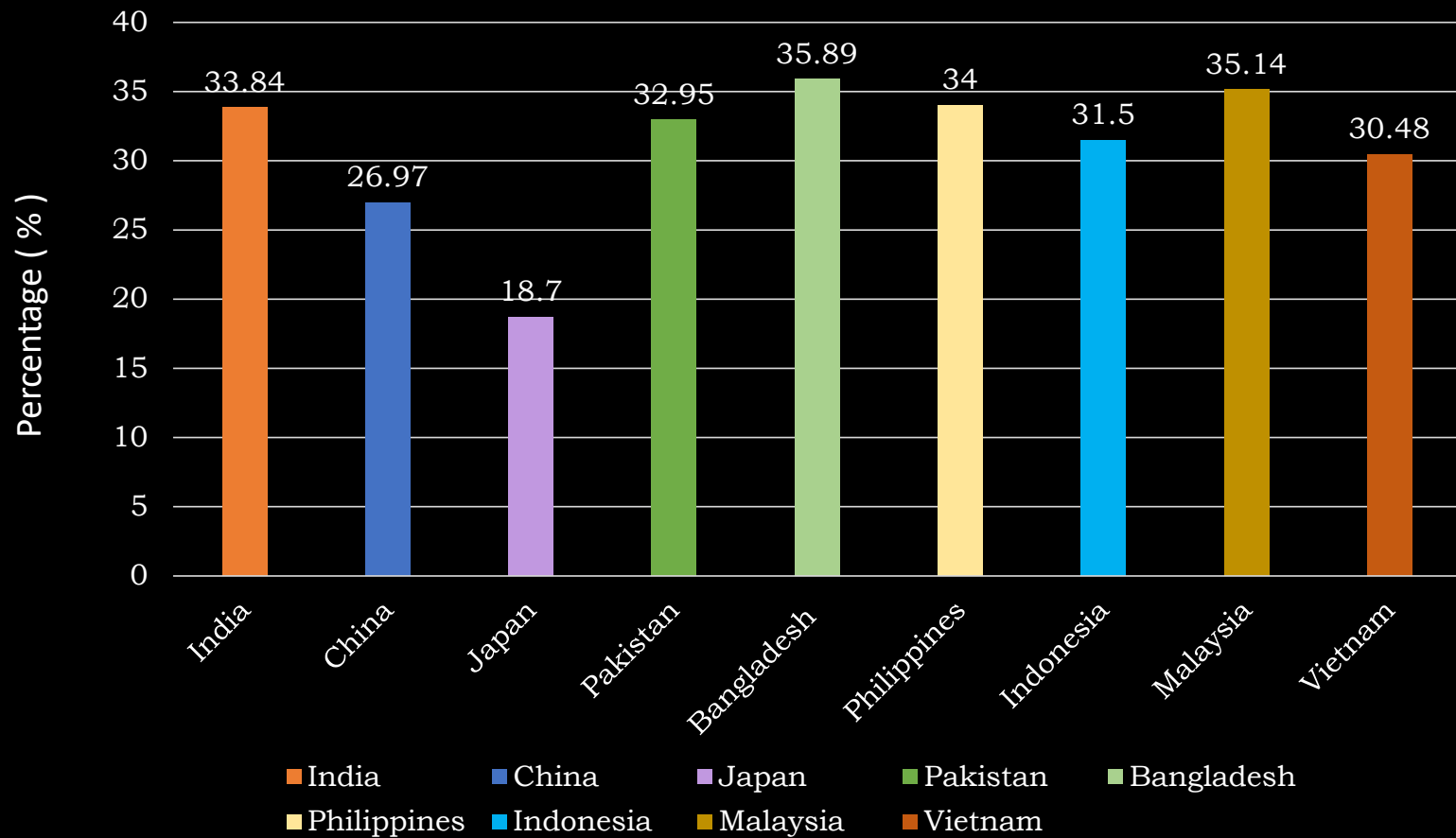
To review related research studies

## Definition of youth

Sl.no	Name of the organization	Age
1	The Commonwealth	15-29
2	United Nations Educational, Scientific and Cultural Organization (UNESCO)	15-24
3	International Labour Office (ILO)	15-24
4	UN Habitat (Youth Fund)	15-32
5	UN Population Fund (UNPF)	10-24
6	World Health Organization (WHO)	10-29
7	World Bank (WB)	15-34
8	African Union	15-35
9	European Union	15-29
10	National youth policy India	15-35

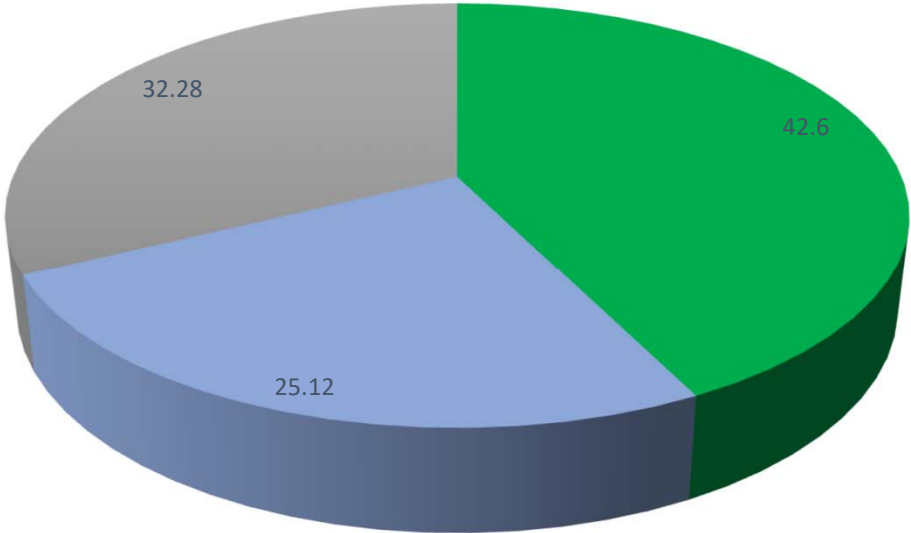
Source: Global Youth Development Index and Report

