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Seminar report

on

Challenges and Strategies for youth in Agriculture

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Global population is projected to reach 9 billion by 2050. The number of young people (aged 15 to 24) is also expected to increase to 1.3 billion by 2050, accounting for almost 14 percent of the projected global population. Most will be born in developing countries in Africa and Asia, where more than half of the population still live in rural areas (UNDESA, 2011). Rural youth continue to face challenges related to unemployment, underemployment, and poverty. Despite the agricultural sector's ample potential to provide income-generating opportunities for rural youth, challenges related specifically to youth participation in this sector – and, more importantly, options for overcoming them – are not extensively documented. Furthermore, statistics on rural youth are often lacking, as data are rarely disaggregated by important factors such as age, sex and geographical location. Youth is the valuable human resource of every country. The young people constitute about forty per cent of the total population of India. During the freedom struggle, the youth of our country played a significant role. There is a generation gap between the young and the old. The youth should be guided and their energies should be utilized for the progress of the nation. Today India is burdened with many social, political and economic problems. The youth can come forward and check them, and work for the betterment of the nation. The youth can also provide relief to the afflicted persons during natural calamities. By performing a constructive role, the youth can make India prosperous in every field. Unrest among youth has been a problem since time immemorial. It was so in the past and it shall be so in future as well, howsoever glamorous and glittering the social fabric might become and however secure and stable they might feel under the new dispensation.

The young have never rested on their past laurels, nor have they felt contented with their present possibilities. The chords of their impulses, instincts and intuitions have been always vocal and vibrant. No doubt the problems of youth in different parts of the world under different sociopolitical systems differ in contours and contents. But one thing is almost certain that the modern youth is up against problems, the like of which did not exist in the past. “Youth in turmoil”, “Unrest among youth”, “Youth in revolt”, “Angry young man” – these epithets are not just literary coinage or journalistic flourishes, but a vociferous voice of protest of vast segments of populations that have seen and suffered the all-round erosion of values and the wreckage of their dreams. What our nation today needs is the power of youth. They need to have zeal and desire to serve the nation.

THE YOUTH today is called by many names, it is this generation X, which is going to lead the nation and the world. 'Leaders of tomorrow', is what they are called as. The world is in deep need of such people who hold the fervor of leading a nation or doing good deeds. In the present scenario, the nation is in deep need of intellectual and intelligent youth. Our young nation calls for younger leaders who can lead us through, there is an urgent need of youthful figures. The young blood can handle situations in a better way. According to the latest studies, young people are the ones who are aware of latest things, about which the old people may not be aware of. The old saying, "slow and steady wins the race," has been replaced by, "fast and competent wins the race."

Youth are the most potent segment of the population of a country. They are the hopes of tomorrow and the backbone of any country. As psychologists said, "Youth possess dynamic energies, creative activities and adventurous spirit. They undergo psychological and physiological changes as they grow". So the development of youth determines the development of the country. There are over one billion youth (aged 15-24 years) in the world today. Eighty per cent of these youth live in the developing world where 99 per cent of population growth is occurring. Currently around the world we are living in an era where rapid urbanization has led to a decline in rural populations and for the first time ever the majority of the world's population lives in a city. The UN World Health Organization predicts that "by 2030, six out of every ten people will live in a city, and by 2050, this proportion will increase to seven out of ten people" meaning that more young people than ever before are moving to cities and towns to find work, leaving few behind to work in rural areas. During his recent visit to India, US President Barack Obama pointed out that India is fortunate to have over half of its total population of 1.2 billion under the age of 30. Out of the 600 million young persons, over 60 per cent live in villages. Most of them are educated. Mahatma Gandhi considered the migration of educated youth from villages to towns and cities as the most serious form of brain drain adversely affecting rural India's development. He, therefore, stressed that we should take steps to end the divorce between intellect and labour in rural professions.

India is a land of youth and constitute a numerically dominant potential, resourceful and also adventurous segment of the population. In our country, youth constitute a numerically dominant potential, resourceful and also adventurous segment of the population. According to 1991 census, youth population in India with the age group of 15 to 35 years was around 31 per

cent (246 millions) of the total population, Out of this total youth population, 20 per cent (53 millions) were urban youth, while the remaining 80 per cent (211 million) were rural .According to 2011 census, youth population in India with the age group of 15 to 35 years is around 43,02,28,000 (35.36%) of the total population. Of this, 70 per cent (301 million) were rural youth and the remaining 30 per cent (129 million) were urban youth. As majority of the youth comes from rural areas, they are considered as the nation builders of tomorrow. The population in the age-group of 15-34 in India increased from 353 million in 2001 to 430 million in 2011. More than half of India's population is under the age of 25 years, with 65 per cent of the population under 35 years. The rural population is about 70 per cent, and the indications are that the migration of rural youth to cities is around 45 per cent in the country, which is quite alarming.

The Government of India (GOI) officially defines youth as persons between the ages of 13 and 35 years and it also varies depending on the programme. For instance, the National Youth Policy of India considers age group 10 to 34 years as youth. The United Nations (UN) and the International Labour Organisation (ILO), however, defined the youth as persons between 15 and 24 years of age for cross country comparison and analysis.

In Karnataka the youth population constitutes around 34 per cent of the total population. Out of this total youth population, 66 per cent were rural youth, while the remaining 34 per cent were urban youth (Anonymous, 1994).

Farm youth are the precious human assets who can play an important role in the developmental activities as well as in agriculture because of their family and community background in agriculture and allied activities. If the talents and abilities of farm youth are properly nurtured and systematically guided, agriculture can attain sustained growth and bring prosperity to the country.

Engaging youth in agriculture has been a prominent topic recently and has risen up the development agenda, as there is growing concern worldwide that young people have become disenchanted with agriculture. With most young people – around 85 per cent – living in developing countries, where agriculture is likely to provide the main source of income, it is vital that young people relate to farming with this background the present seminar is conceptualized with the following objectives.

1. Challenges and Strategies for youth in Agriculture

2. To know about the ARYA project
3. To review related case studies/research studies

Definitions of youth given by different organization

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

In India, over 58% of the rural households depend on agriculture as their principal means of livelihood. As per Ministry of Statistics, the share of agriculture and allied sectors was 18.8 % of the Gross Value Added during 2021-22 at current prices. Average monthly income of farmer's households is Rs. 6426, of which 47.9 % of income comes from cultivation. Today, the main concern has shifted from higher farm production to higher returns on their investments. However, agriculture in India is faced with multiple challenges for accelerating agricultural growth these challenges may include low farm productivity, limited access to inputs and market, fragmentation of land, natural resource degradation, climate change, non-remunerative price, and limited surplus for value addition. Thus, on the one side, there is a need to diversify agriculture and make it more remunerative with the thrust on value addition and processing, on the other hand, the rural youth are moving away from agriculture sector. Youth are expected to play a vital role in the much-

anticipated transformation of agriculture in India. According to national youth' policy, persons in the age group of 15-35 are defined as young.