### Share of Youth Population (15-35 Years ) in Major Countries of Asia in 2020 ( in % )



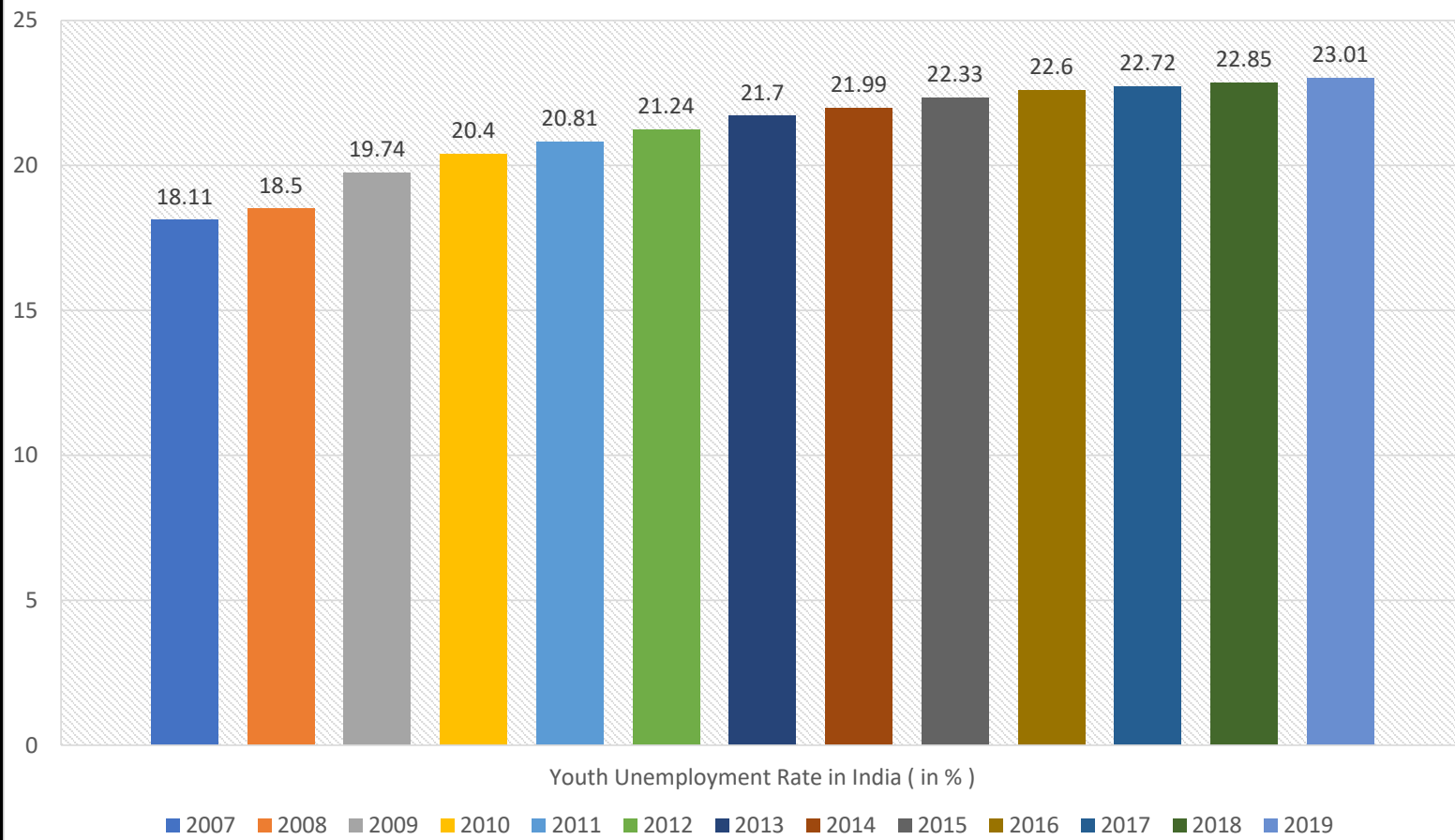
Source: Ministry of Statistics and Programme Implementation, Government of India. 2017. Social Statistics Division, Youth in India. 11-14.

**Distribution of Work Force across Economic sectors in India as on 2020 ( % )**

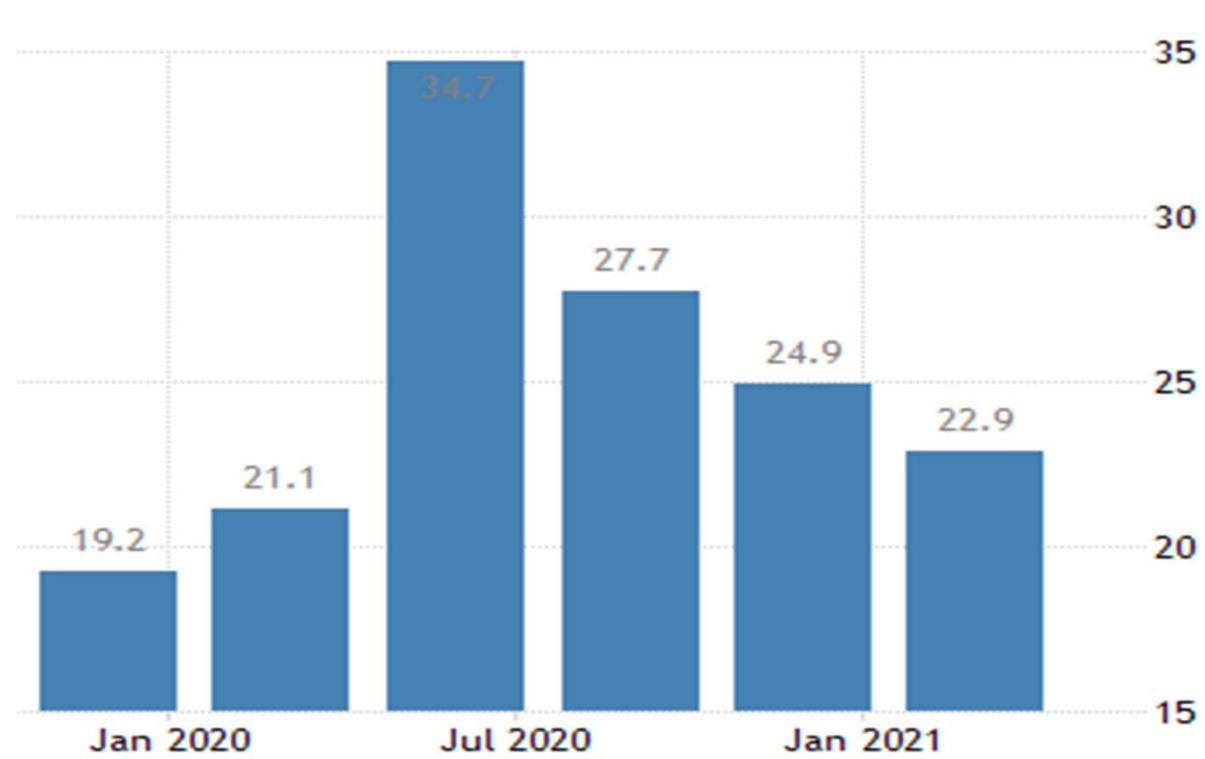


■ Agriculture & allied   ■ Industry   ■ Service

Source: <https://www.statista.com/statistics/271320/distribution-of-the-workforce-across-economic-sectors-in-india/>



Source: <https://www.statista.com/statistics/812106/youth-unemployment-rate-in-india/>



Source: <https://www.statista.com/statistics/812106/youth-unemployment-rate-in-india/>

## Employment status of different age group in Karnataka

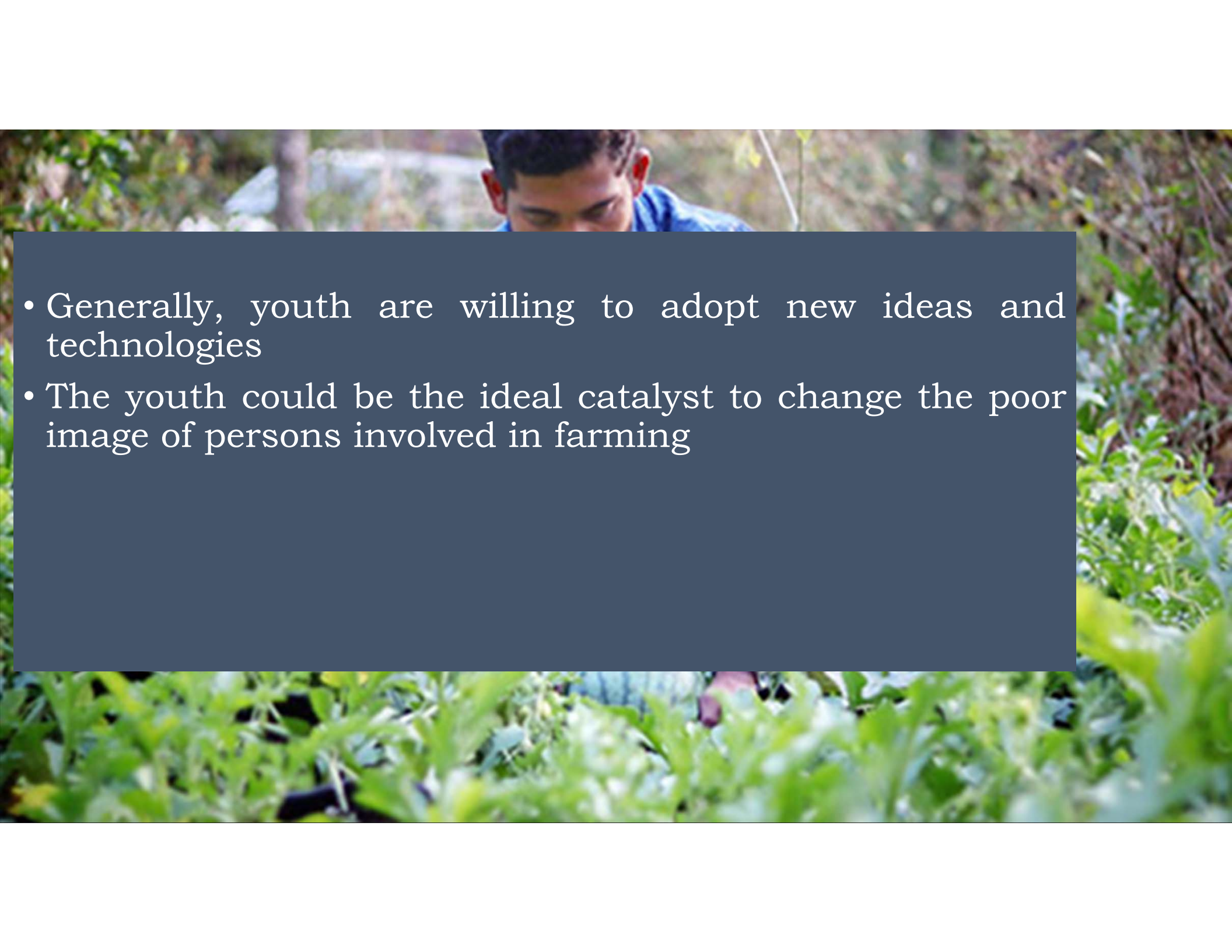
Age group	Total population	main workers	worked for less than 3 months	Worked for 3 to 6 months	seeking for work	non-workers
15-19	5827277	1293180	72819	377975	439025	1926546
20-24	6052558	2715409	81901	567905	529754	873230
25-29	5771606	3332924	69340	560811	274815	269045
30-34	4698380	2985310	52137	444268	107316	103313
<b>TOTAL</b>	<b>22349821</b>	<b>10326823</b>	<b>276197</b>	<b>1950959</b>	<b>1350910</b>	<b>3172134</b>

Age group (Rural)	Total population	main workers	worked for less than 3 months	Worked for 3 to 6 months	seeking for work	non-workers
15-19	3658264	930074	58444	299514	265009	2370232
20-24	3549425	1751991	59387	437699	274277	1300348
25-29	3283508	2001027	48431	425190	123708	808860
30-34	2657749	1764662	35643	335887	46102	521557
<b>TOTAL</b>	<b>13148946</b>	<b>6447754</b>	<b>201905</b>	<b>1498290</b>	<b>709096</b>	<b>5000997</b>

Source: censusindia.gov.in

In developed countries, skilled workforce is in the range of 60% to 90% of the total workforce, whereas in India, the skilled workforce is as low as 10 %.

In order to create interest and confidence among rural youth in agriculture, there is need to make agriculture more profitable.

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- A young man with dark hair, wearing a blue shirt, is looking down at a field of green plants. The background is slightly blurred, showing more of the field and some trees. The overall scene is outdoors and appears to be a farm or agricultural setting.
- Generally, youth are willing to adopt new ideas and technologies
  - The youth could be the ideal catalyst to change the poor image of persons involved in farming

By 2035, it is expected that about half of India's population would be urban-based, posing a food security challenge in the country (Kumar et al., 2019).

While the average age of the Indian population is 29, the average age of farmers is 52, indicating that young people are less involved in agriculture. In addition, farmers under the age of 30 are more likely to leave agriculture (Singh et al., 2016).

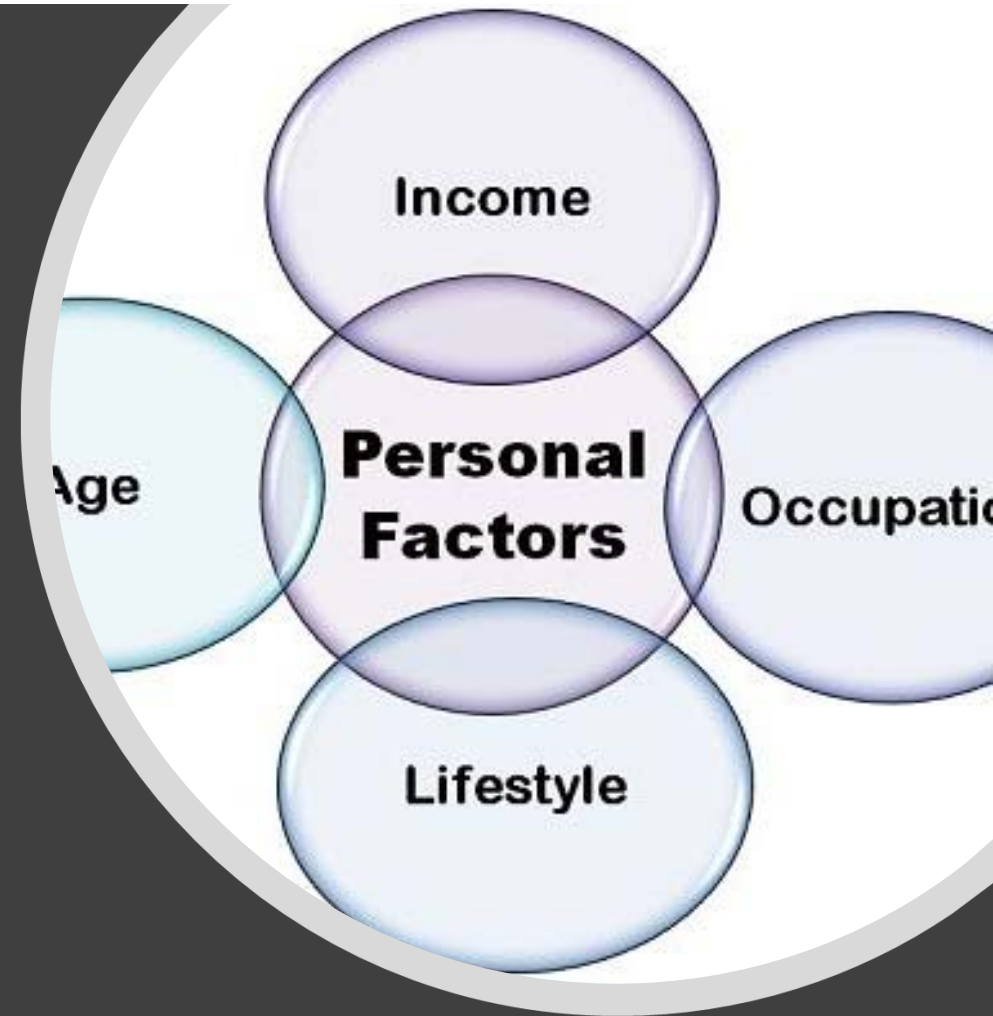
# challenges for youth in Agriculture

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## Personal factors:

They wanted to do any work other than farming, didn't want to bring their children into agriculture, avoiding work in difficult weather conditions and didn't want to do drudgery-oriented work (Kumar et al., 2019).

younger farmers have more occupational mobility and are more sensitive to wage disparities between farm and non-farm employment (Sharma and Bhaduri, 2009).



A decorative background featuring paper cutouts of people holding hands in a circle. The cutouts are in various colors: orange, yellow, pink, and brown. The text is overlaid on this background.

## Social factors

Parents want their children to achieve a high social position through education, girls of the current generation don't want to marry a farmer, lack of support from family members to continue farming, no social acknowledgement of farming as a career (Kumar et al., 2019).

Agriculture is an outdated sector with low financial rewards, youth are less interested in pursuing careers in agriculture (Paisley, 2013).

# The economic factors



It carries a considerable financial risk because it is a profession that is reliant on nature.



High production costs



Insufficient funds for farming:



Unfriendly crop insurance system



## Psychological factors

The primary psychological factors were unfavorable perceptions towards agriculture as a profession, loss of enthusiasm in farming, lack trust in adopting scientific farm technologies and a risk averse attitude (Kumar et al., 2019).