At present, around 35% of the total population is in the age group of 15-35 years, out of which 75% live in rural areas. Migration of rural youth to cities is around 45% in the country, and it is estimated that only about 5% of youth are engaged in agriculture. 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%. Creation of successful economic models in the villages is crucial to catalyze and energize youth to become entrepreneurs in rural. Retaining youth in agriculture is therefore strongly linked to agriculture. At present, the youth are having different needs, challenges, aspirations, attitudes, habits, and values of life. The development of personal, social, economic, and spiritual aspects of rural youth are possible, only when their needs, challenges, aspirations, habits, and values of life are recognized early and guided properly.

Migration of Rural Youth from Agriculture

With 356 million, India has the world's largest youth population despite having a smaller population than China. The livelihood of most of the Indian population is dependent on agriculture. The population of the country below 35 years of age is 51.8 per cent. Of this 48.2 per cent are women and 51.8 per cent are men, 30.1 per cent reside in urban areas and 69.9 per cent in rural India. Agriculture generally involves five stages viz., production, processing, storage, marketing, and consumption. In most of these stages rural youth can actively be involved. Rural youth participate in marketing where the trade or enterprise is highly/commercialized. Rural youth play a key role in performing various tasks related to dairy and goatery enterprises in activities like maintenance of cattle/ goat shed, feeding of animals/goats, collection of fodder for animals/ goats etc. But unfortunately, there is a continuous increase in the migration of rural youth to urban areas. Large numbers, mostly youth are moving away from rural areas to urban centers because there are fewer employment opportunities back home. The migration of rural people to cities is around 45 per cent in the country, which has several implications for the future of Indian agriculture.

Out of total migrants from rural to urban areas youth account for 30 per cent. While the average age of Indian population is only 29 years, the average age of farmers is 55 years which indicates lesser youth participation in agriculture. Given the growing disinterest of youth in this

sector, there are risks to agriculture raising the question of ‘who will do farming in the future?’ According to survey results, rural youth who currently live or have lived in urban communities relocated to large centres to pursue post-secondary education, find employment, or accompany family. Rural youth have fewer opportunities after formal education than their urban counterparts. It is also acknowledged that youth get into trouble more often if they have nowhere to go and no meaningful activities to keep them occupied after school hours. Although youth migration has been a popular subject in recent years, little research has focused on the migration between rural and urban areas. One of the main factors affecting young people’s success in employment in agricultural practices was their limited connection with local informal networks. Informal networks provided young people with information about forthcoming employment opportunities or personal recommendations for jobs (Cartmel and Furlong, 2000). It is felt that extension educators can extend the opportunities in youth development issues (Ommani and Chizari 2006). They have the ability to help youth develop in different ways. In addition, efforts should be made to help youth to develop the capacity to voice their needs within the cultural, social, and political framework. Currently 472 million young people are living in rural communities in developing countries. Unfortunately, many rural young people are choosing to migrate to the city to make a better life for themselves or send money home to help their families- “an exodus that constitutes a severe threat to global food security”.

It is disturbing to note that our youth are losing interest and confidence in agriculture and allied activities; hence they are not willingly involved in agricultural operations. Despite excellent and tremendous development in the field of agriculture, science and technology, only a few have been adopted. Youth are more receptive to new innovations or techniques in any field of development. The youth, if provided proper training in modern agricultural technologies, would not only come forward to accept changes but can also influence and educate the members of the farming community about modern agricultural technologies. The urban youth are mostly educated, organized in many forms, and have access to facilities and institutions meant for youth services. On the other hand, rural youth are mostly having less opportunity for higher education, burdened with the needs of their own families, lack of opportunities for organizing themselves to engage in constructive work and lack guidance for participation in development activities. Though rural youth have different fields of activities, they have not been involved and motivated to contribute to the development process. This is due to several reasons, such as, lack of

nationwide youth programmes, lack of an appropriate network for youth organizations, lack of training and guidance, lack of inter-departmental or sectorial coordination. All these factors largely contribute to rather unplanned and forced migration of youth from rural areas to urban centers. So, to stop this trend of migration and to make them participate in the general prosperity of the rural community, it is inevitable to develop different income generating activities to ensure their participation. Therefore, the development and harnessing of the talents and energies of youth towards constructive channels has always engaged the attention of a country's planners and policy makers. One of the most effective ways of development and channeling the potential of youth towards creative purpose is through the youth clubs. They help young people to develop themselves physically, mentally, socially and economically and prepare them to meet the future challenges of life effectively. The socio-economic development and prosperity of the rural areas depend upon the type of youth the country own, as the rural youth have the abilities to orient themselves to go along the mainstream of the development process.

The youth form the bulk of total population of the country. They are the national cream and the future crown with full possession of physical built and mental tenacity and power. In our country, youth constitute a numerically dominant potential, resourceful and also adventurous segment of the population. According to 1991 census, youth population in India with the age group of 15 to 35 years was around 31 per cent (246 million) of the total population. Out of this total youth population, 20 per cent (53 million) were urban youth, while the remaining 80 per cent (211 million) were rural.

India both before and after independence witnessed emergence of youth as a potential force, to reckon with. Involvement of youth in national developmental activities is felt significantly relevant because of their boundless energy and innate idealism, which could give a positive direction in improving the quality of life. The Government of India has been organizing planned and systematic programmes for the development of Indian youth for their participation in the national development. As agricultural operations/activities are seasonal in nature, the rural youth will be engaged in these activities during the seasonal period while during off/ lean period they will not have any work or they will be free. So rural youth will have to be given proper training and orientation about self-employment programmes like ACABC and WYTEP (Women and Youth Training Extension Project) etc. and encouraging them to take up selfemployment, thereby contributing additional income to their family and improving their standard of living. At

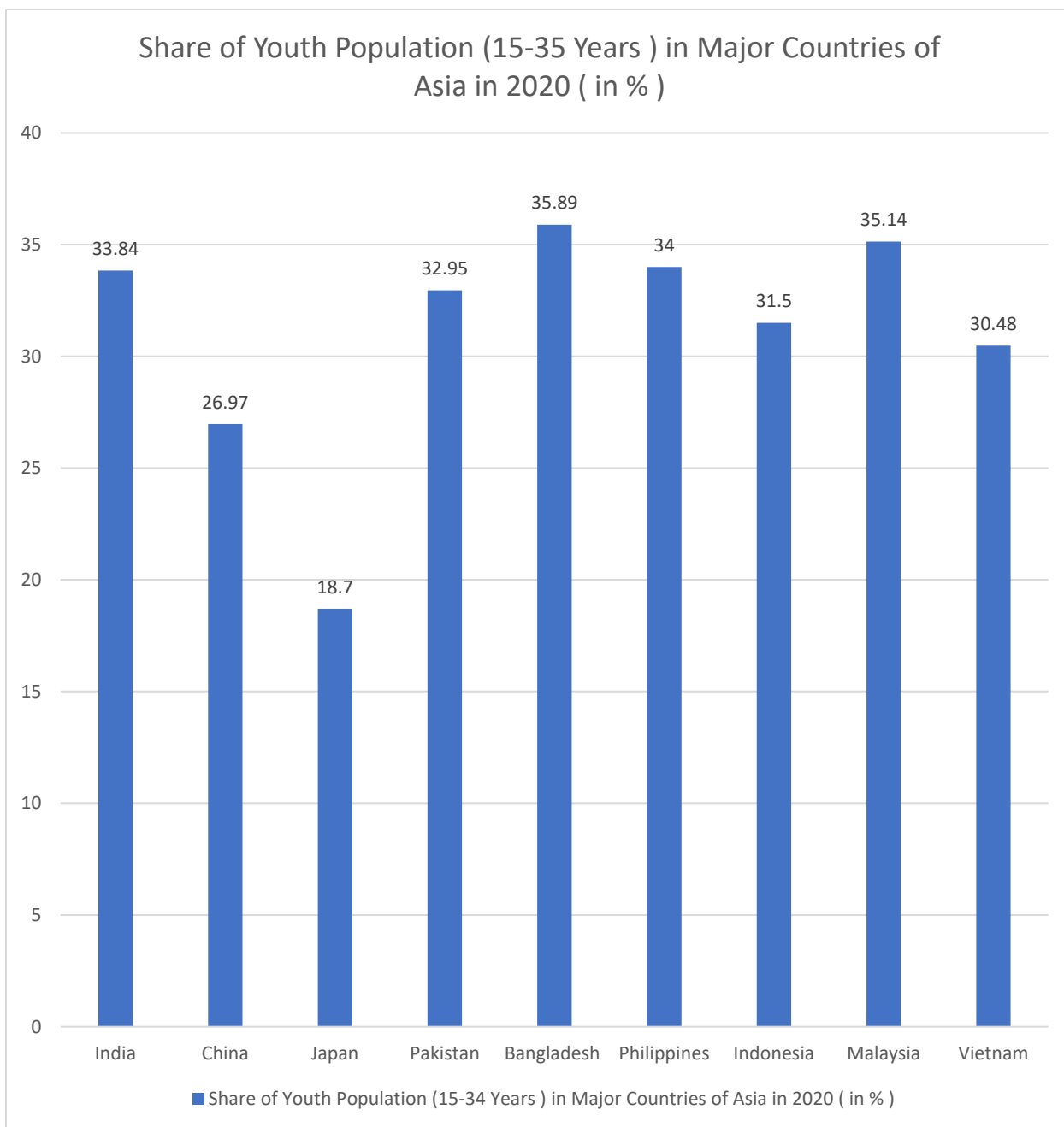
present, the youth are having different needs, aspirations, attitudes, habits and values of life. The development of personal, social, economic and spiritual aspects of rural youth are possible, only when their needs, aspirations, attitudes, habits and values of life are recognized early and guided properly. Therefore, some of these aspects were considered which would be useful to the agencies involved in the development of rural youth.

Importance of Youth involvement in Agriculture

Higher growth in agriculture is needed for sustainable food security of the country and the demand for food grains will increase further. To keep pace with these diverse demand's agriculture needs to be modernized and diversified. Young people bring energy, vitality, and innovation into the workforce. Many young farmers engage in high-tech, high-risk and high returns Agri ventures like protected agriculture, precision farming, organic agriculture, floriculture, medicinal and aromatic plants cultivation etc, which are mostly avoided by the aging farmers (Bhat et al., 2015). In the most adverse and risky situations, young people have an extraordinary resilience and ability to cope (UNFPA, 2006). Youth could be the ideal catalyst to change the poor image of agriculture given their greater possibility to adapt new ideas, concepts and technologies (Akosa, 2011). Therefore, a loss of youth means a loss of the opportunity to modernize and be competitive in present era of globalization.

A panel discussion on 'Youth and Agriculture' in the Rio+20 Conference and the Second Global Conference on 'Agricultural Research for Development' highlighted the need of youth in developing agriculture in a sustainable mode (Porcori, 2012). A special session on youth in agriculture during the 2012 Farmers' Forum of the International Fund for Agricultural Development (IFAD) also emphasized the need to invest in the "rural youth of today, the farmers of tomorrow" (Anonymous, 2012a). The involvement of youth in agricultural production is significant not only because of the need to feed the country, but most importantly because it offers options for wealth creation and financial security. It has the potential of reducing the problems of increasing youth unemployment and this calls for securing the interest and participation of young people in agriculture by deliberate shift in policy, training and promotion that specially targets the youth. Thus, there is need to strengthen on-farm, as well as

offfarm rural employment opportunities to combat rural poverty and to secure adequate livelihood for rural youth. Connecting the enormous youth resources to exploit vast range of opportunities in farming sector can give Indian agriculture a whole new stature.



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

Employment status of different age group in India and 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
TOTAL	22349821	10326823	276197	1950959	1350910	3172134

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
TOTAL	13148946	6447754	201905	1498290	709096	5000997

Why are youth shying away from agriculture?

At present there is insufficient youth participation in the agricultural sector in India even though this class of people is the most productive of any society as it contains people in the prime of their lives physically and mentally. The survey of 5,000 farm households across 18 states conducted by Centre for Study of Developing Societies (CSDS) claims that 76 per cent farmers would prefer to do some work other than farming. Sixty-one per cent of these farmers would prefer to be employed in cities because of better education, health, and employment avenues there. Furthermore, shifting out of farming is high among farmers below 30 years of age and research in other countries also showed that occupational mobility is higher among younger farmers, and they were found to be more sensitive to income differentials between farm and non-farm occupations (Sharma and Bhaduri, 2009). India is losing more than 2,000 farmers every single day and that since 1991 and the overall number of farmers has dropped by 15 million (Sainath, 2013). The migration of rural youth to cities is around 45 per cent in the country, which is quite alarming. Out of total migrants from rural to urban areas youth account for 30 per cent (Hazra, 2012). This has several implications for the future of Indian agriculture and India's food security. It is imperative to find out the reasons for growing disinterest of youth to be involved in agriculture.