Farm work, according to highly educated professionals, is not intellectually gratifying because it does not need creativity and expression (Anonymous, 2011).

A vibrant outdoor market scene with people and fresh produce. In the foreground, there are large piles of green leafy vegetables and purple eggplants. Several men are visible, some wearing white shirts and head coverings, engaged in transactions. The background shows a narrow street with buildings and more people, creating a sense of a bustling marketplace.

# Market related factors

Inequitable returns owing to unorganized market structure, product cost is determined by purchaser rather than producer, middleman dominance in marketing and Government farm trade policies that are unfavorable to farmers (Kumar et al., 2019)



## Labour related factors

Labour shortages due to industrialization, lack of skilled labour for farming, as well as the inability to find workers on time and insufficient numbers when required (Kumar et al., 2019).



# Situational factors

Insufficient storage facility, inadequate irrigation, electricity scarcity.

Farming mechanization suffers as a result of land fragmentation into irregular sizes.

## **Next generation related factors:**

Educated new generation, prefers to settle in urban areas after completing higher education and has little interest in farming. Next generation is discouraged from settling in rural areas for family farming because of the lack of urban amenities (e.g., education, communication, etc) (Kumar et al., 2019)



## Education, Training and Skills



The main challenge that rural youth (especially girls) face is the lack of access to education and training which makes it difficult for them to secure a job or other opportunities in Agriculture



In many cases, agricultural courses tend to be more theoretical than practical.



Strategies to attract and  
retain youth in agriculture

# Extension service

Agricultural extension service - can effectively boost youth participation in agriculture transformation since they are eager to adopt new ideas and technologies (Chander, 2013).

Increased NGO participation, counseling and advising rural youth, creating awareness about youth programmes, fostering entrepreneurship, promoting scientific farming and agri-business are some of the most effective extension strategies that could be used.(Srivastava, 2013).

Only 5 percent of farm households had access to animal husbandry information, compared to 40 percent for crop farming (Planning Commission, 2012)



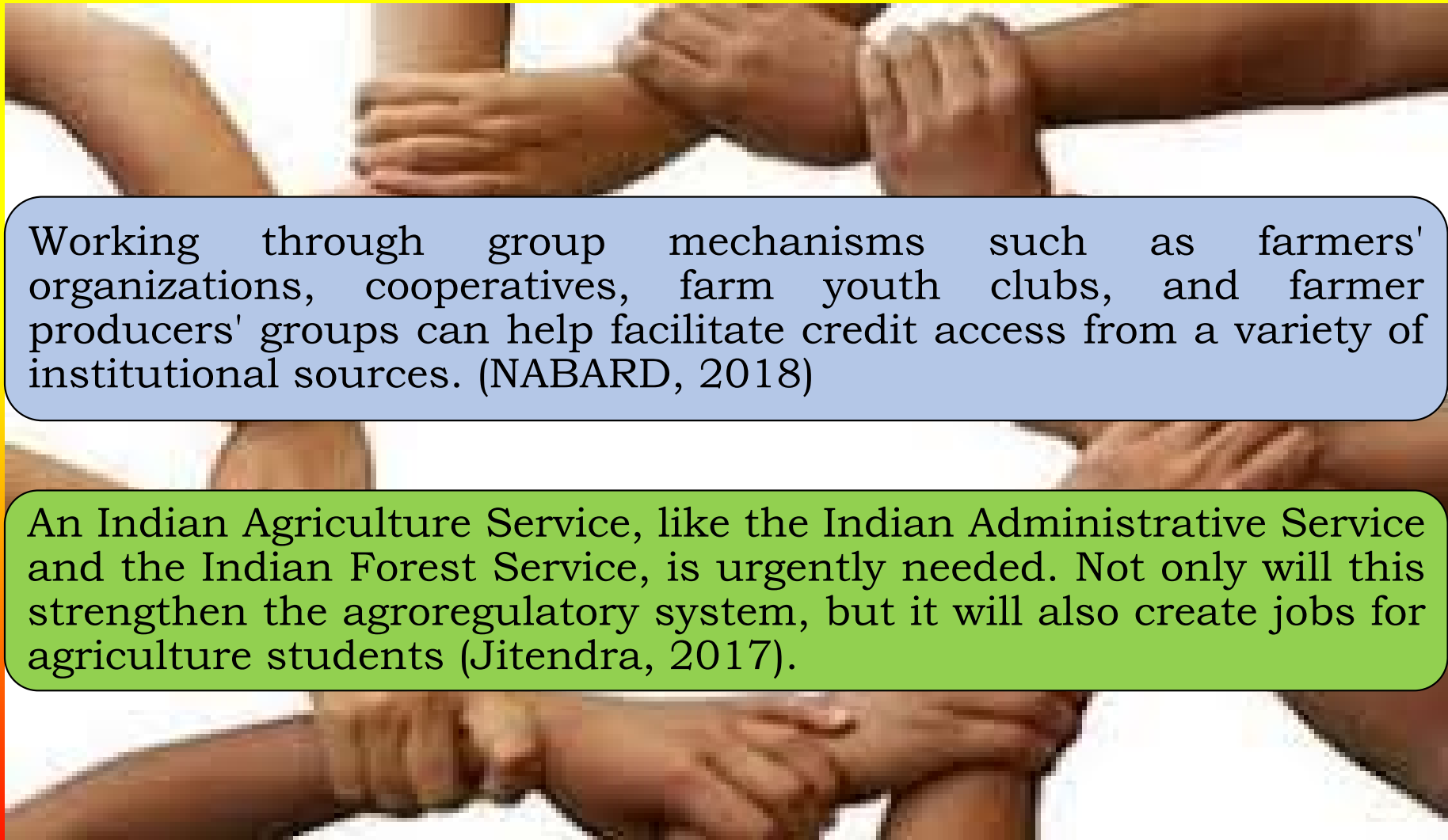
ICT

Mass media and information and communication technologies (ICTs) can also be used effectively to pique the interest of youth in agriculture.

Radio, TV, and newspapers can be used to share the success stories of innovative young

Presently, “Agriculture is a State subject the state government is accountable and responsible. As a result, the central government is excused from responsibility and accountability.

Central Government must protect inter-state interests and agricultural aspects relating to agricultural inputs and export. This will require both governments to take efforts and develop policies to safeguard and promote the interests of farming families and their youth.



Working through group mechanisms such as farmers' organizations, cooperatives, farm youth clubs, and farmer producers' groups can help facilitate credit access from a variety of institutional sources. (NABARD, 2018)

An Indian Agriculture Service, like the Indian Administrative Service and the Indian Forest Service, is urgently needed. Not only will this strengthen the agroregulatory system, but it will also create jobs for agriculture students (Jitendra, 2017).

Link youth to planning and policy efforts

Agribusiness should be taught in agricultural colleges/universities, emphasizing the use of relevant technology, success stories.