Farming sector is facing several problems today like indebtedness, climate change, inadequate Govt. support and credit, unregulated market, land degradation, infrastructure etc. which makes youngsters lose interest in agriculture (Chaudhary and Chaudhary, 2013). There are a number of reasons which distract youth to shy away from farming like low return in comparison to the effort, perception of low status associated with farm activities and the fact that highly educated professionals feel work on farms is not intellectually satisfying, as it does not involve creativity and expression (Anonymous, 2011). Public policies governing trade, introduction of new varieties, licensing and intellectual property rights, and taxation do not yet provide adequate incentives to producers and innovators. The investment climate in agriculture is also not adequate to attract private firms needed in marketing, processing, input supply, and finance (Brooks et al., 2013). There is decreasing interest among youth in entering agriculture related fields mainly due to the persistent perception of agriculture as an out-dated field with minimal financial returns. It is considered not the right place especially for those with tertiary education. Youth are disinterested in agriculture because of better opportunities in cities like better employment, better

pay, or a more desirable job (Foster, 2014). Some of the most important factors for youth to shift out of agriculture are attraction towards white collar jobs, uncertainty of crop production, low price, assured income of service, low profit, inadequate credit etc. (Sherawat and Sharma, 1994). In many cases, agricultural labour migrates to urban areas because urban wage rates in even the unorganized sector are better than those prevailing in agriculture (Mehrotra et al., 2013). People perceive this kind of work to be better than agriculture even if they do not provide employment security, income security or social security.

The average size of operational land holding is also declining in rural areas due to land fragmentation. It has decreased from 1.35 ha per individual in 2000-01 to 1.10 ha per individual in 2010- 11 (Agricultural Census, 2011). This phenomenon might compel many to shift to urban areas due to lack of land resources left back home Under these circumstances youth cannot be blamed completely for leaving agriculture. In certain situations, their decision to shift out of farming and rural areas is righteous. Some researchers justified the migration of rural youth to urban areas and also suggested that parents need to acknowledge and recognize the perceived changed trends of needs of the youth dictated by globalization (Naamwintome and Bagson, 2013). This creates a contradictory situation. The importance of youth involvement in agriculture is already established. But at the same time we cannot deny the fact that this section of the population are constrained by several factors to engage in farming that justifies their moving out of agriculture. What is needed immediately to resolve this conflict is to rebrand and reform agriculture by making a composite plan of action to model agriculture as per the need and demands of youth.

Leveraging Youth for Agriculture

Number of youth will be increasing day by day and they will need employment to survive. Current predictions suggest a steady increase in the youth population to 464 million by 2021 (Shivakumar, 2013). Their enormous energy and potential if not channelized in proper way will end up either being wasted or being invested in wrong activities. Agriculture is uniquely positioned to absorb these workers. Agriculture in India has untapped potential to create jobs, both directly and indirectly. Even though the general perception of people towards agriculture is negative, there still exists enormous scope in this sector to offer high income to practitioners, provided it is operated in the right way (Man, 2007). Opportunities for agriculture-based businesses and activities are

almost unlimited. Furthermore, the demand for agriculture products is rarely affected by the world economic crisis and downturn. The agriculture sector which comprise of lot of activities ranging from crops, livestock to fisheries is still seen as one of the sector which expected to offer many job opportunities. Regional markets for food are also booming, and tight global food supplies create high prices and active export markets. India can harvest the 'youth dividend' by accelerating the transformative change in agriculture that can simultaneously raise productivity, reduce real food prices, boost rural incomes, and create jobs. We may utilize the demographic dividend for taking Indian agriculture to new heights by channelizing the creative energies of the youth. If educated youth choose to live in villages and launch the new agriculture movement, based on the integrated application of science and social wisdom, our untapped demographic dividend will become our greatest strength (Swaminathan, 2013). Efforts to accelerate agricultural growth and improve food security are separated conceptually from efforts to create jobs for young people. This is a damaging compartmentalization, and if continued will likely result in the forfeit of India's youth dividend. Efforts to enhance agricultural growth and those to create employment for young people are complementary, and must be so understood

Challenges for youth in Agriculture

1. Personal factors: The important personal factors faced by farmers to avoid agriculture as livelihood were 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

Farmers under the age of 30 are more likely to leave farming, and research in other countries has shown that younger farmers have more occupational mobility and are more sensitive to wage disparities between farm and non-farm employment

2. Social factors: The social factors responsible for avoiding agriculture as a livelihood were 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

As a result of the idea that agriculture is an outdated sector with low financial rewards, youth are less interested in pursuing careers in agriculture

3. Economic factors: The economic factors experienced by landholders to avoid agriculture as livelihood were:

(i) It carries a considerable financial risk because it is an profession that is reliant on nature.

(ii) High production costs

(iii) Insufficient funds for farming: Banks are the primary source of credit (50 percent or more) for farmers with land holdings of two or more hectares, while informal sources such as moneylenders account for 41 percent for farmers with less than a hectare of land. Shopkeepers, relatives or friends, and cooperative societies are also important sources of agricultural finance. Uncertainty about land records makes it difficult for farmers to obtain formal credit, ratio of short term (pre-harvest and post- harvest operations) and long-term agricultural finance (agricultural equipment and machinery) is unbalanced as well as insufficient access to crop insurance coverage are the most pressing issues for agricultural credit

(iv) Unfriendly crop insurance system: Small farmers dislike farming, because of the risk involved; as a result, insurance companies must focus their efforts on strengthening their outreach to smallholder farmers since barely one-tenth of Indian farmers utilize insurance for risk management in agriculture

4. 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

Farm work, according to highly educated professionals, is not intellectually gratifying because it does not need creativity and expression

5. Market related factors: Agricultural landholders were discouraged from farming because of market related concerns like 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

6. Labour related factors: The major personal factors faced by farmers to avoid agriculture as livelihood were labour shortages due to industrialization, lack of skilled labor for farming, and the negative impact of MGNREGA on the availability of labour, as well as the inability to find workers on time and in sufficient numbers when required

7. Situational factors: The situational factors encountered by agricultural land holders were insufficient storage facility for agricultural produce, inadequate irrigation facility for farming, electricity scarcity.