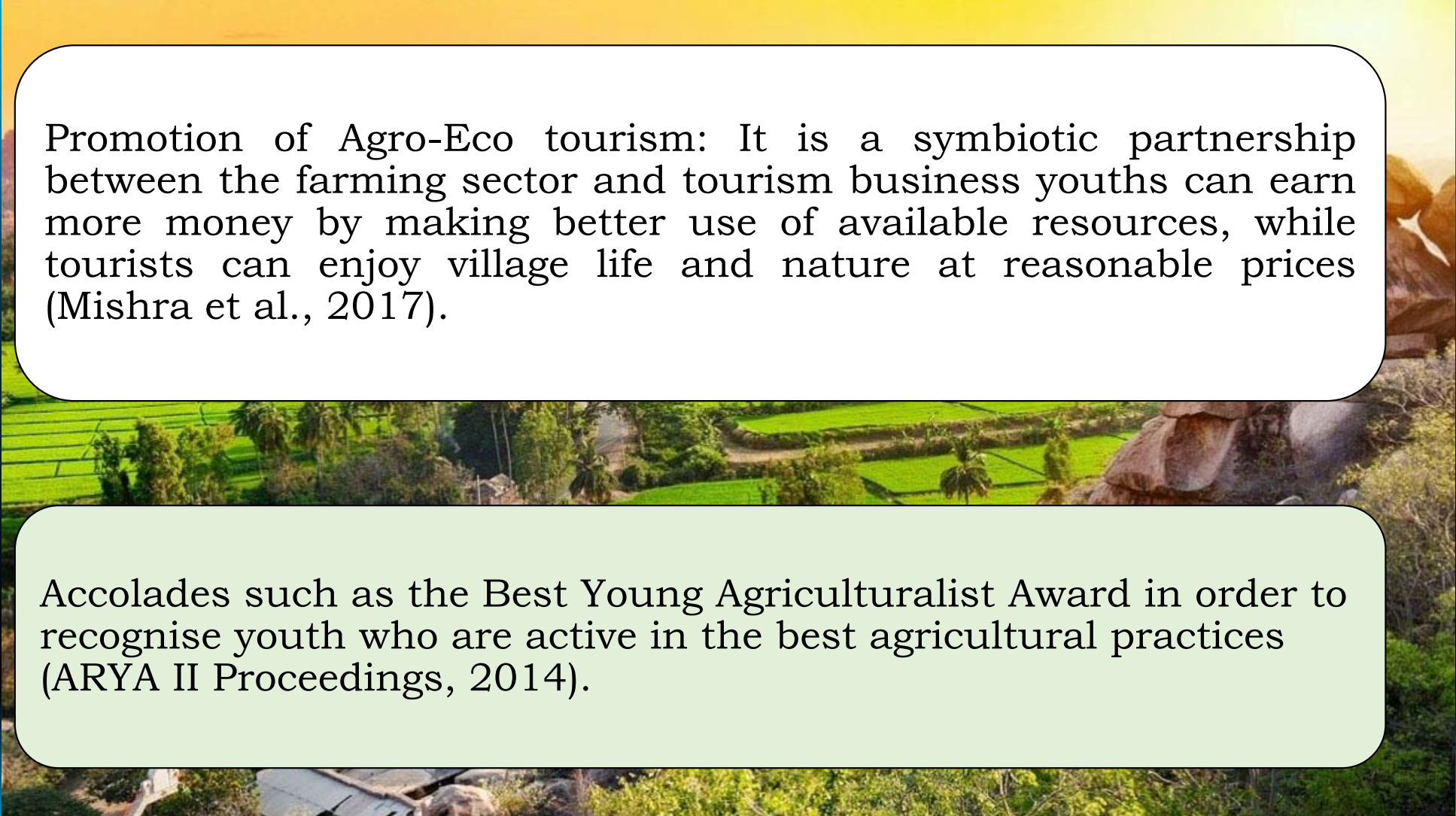
Priority should be given to agricultural transformation through Community participation and Farmer's Field School.



Capacity building of youth: Young people require training and skill-building opportunities


Other areas that the extension system will address are the development of soft skills such as communication, leadership, and business skills, as well as the mobilisation of young farmers to start high-tech ventures and micro enterprises





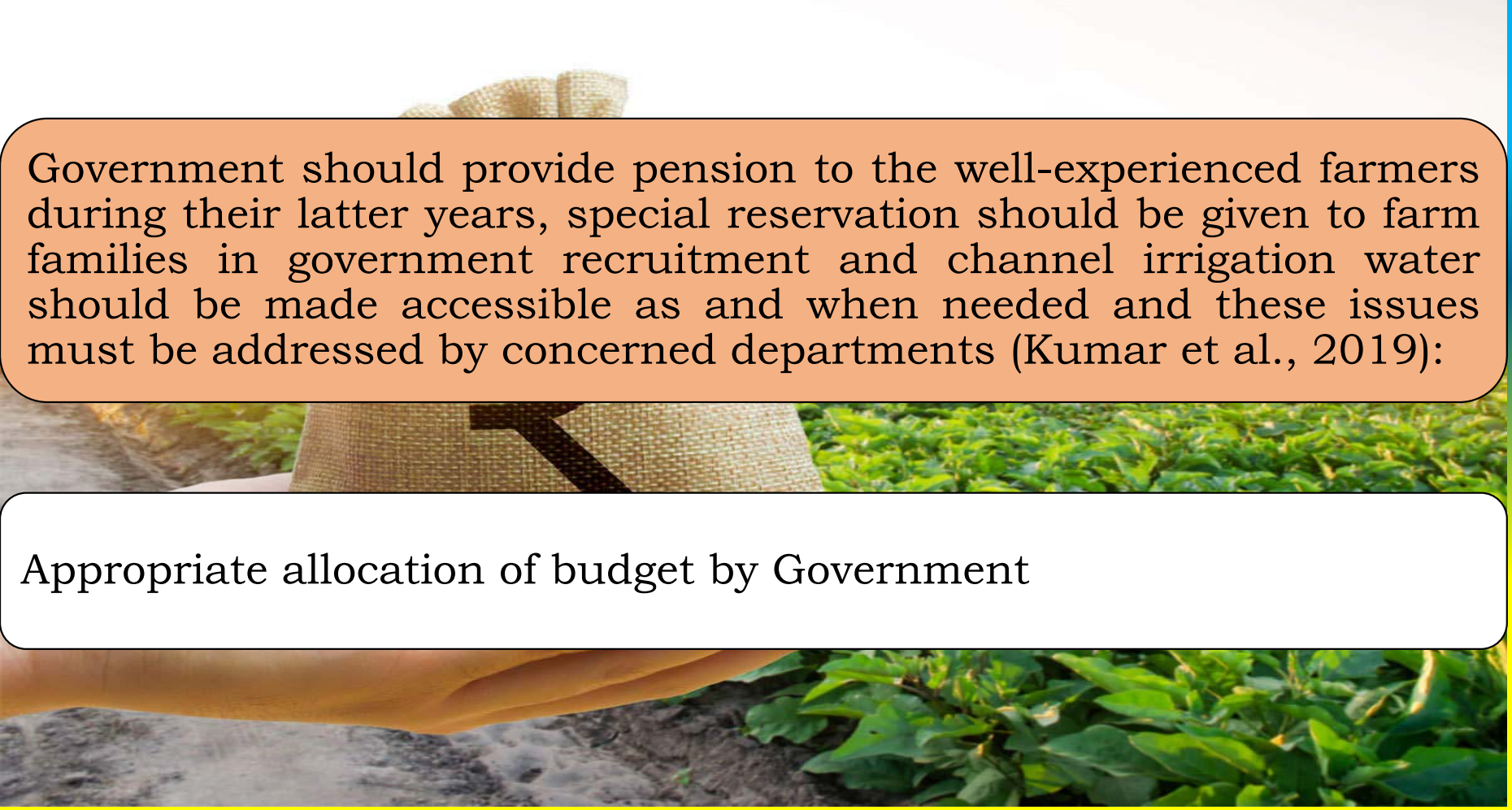
Promotion of Agro-Eco tourism: It is a symbiotic partnership between the farming sector and tourism business youths can earn more money by making better use of available resources, while tourists can enjoy village life and nature at reasonable prices (Mishra et al., 2017).

Accolades such as the Best Young Agriculturalist Award in order to recognise youth who are active in the best agricultural practices (ARYA II Proceedings, 2014).

A woman in a pink shirt is working in a field, possibly engaged in agricultural activities. The background shows trees and a clear sky. The image is partially obscured by two text boxes.

Young farmers should be guided to implement integrated farming system, mixed farming system, organic farming and precision farming for better utilization of natural resources and attain sustainable productivity.

Develop entrepreneurship among rural youth by providing training in agro-based enterprises such as vermicomposting, poultry farming, mushroom farming, beekeeping, livestock feed production, piggery etc.,

A photograph showing a close-up of a hand holding a burlap sack. The sack is filled with a dark substance, possibly soil or seeds. The background is a field of green plants, likely a crop field. The image is used as a background for the text boxes.

Government should provide pension to the well-experienced farmers during their latter years, special reservation should be given to farm families in government recruitment and channel irrigation water should be made accessible as and when needed and these issues must be addressed by concerned departments (Kumar et al., 2019):

Appropriate allocation of budget by Government

# Making Agriculture 'Cool' : Six Interventions



## **1. Investigate the issue**


- There is a need to study the needs, aspirations and perceptions of youth with regards to agriculture

## 2. Awareness of what is contemporary:

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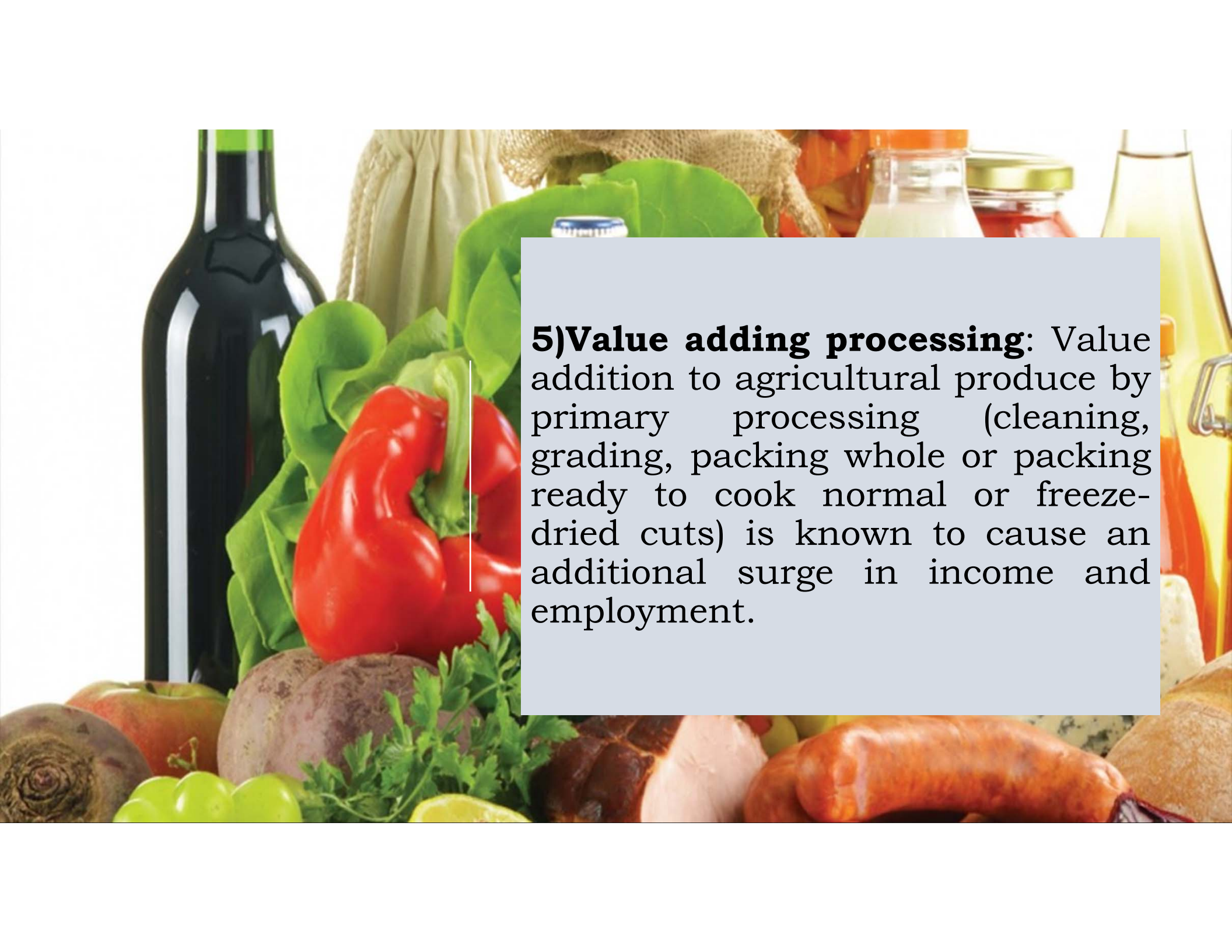
Necessary awareness on agriculture business (modern methods of crop/animal production, input and service provisioning institutions and schemes, farm machinery management, produce handling and processing, markets and consumer) through experiential learning must be created





**3)Converting Agri-farmers to “Agripreneurs”:** Development departments should institutionalize youth-specific schemes facilitating unhindered access to financial services.

**4)Developing a market:** Elimination of existing barriers via real-time transfer of information on right decision support products, markets and consumer demands by infusing the state of the-art ICT tools would be crucial



**5) Value adding processing:** Value addition to agricultural produce by primary processing (cleaning, grading, packing whole or packing ready to cook normal or freeze-dried cuts) is known to cause an additional surge in income and employment.

## **6)Policy intervention and institutionalization:**

Since an intervention like “sun-rise agriculture enterprise” is a potent strategy to attract and sustain the youth in agriculture and to generate new jobs, it calls for a comprehensive backing (institutional, financial, legal) of public policymaking bodies (NITI Aayog) and Ministry of Agriculture and Farmers' Welfare Ministry in that the core concerns of youth are addressed effectively.

# Opportunities for youth

- Big country with 1.3 Billion population / consumer base.
- All season activities in Agriculture and Allied sectors.
- Ample opportunities for commercial Agriculture, processing, marketing and export.
- Increased focus on skill training, programs providing financial support, incubation, entrepreneurship facilities.
- Some of the income generating agribusiness activities, youth can take up are such as, water testing kits/ laboratories; Land preparation consultancy/ customized land preparation techniques for farmers; Compost preparation out of rural waste and marketing,
- Vermicomposting, Hybrid Seed production skills, Weed control through customized implements & low-cost implements; Plant protection techniques such as extracting neem oil, animal husbandry etc.,

Urban and rural divide in terms of infrastructure namely; health, education, communication and other basic amenities are the other factors making them to shy away from farming.

Dr. A.P.J. Abdul Kalam, Former President of India has rightly said that “ Providing Urban Amenities in Rural Area” popularly called PURA is a basic requirement to be ensured to attract rural youth to stay back in rural areas.

Consequently, villages across the country are becoming old age homes and able youth are leaving the villages. If this trend is to continue for some more year's country's' food security will be in jeopardy.

Thus, realizing the importance of rural youth in agricultural development, ICAR has initiated a project on "Attracting and Retaining of Youth in Agriculture (ARYA)". during 2015-16. Under this project, special efforts are being taken up to attract the rural youth under the age of 35 years in agriculture to provide income generating opportunities and engage them in agriculture

## Objectives of ARYA Programme

*1.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.*

*2.To enable the Farm Youth to establish network groups to take up resource and capital-intensive activities like processing, value addition and marketing.*

*3.To demonstrate functional linkage with different institutions and stakeholders for convergence of opportunities available under various schemes/program for sustainable development of youth.*

## List of Identified Enterprises

Sl.No	Enterprise	S.No	Enterprise
1	Goat Rearing	11	Poultry
2	Mushroom Cultivation	12	Piggery
3	Bee Keeping	13	Large Cardamom cultivation
4	Horticulture	14	Pineapple Cultivation
5	Commercial Floriculture	15	Fruits and vegetable Nursery
6	Broiler rearing	16	Fruits and Vegetable Processing
7	Beetelvine Cultivation	17	Vermicompost
8	Fish Hatcheries	18	Lac Cultivation
9	Duck rearing	19	Value addition to Produce
10	Turkey Farming	20	Integrated Farming systems

Source: ICAR report, ARYA, 2019.