Farming mechanization suffers because of land fragmentation into irregular sizes. Small holdings dominate agriculture in India; holdings measuring less than or equal to one hectare account for two-thirds of the total 139 million land holdings. Furthermore, landholdings have been steadily fragmenting; between 1970–71 and 2010–11, the overall number of holdings nearly doubled, while the average size decreased by half (to 1.2 hectares)

8. Next generation related factors: The next generation factors causing agricultural landholders to avoid agriculture as a profession where the educated new generation prefers occupations other than agriculture, 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

Young college graduates in the Indian city of Meerut, the sons of lower middle-class Jat farmers, enrol in one course after another rather than returning to the village, and describe their existence as ‘timepass’, a form of aimless waiting

Strategies to attract and retain youth in agriculture

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

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.

To encourage them to get more involved in agricultural related activities, an exclusive nationwide extension programme might be developed to address rural youth challenges.

Only 5 percent of farm households had access to animal husbandry information, compared to 40 percent for crop farming (Planning Commission, 2012). Interestingly, the distribution of livestock resources is more equitable, with marginal farmers owning more than half of the cattle population and two-thirds of the small ruminants, compared to their share of land, which is only 24 percent (NABARD, 2018).

2. 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 farmers or agripreneurs in order to inspire other young farmers. Community radio and social media can also play an important role in motivating and educating young farmers about the opportunities in agriculture.

3. Low levels of youth involvement in agriculture are often the result of a lack of agricultural skills and inadequate financial resources. Working through group mechanisms such as farmers' organisations, cooperatives, farm youth clubs, and farmer producers' groups can help facilitate credit access from a variety of institutional sources. Only 13.3 percent of NABARD's total agricultural credit is allocated to livestock credit (NABARD, 2018)

4. **An Indian Agriculture Service**, like the Indian Administrative Service and the Indian Forest Service, is urgently needed. Not only will this strengthen the agro regulatory system, but it will also create jobs for agriculture students.

5. Presently, “Agriculture, including Agricultural education and research, protection against pests and prevention of plant diseases” are in Sl. No. 14 of the 2nd list of 7th schedule in the Article 246 under Part XI of the Constitution of India. It is under State list. In accordance with the state constitution, the state government is accountable and responsible. As a result, the central government is excused from responsibility and accountability. In addition, the Central Government must protect inter-state interests and agricultural aspects relating to agricultural inputs. The Central Government has to be the party to the International, Bi-lateral, Plurilateral, Multi-lateral

Agreements, Treaties, Intellectual Properties, Rounds, Summits, Convention, Protocol Memorandum of Understanding, Import & Export, Plant & Animal(domestic) quarantine and many other implications on Agriculture. Similarly, the Central Government is expected to respond to the International

Community, the FAO, the United Nations, and others. Agriculture, including soil and water conservation, is believed to be appropriate for inclusion in the concurrent subject/list, i.e. the 3rd list in the 7th Schedule of Article 246 of the Indian Constitution. Both the Central and State Governments will be in a better position to serve India's residents/citizens because of its inclusion. This will require both governments to take efforts and develop policies to safeguard and promote the interests of farming families and their youth in order to attract and retain them in agriculture (Mandal, 2016).

6. Youth development as a priority area for State Agricultural Universities (SAUs) and other agricultural education institutions would be a significant step in refocusing attention and resources to meet important goals of linking youth to agriculture. The vast network of agricultural universities and colleges can play a leading role in instilling self-confidence and capabilities in students who wish to pursue agriculture as a career.

In Agricultural Universities and Institutes, 0.4 million students are enrolled each year. However, the majority of them join the banking sector instead. Farm graduates can begin as rural entrepreneurs by establishing Agri-clinics and agri-business centers (ACABC) in villages. ACABC schemes, which are already in place, should be expanded to accommodate a greater number of agricultural graduates in villages to start up new rural enterprises.

7. Capacity building of youth: young people require training and skill-building opportunities that will prepare them to participate actively in decision-making processes. Other areas that the current extension system will address are the development of soft skills such as communication, leadership, and business skills, as well as the mobilization of young farmers to start high-tech ventures and micro enterprises.

8. Link youth to planning and policy efforts: This can be achieved by incorporating youth in the review of current policies as well as the identification and evaluation of potential policy alternatives.

9. Agribusiness should be taught in agricultural colleges/universities, emphasizing the use of relevant technology, success stories, and the importance of youth federations and extension in the agribusiness in the state.

10. Priority should be given to agricultural transformation through Community College and Farmer's Field School. Agricultural transformation can only be achieved if rural youth are given more opportunities to engage in agriculture.

11. Promotion of Agro- Eco tourism: It is a symbiotic partnership between the farming sector and tourism business for the aim of relaxation through active involvement in farm operations hence boosting knowledge of agrarian heritage. Farm stays, guest ranches, organic food, recreation pond, fishing, plantations, dairy, piggery, poultry, processing of farm products, demonstration of farm activities, wool processing, rural festival celebrations, handicrafts, folklore, dances, and various rides such as bullock cart, tractor, horse, and so on. Farmers can earn more money by making better use of available resources, while tourists can enjoy village life and nature at reasonable prices.

12. To establish a role model of agriculture field aimed at retaining youth in agriculture, such as pulses village and seed village, as well as community grain and seed bank, waste lands can be assigned to young farmers. Accolades such as the Best Young Agriculturalist Award at the district level can be instituted to be distributed on National Youth Day (12th January) in the presence of Agriculture Department officials in order to recognise youth who are active in the best agricultural practice.

13. To make agriculture a profitable venture, 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. Rural youth would be

motivated by success stories of seed growers and the expertise in seed production provided through training and field demonstrations to foray into seed production activities as a producer or as a seed production organizer.

The strategies that could Help to retain youth are to develop entrepreneurship among rural youth by providing training in agro-based enterprises such as vermicomposting, poultry farming, mushroom farming, beekeeping, livestock feed production, piggery, and medicinal herbs farming, and so on, as well as providing knowledge on marketing methods for agricultural products and creating export opportunities. In addition to this provision of social amenities, establishment of industries, educational institutions, corporate branches, and provision of recreation facilities in rural areas may aid in reducing the rate of youth migration from rural to urban areas .