## *The conditions for selecting rural youth are*

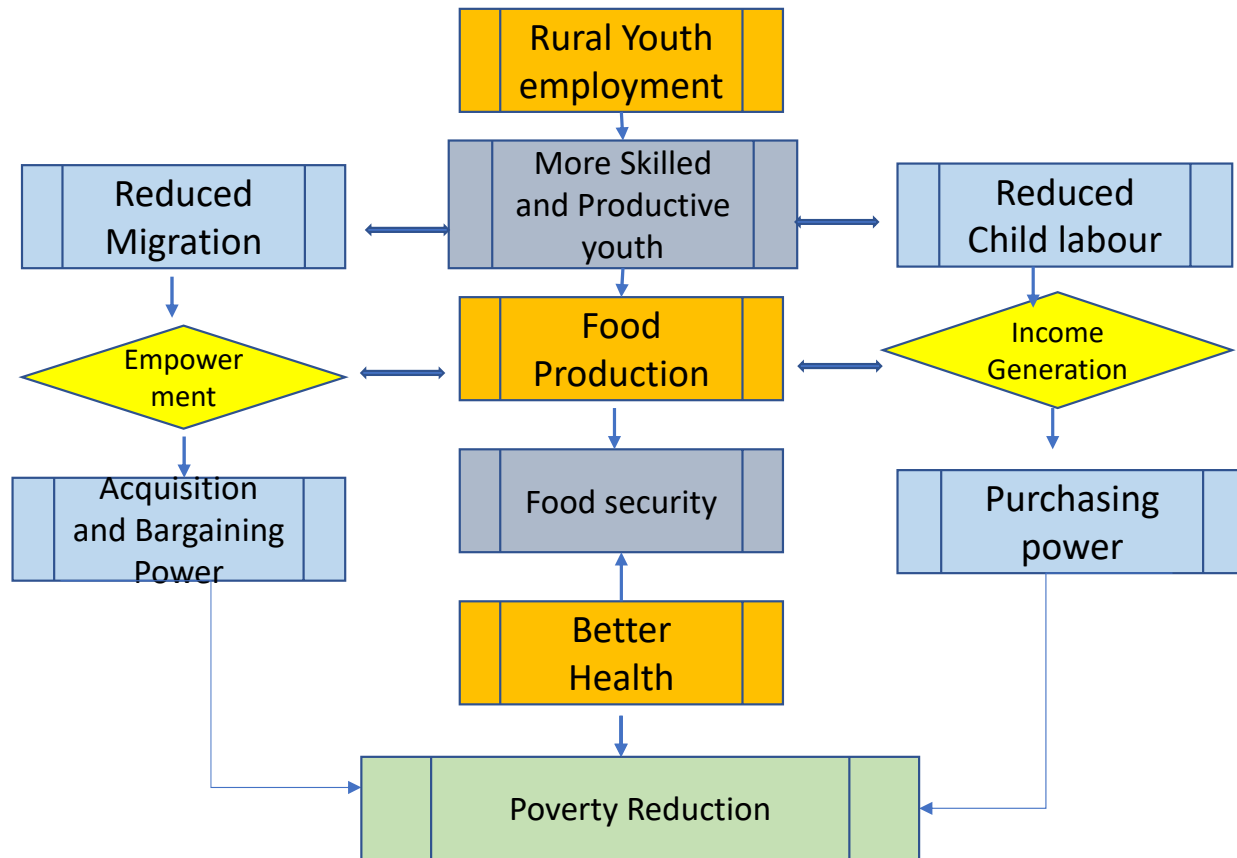
Youth should be between the age group of 18- 35 years

He should not be on roll in any of the formal educational institutions

He should be a permanent resident of the village and practicing agriculture or related activities which includes farm labour/rural artisans

He should not be an absentee landlord

# YOUTH CENTRED FRAME WORK APPROACH



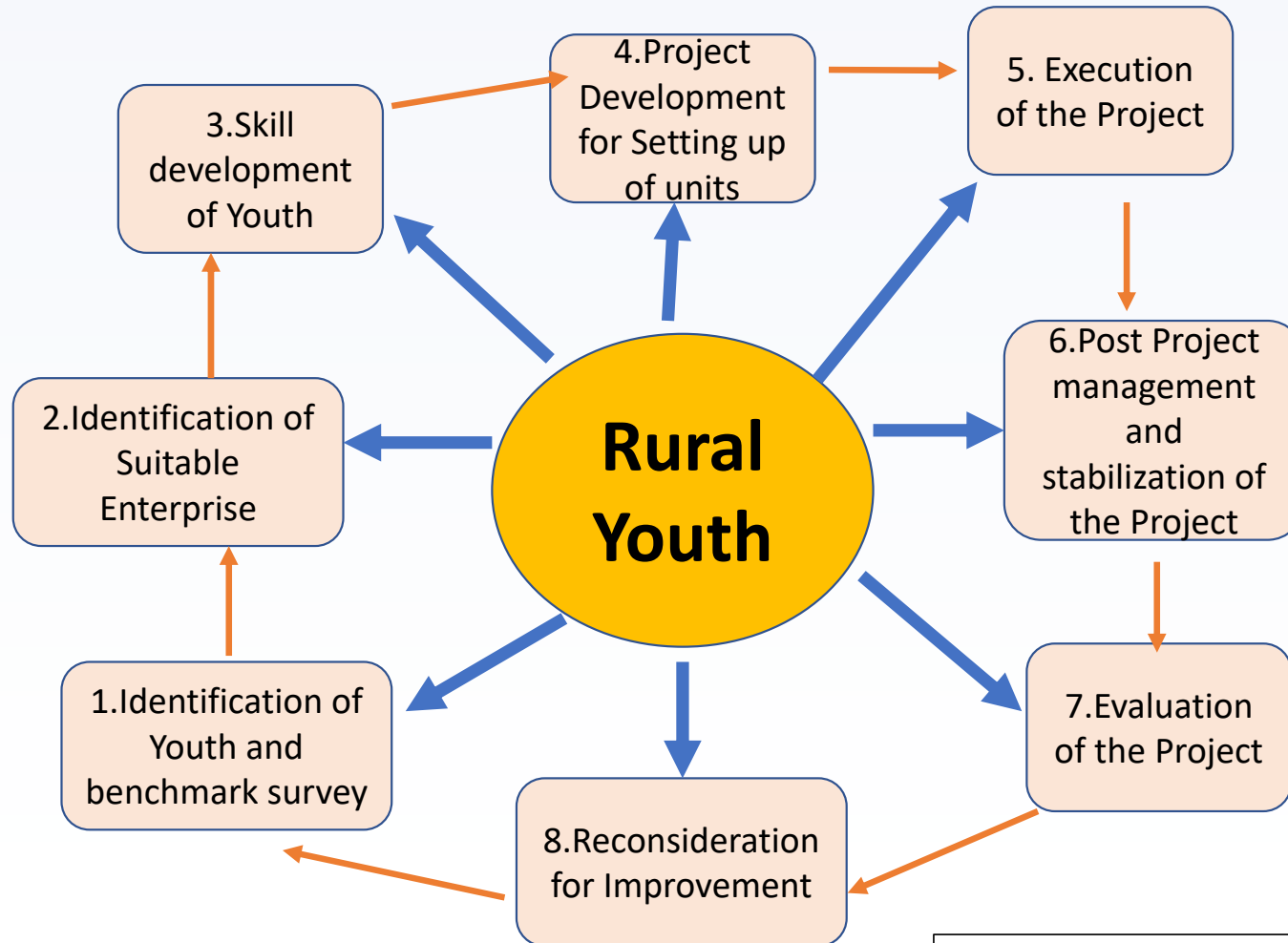
Source: Youth for transforming Indian Agriculture by S. Ayyappan

## No of Youth Oriented and Enterprises established in INDIA

S.No	Major enterprise	No of Youth Oriented	No. of Youth established their own entrepreneurial units	Oriented/Established enterprise
1	Mushroom Production	847	291	34%
2	Poultry	792	280	35%
3	Lac Cultivation	230	100	43%
4	Pig Farming	387	91	31%
5	Bee Keeping	406	82	20%
6	Fishery	80	80	100%
7	Goat rearing	221	69	31%
8	Broiler rearing	55	46	83%
9	Value addition	40	40	100%
10	Nursery management	721	13	18%
		<b>3779</b>	<b>1092</b>	

Source: ICAR ARYA report 2019

# Entrepreneurship Development among youth



Source: <https://atarijodhpur.res.in/>

# RESEARCH STUDIES

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# Impact of Attracting and Retaining Youth in Poultry and Goat farming in Banswara district of Rajasthan

By Ms. Sonika Sharma, *Ph.D Thesis*, Maharana Pratap university of Agriculture and Technology, Udaipur.