14. Regional Exchange program: These include gatherings of young farmers, exchange visits among young farmer organisations, cooperation and international solidarity among young farmers, participation in trade fairs, exhibitions, and other events such as farming technique competitions, sharing success stories of youth involvement in agriculture, etc.

15. Partnership with various actors: As a means of attracting youth to agriculture, collaboration with a variety of actors (government, corporate sector, banks, academia) is required, such as establishing links with training centres for refresher courses, partnering with consumer groups on food safety and organic foods, and garner community support for food purchasing schemes. The public must be educated about the importance of agriculture in the economy and in ensuring food security. A greater understanding of the importance of farmers should be fostered, and young farmers should be encouraged to succeed their parents in farming.

16. Among the proposals made by rural landowners to get young people into farming are the following: Government should provide pension to the well-experienced farmers during their later years; implementation of practical and employability generating higher agricultural education; 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.

17. Appropriate allocation of budget by Government: More than half of India's workforce is employed in agriculture, which accounts for 17.5 percent of the country's GDP (at current prices in 2015-16)(PRS India, 2017). The contribution of livestock sector to GDP is 4.5 percent and 25.8 percent of total agriculture GDP of the Nation (GoI, 2017a). Agriculture and allied sectors' contribution to the economy fell from 18.2 percent in 2012-13 to 16.4 percent in 2017-18. In 2017-18, the growth rate of the agriculture sector is estimated to be 2.1 percent, as compared to 4.9 percent in 2016-17 (Economic Survey, 2018). But the share of livestock sector from 2013-14 to 2015-16 increased from 22.6 percent to 25.7 percent (GoI, 2018). Agriculture budget accounts for 5.2 percent of total budget (Acharya, 2019). In 2018-19, the Department of Agriculture, Co-operation and Farmers Welfare accounts for 81 percent of the Ministry's allocation, the Department of Agricultural Research and Education is allocated 13.5 percent, the Department of Animal Husbandry, Dairying and Fisheries accounts for 5 percent of the allocation (PRS India, 2019). According to the Indian Council for Research on International Economic Relations (Icrier) study, India spends about 0.7 percent of its agriculture GDPA on agriculture research and education (R&E) (including extension education), with 0.54 percent going to R&E and 0.16 percent going to extension and training as per expenses recorded in 2013-14. This falls short of the World Bank's recommendation of 2 percent of GDPA. Only 10 percent of the agriculture R&E budget was allocated to A.H. and dairy development (Anonymous, 2018).

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: 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 in Agriculture

- 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.,

Government Initiative to attract Youth in Agriculture

To harness the potential of youth and to take the benefit of demographic dividend holistically, Government of India has and is announcing multifarious schemes. These schemes are

based on the principle of social inclusion, gender equality, and sustainable development of rural areas. Some of the schemes and steps are

Agri-Clinic and Agri-business Centre

Agriclinics and Agribusiness Centres (ACABC) scheme is implemented by the Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare, Government of India (GoI) to foster entrepreneurship in agriculture. Through this scheme fresh and unemployed agricultural graduates are imparted training (for 2 months) on entrepreneurship avenues in agriculture and transformed as agripreneurs through establishment of need-based agribusiness ventures.

The purpose of the scheme is to provide gainful employment and foster entrepreneurship in agriculture and rural areas and to attract investment in agriculture. The aim is to supplement and complement the extension services of development departments of state governments in extending broad-based services to the farming community. The scheme has the support from NABARD for extending loan facilities to the agripreneurs through banking sector and that of MANAGE and SFAC in training the fresh and unemployed agricultural graduates through nodal training institutes identified all over the country. The scheme has been in operation from 2002 onwards

Skill India

Entrepreneurship efforts will not be succeeding until and unless the bridges of gap are fulfilled. So, there is a need for speedy reorganization of the ecosystem of skill development and entrepreneurship promotion in the country to suit the needs of the industry and enable decent quality of life to its population. However, there are gaps in the capacity and quality of training infrastructure as well as outputs, insufficient focus on workforce aspirations, lack of certification and common standards and a pointed lack of focus on the unorganized sector. Recognizing the need and urgency of coordinating the efforts of all concerned stakeholders in the field of Skill Development and Entrepreneurship, Skill India was launched. The National Skill Development Corporation India (NSDC) governed Pradhan Mantri Kaushal Vikas Yojana (PMKVY), outcome-based skill training scheme of the new Ministry of Skill Development & Entrepreneurship (MSDE) was introduced to enable and mobilize a large number of Indian youth to take up outcome based skill training and become employable and earn their livelihood

Skill Development in Agriculture

India's population is rising at a geometric rate. To combat with the increase in population, the demand for food and agri produce is increasing, but the supply is constant due to low agricultural productivity. This is predominantly due to improper Farm Management practices and loss in post-harvest handling. There is a requirement for specific set of skills in the field of agriculture. Considering the above factors, Agriculture Skill Council of India was set up in January 2013 as a Section 25 company under Companies act of Ministry of Company Affairs for building capacity in the Agriculture Industry and bridge the gap between laboratories and farms

Start-up India & Stand-up India

Start-up India, Stand-up India initiative of the Government of India will boost entrepreneurship among the youth, create new job opportunities and help set up a network of start-ups in the country. The scheme will create an entire start-up ecosystem that would be set-up and will work as a friend, mentor and guide for start-ups through their entire journey of entrepreneurship.

Digital India

Digital India is an initiative to ensure that the government services are made available to citizens electronically by reducing paperwork and a lot of time. This initiative also includes a plan to connect rural areas with high-speed internet networks. This will give the rural youth more opportunities to interact with people from different walks of life and evolve better as an individual. Digital India will empower youth to know the government and its various departments better and to analyze the loops and strength unguided by political issues. The user-friendly interface will connect more people to technology and the platform will act as a thought-pool. This will enable youth to gather more knowledge about the agrobased policies of the government and the benefits. The opportunities that Digital India provides may be in effectively harnessing ICT mediation in agriculture and the skilled youth in digital technologies may play a crucial role as change agents in partnership with a wide range of stakeholders in the Agricultural sector (Singh et al, 2016).