Distribution of respondents (n=60) on the basis of Impact of ARYA Project on goat beneficiaries in qualitative aspects

S.No	Aspect	MPS before Implementation	MPS after Implementation	% Change
1	Employment opportunity	64.16	76.67	19.49
2	Management Practice (breeding/feeding)	62.50	68.3	9.32
3	Migration	56.67	48.33	-14.71
4	Health Status of family	61.67	69.16	12.14
5	Food Security	65	71.67	10.26
6	Daily Nutritional intake	60	67.5	12.5
7	Educational Status of the family	74.16	80	7.87
8	Standard of living	65.83	70	6.33
9	Social Security	60.83	65.83	8.21

MPS= Mean Percent Score

Distribution of respondents (n=60) on the basis of Impact of ARYA Project on Poultry beneficiaries in qualitative aspects

S.No	Aspect	MPS before Implementation	MPS after Implementation	% Change
1	Employment opportunity	65.00	70.83	8.96
2	Management Practice (breeding/feeding)	62.50	65.00	4
3	Migration	57.50	52.50	-8.69
4	Health Status of family	64.16	68.33	6.49
5	Food Security	66.67	69.16	3.73
6	Daily Nutritional intake	62.50	65.83	5.32
7	Educational Status of the family	70.00	80.00	14.28
8	Standard of living	69.16	75.83	9.64
9	Social Security	58.33	61.67	5.72

MPS= Mean Percent Score

## Conclusion

- It is observed that implementation of ARYA Programme showed a very positive and significant impact in terms of qualitative aspects of goat farming and poultry farming, as there is increase in employment opportunities, improvement of management practices, health status of the family, educational status, daily nutritional intake, food security, Social security and by reducing migration of youth.

## Success story of Ashok from Karnataka who is earning sustainable income from beekeeping

- Ashok C, aged 32 and having 8 acres of land, is mainly cultivating horticultural crops to sustain his family.
- He participated in a skill-based training program conducted on 'Beekeeping' during January 2020 by Krishi Vigyan Kendra, Ramanagara, University of Agricultural Sciences, Bangalore under the coordination of Directorate of Extension, UAS, Bangalore (SAMETI-S).
- The program helped Ashok acquire knowledge and skills required to practice beekeeping like identify the Queen in bee box, hiving of honeybee colonies, division and uniting of bee colonies, management of bee colonies in different seasons, extraction of honey and processing.

Source:Success Stories under Skill Training of Rural Youth (STRY)

## Program encouraging beekeeping enterprise

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- The skills learned during the training program helped Ashok to implement the prescribed protocol and techniques involved in handling the bee colonies.
- Profit – Ashok is able to generate an income of Rs 22000/- per month by practicing beekeeping.



# **A STUDY ON PERCEPTION, ASPIRATION AND PARTICIPATION OF FARM YOUTH IN AGRICULTURE**

**By Preethi in 2015**

**Locale of the study: Tumkur district** (Four taluks were selected purposively from Tumakuru district. Two irrigated taluks (Kunigal and Turvekere) and two rainfed taluks (Tiptur and Sira) were the sampled taluks for the research study.

## Overall perception of farm youth about agriculture

<b>Perception level</b>	Irrigated (n1=100)		Rainfed(n2=100)		Total (n=200)	
	No	%	No	%	No	%
<b>Poor</b>	16	16.00	31	31.00	47	23.50
<b>Average</b>	45	45.00	56	56.00	101	50.50
<b>Better</b>	39	39.00	13	13.00	52	26.00
<b>Total</b>	100	100.00	100	100.00	200	100.00


## Problems faced by farm youth in practicing agriculture

(n=200)

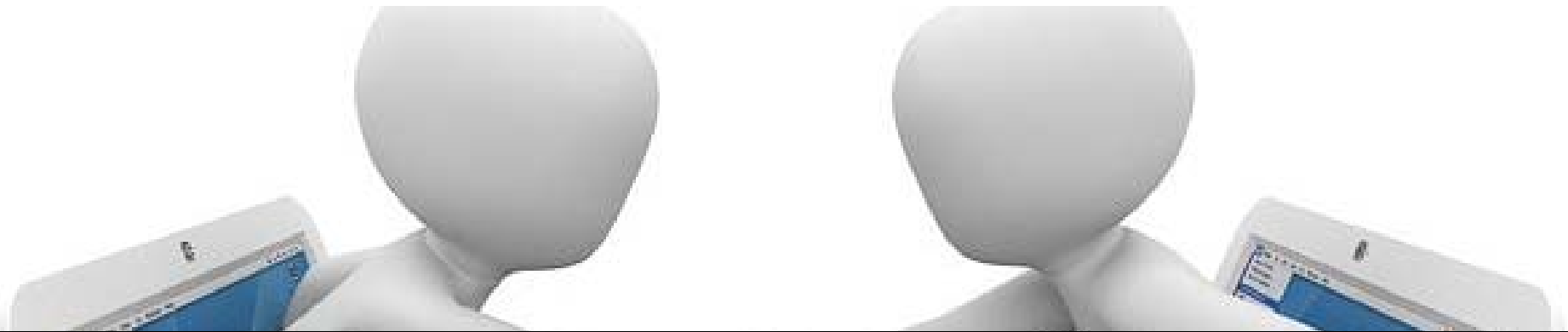
Sl. No.	Problems	Farm Youth					
		Irrigated area (n <sub>1</sub> =100)			Rainfed area (n <sub>2</sub> = 100)		
		No.	%	Rank	No.	%	Rank
1	Scarcity of labour	90	90.0	I	76	76.0	IV
2	Electricity problem	84	84.0	II	81	81.0	III
3	Lack of credit support	72	72.0	III	68	68.0	VI
4	Lack of necessary timely inputs like seeds and fertilizers	69	69.0	IV	91	91.0	I
5	Lack of Irrigation facilities	61	61.0	V	87	87.0	II
6	Lack of storage facility	60	60.0	VI	64	64.0	VII
7	Lack of transportation facility	58	58.0	VII	72	72.0	V
8	High cost of production and lower returns	53	53.0	VIII	61	61.0	VIII
9	Lack of training programmes	52	52.0	IX	59	59.0	IX
10	Lack of proper guidance	50	50.0	X	52	52.0	X
11	Fear of failure	44	44.0	XI	49	49.0	XI

## Suggestions given by farm youth practicing agriculture (n=200)

Sl. No.	Suggestions	Farm youth					
		Irrigated area (n <sub>1</sub> =100)			Rainfed area (n <sub>2</sub> =100)		
		No.	%	Rank	No.	%	Rank
1	Timely supply of necessary inputs (seeds/ planting material/ breeds/species/fertilizers)	89	89.0	I	79	79.0	III
2	Timely provision of subsidy/credit (financial support)	84	84.0	II	71	71.0	IV
3	Providing Irrigation facility	79	79.0	III	88	88.0	I
4	Regular Supply of power	71	71.0	IV	84	84.0	II
5	Provide training programme	65	65.0	V	62	62.0	VI
6	Establishment of local market	60	60.0	VI	59	59.0	VII
7	Establishment of storage facility	55	55.0	VII	54	54.0	VIII
8	Conducting educational activities to create awareness among farm youth	52	52.0	VIII	68	68.0	V

A spiral-bound notebook with a silver pen resting on it. The notebook is open to a blank, lined page. The pen is a sleek, silver ballpoint pen. The notebook is placed on a dark surface. A white rectangular box is overlaid on the bottom right of the notebook page.

**CONCLUSION**



THANK YOU