Government Programmes and Organizations for Youth in India

1. National Young Leaders Programme (NYLP)
2. Nehru Yuva Kendra Sangathan (NYKS)
3. National Service Scheme (NSS)
4. Rajiv Gandhi National Institute of Youth Development (RGNIYD)
5. National Programme for Youth and Adolescent Development (NPYAD)
6. Youth Hostels
7. Assistance to Scouting and Guiding Organisations

Skill Development of Youth

8. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
9. Deen Dayal Upadhyaya Grameen Kaushalya Yojna (DDU-GKY)
10. Deen Dayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)
11. Prime Minister's Employment Generation Programme (PMEGP)
12. Enterprise and Skill Development
13. Assistance to Training Institutions (ATI) Scheme
14. Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
15. UDAAN

International Initiatives for Youth

1. UN's Department of Economic and Social Affairs (DESA)
2. UN Centre for Human Settlements (HABITAT)
3. United Nations Development Programme (UNDP)
4. United Nations Environment Programme (UNEP)
5. United Nations Population Fund (UNFPA)
6. United Nations Children's Fund (UNICEF)
7. United Nations Programme on HIV/AIDS (UNAIDS)
8. International Labour Organization (ILO)
9. Food and Agriculture Organization of the United Nations (FAO)

10. United Nations Educational, Scientific and Cultural Organization (UNESCO)
11. United Nations Volunteers (UNV)
12. United Nations Alliance of Civilizations (UNAOC)
13. United Nations Office on Drugs and Crime (UNODC)
14. UN Department of Public Information (DPI)
15. The World Programme of Action for Youth (WPAY)

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. 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).

- 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.
- To create interest and confidence among rural youth in agriculture, there is need to make agriculture more profitable. Retaining youth in agriculture and making agriculture more profitable are thus, big challenges. There is a continuous increase in migration of rural youth to urban areas. On the other hand, small holdings are on the rise which possess challenge to food security for increasing population. Thus, it was felt to bring a comprehensive model for the development of rural youth in general and agricultural youth. Thus, realizing the importance of rural youth in agricultural development especially from

the point of view of food security of the country, ICAR has initiated a programme on "Attracting and Retaining of Youth in Agriculture (ARYA)"

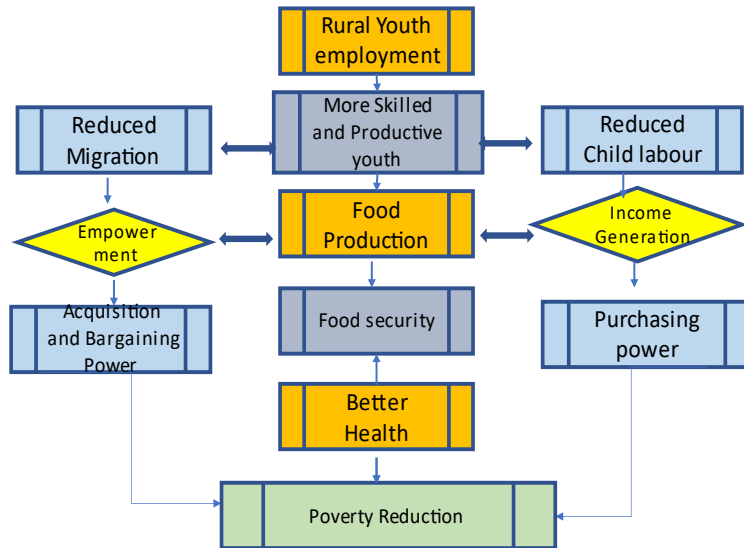
Objective of ARYA Project:

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

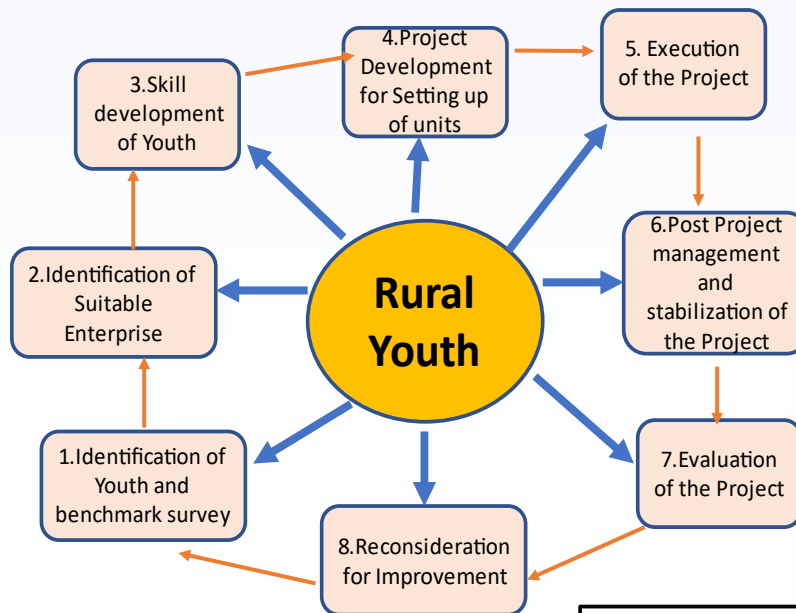
t	Enterprise	S.No	Enterprise
1	Goat Rearing	11	Poultry
2	Mushroom Cultivation	12	Piggery
3	Bee Keeping	13	Large Cardamom cultivation
4	Horticulture	14	Pineapple Cultivation
5	Commercial Floriculture	15	Fruits and vegetable Nursery
6	Broiler rearing	16	Fruits and Vegetable Processing
7	Betel vine Cultivation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

YOUTH CENTRE FRAME WORK APPROACH



Source: Youth for transforming Indian Agriculture by S. Ayappa

Entrepreneurship Development among youth



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

No of Youth Oriented and Enterprises established in INDIA

Sl.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%
		3779	1092	

ARYA PROJECT IN KVK – BENGALURU RURAL

Bengaluru Rural district has 0.61 lakh hectare area under millets with a production of 0.99 tones with productivity of 1634 kg/ha. Under ARYA project, the KVK- Bengaluru Rural has created awareness among farm youth about importance of millet cultivation and expanded area under these crops in the district. With the support of the project, the registered Commodity Based Association (CBA) has been formed in the district for promotion of millets. Under the ARYA project, Annapurneshwari Nutri-millet Growers, and Processors Association® has been formed in 2016 at Perumagondanahalli, Doddaballapur Taluk, Bengaluru Rural District with 35 members.

A total of 21 capacity building programmes have been organized on production technologies, processing, preparation of value-added products, branding including FSSAI license and market linkages. The KVK has also emphasized on value addition of jack fruit. The Jack fruit is cultivated in an area of 944 ha with a production of 0.21 lakh tones and it has got good potential for value addition into several products like squash, jam, candy, halwa and ready to serve beverages. With the support of ARYA project, the KVK has supported formation of CBA in the district for promotion of jackfruit and its value-added products and provided technical backstopping.

Enterprise 1: Nutri-millet processing

No. of youth trained: 35

No. of groups formed: 1

No. of youth established their own units: 35

No. of youth running the units sustainably: 20

Cost of production per unit: Rs. 682248

Sale value: Rs. 250 /Kg

Net economic gains (Rs./unit/year): Rs.21.2 lakh

Employment generation: 35 youth employed for 250 days in a year

Enterprise 2: Jack fruit processing and value addition

No. of youth trained: 35

No. of groups formed: 1

No. of youth established their own units: 35

No. of youth are running the units sustainably: 35

Cost of production per unit: Rs. 447119

Sale value: Rs. 300 /Kg

Net economic gains (Rs./unit/year): Rs.20.3 lakh

Employment generation: 35 youth employed for 160 days in a year

RESEARCH STUDIES

- 1. 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.)

Table 1: Distribution of respondents (n=60) on the basis of Impact of ARYA Project on goat beneficiaries in qualitative aspects

Sl.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

Table 2: Distribution of respondents (n=60) based on Impact of ARYA Project on Poultry beneficiaries in qualitative aspects

Sl.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

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.

Research Study 2

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.

Table 1: Overall perception of farm youth about agriculture

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

Table 2: Problems faced by farm youth in practicing agriculture (n=200)

Sl. No.	Problems	Farm Youth					
		Irrigated area (n ₁ =100)			Rainfed area (n ₂ = 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

Table 3 : **Suggestions given by farm youth practicing agriculture (n=200)**

Sl. No.	Suggestions	Farm youth					
		Irrigated area (n ₁ =100)			Rainfed area (n ₂ =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

Success story: 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

Program encouraging beekeeping enterprise

- 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

Conclusion:

Agriculture sector, being the largest employer in the country holds the responsibility to provide sustainable and secure livelihoods to its practitioners. Failing to address the present challenges faced by this sector is to condemn India to food insecurity, poverty and increased reliance on costly imports. Unfortunately, farming is no more viewed as a prospective employment option for the youngsters of the country for various constraints that this sector faces today. With careful alteration in the present mechanism of this sector, it can have the potential to engross the massive youth workforce presently available in the country. This would automatically contribute to resolving the crisis of youth unemployment and migration as well. To attract and retain youth in agriculture a respectable brand image is to be formed so that people’s view on this sector is altered. Today, agriculture needs to be perceived as an enterprise and the farmer as an agri-preneur. Different suggestions mentioned by youth are to be keenly observed and to be put into action by all the stakeholders of farming community. The youth in farming must be attentive, courageous to take up innovative farming practices which further indirectly leads to the economic development of the nation. in farming must be attentive, courageous to take up innovative farming practices **which further indirectly leads to the economic development of the nation.**

Discussion:

1. Don't you think reverse migration of youth lead to Disguised employment in the village?

Yes, if villages are left and unaddressed, but certainly no, if the villages are vibrant and sound enough in terms of infrastructure, small and medium scale industries which are labour intensive and if scientific and sustainable agriculture is carried out which demands semi-skilled and skilled labour for the implementation of modern technologies like tissue culture, hydroponics, aeroponics, solarizing agriculture , using drone technologies, internet of things, scientific animal husbandry , food processing and other post-harvest technologies improvement in Agriculture

2. Majority of youth migrate to urban areas in search of employment, which type of employment do they prefer?

As per the review of literature, there is no mention of any such specification, and it varies with nature of cities, cities like Bengaluru, Mumbai, Delhi etc., which are manufactures hubs attract youth to work in industries. It also varies with gender, according to labour bureau more than fifty percent of domestic workers who work in unorganized services sectors like households and other institutions are women.

3. The main setback for agriculture mechanization and implementation of modern Technologies is agriculture is the land fragmentation. How this issue can be addressed?

Land fragmentation makes mechanization or other modern technologies economically unviable to address this land consolidation polices and cooperating farming should be implemented via SHG, FPOs, FPCs etc. which lead to pooling of lands and carrying out agriculture activity as a single entity in cooperation which gives economies of scale in procuring inputs production and marketing of produce along with economically viable mechanization opportunities.

4. Can MAYA (motivating and retaining of youth in Agriculture) be substitute of ARYA?

Certainly not, because MAYA gives you the initial motivation and builds the enthusiasm in youth to remain in agriculture, but what if agriculture sector doesn't provide him the required living standard or if villages are lack of quality education, health care, logistics and employment opportunities? Do you think the initial motivation sustain longer? No. this can be done only by attracting youth in agriculture with required changes and developments timely as the modern era programmes.

5. Generally youth migrate to urban areas in search of better living standard and with this condition by asking the youth to remain in villages don't you think you are denying the right to better living standard of a youth?

I agree with the fact that if youth is made to stay back in the villages, his/her living standard will go down. But what if villages are competent enough to provide all the amenities that the urban cities provide in terms of education, healthcare, transportation and more importantly the employment opportunities along with clean environment which made most of cities fail to provide presently. Dr APJ kalam sir told that if PURA implemented properly there is no migration from villages to cities

REFERENCES:

- ABBE, T. S., AYOMIDE. V. A. AND TIWATOPE. E., 2015, Evaluation of youth's involvement in local farm practices of vegetable production in Oyo State, Nigeria. *International Journal of Agricultural Extension and Rural Development*, **2(6)**: 125-130
- AJANI, E. N., MGBENKA, R. N. AND ONAH, O., 2015, Empowerment of youth in rural areas through agricultural development programmes: Implications for poverty reduction in Nigeria. *International Journal of Research in Agriculture and Forestry*, **2(2)**: 34-41.
- KITIASHVILI., ANASTASIA. AND SUMBADZE. N., 2019, Dealing with identity loss and well-being of unemployed young people. *Journal of Advanced Research in Social Sciences*, **2 (1)**: 32-50

PREETHI, 2015, A study on perception, aspiration, and participation of farm youth in agriculture. *Ph.D. Thesis* (Unpub.), Univ. Agric. Sci., Bangalore.

SONIKA SHARMA, 2021, Impact of Attracting and Retaining Youth in Agriculture (ARYA) Project on Goat and Poultry Farming in Rajasthan. *Ph.D. Thesis* (Unpub.), Univ. of Agric. and Tech., Udaipur.

SWAMINATHAN, M. S., 2007, Report summary Swaminathan committee on farmers, PRS legislative research

<https://www.mospi.gov.in/>

<http://www.thehindu.com/news/national/About-70-per-cent-Indians-live-in-rural-areas>

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