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Role of Technology on Agriculture Workers in Tirunelveli Taluk

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Abstract: *The main purpose of this paper is to introduce the technology impact of agriculture workers in Tirunelveli Taluk. In the last century, the basic agriculture technology like machines has changed a little. Though the modern technology, planters and harvesters do a better job or are slightly tweaked from their predecessors. However, the modern technology is changing the way that humans operate the machines, GPS locators, as computer monitoring systems and self-steer programs allow the most advanced tractors and implements to be more precise and less wasteful in the use of fuel, fertilizer or seed. In future, there may be mass production of driverless tractors and other agriculture machinery which use electronic sensors and GPS maps.*

Keywords: Modern Technology, Gross Domestic Product, Pesticides

I. INTRODUCTION

During the past fifty years, development in the agriculture sector and policies has been changed successfully at emphasizing external inputs to increase food production. This has led to growth in global inorganic fertilizer, consumption of pesticides, animal feed stuffs and tractors and other machinery. These external inputs have substituted for natural resources and processes rendering them less powerful, pesticides have replaced biological, cultural and mechanical methods for controlling pest, weeds and diseases, inorganic fertilizers have substituted for livestock, manures, composts and nitrogen fixing crops. The basic challenge of sustainable agriculture is to make better usage of these internal resources. Agriculture is one of the most important sectors in India, and could benefit tremendously with the applications of ICTs especially in bringing changes to socio-economic conditions of poor in backward areas. Agriculture constitutes a major livelihoods sector and most of the rural poor depend on rain-fed agriculture and fragile forests for their livelihoods.

II. REVIEW OF LITERATURE

Their role is to facilitate the invention, refinement, and dissemination of innovations that benefit the needy masses. We work with industry, NGOs, and governments, to bring these innovations to rural and small town India. Impact of ICT Application in Agriculture It is to be mentioned that the ICT offers a variety ofprograms both for the social development and the economic development. An assessment of the impact was felt essential so as to determine whether there is any significant change on the part of the farmers before and after their ICT application in Agriculture. It is to be noted that a change which a farmers does not possess before ICT application in Agriculture may take place in the farmers after his ICT Application in Agriculture (Banerjee, 2011).

The researcher, through his observations and interaction with the farmers, has identified eight economic and social traits which the farmers may or may not posses before their ICT application inAgriculture. As such, the economic and social traits for the purpose of the study include productivity improved, avoiding buying on credit, comfortable life, reduction in poverty, house modified, liberal spending, change in the life style and maintenance of children improved (Venkatesh et al., 2012)

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III. AGRICULTURE TECHNOLOGY

Modern farms and agricultural operations work far differently than those a few decades ago, primarily because of advancements in technology, including sensors, devices, machines, and information technology. Today's agriculture routinely uses sophisticated technologies such as robots, temperature and moisture sensors, aerial images, and GPS technology. These advanced devices and precision agriculture and robotic systems allow businesses to be more profitable, efficient, safer, and more environmentally friendly.

IV. OBJECTIVES OF THE STUDY

The main objectives of the paper are as follows:

1. To study the socio economic profile of Agriculture Workers in Tirunelveli Taluk.
2. To understand the level of awareness about the Agriculture Technology
3. To analyze the impact of technology on agriculture workers.
4. To offer some suggestions for the development of agriculture workers.

V. METHODOLOGY

The study is based on both primary and secondary data. The primary data was collected by the researcher with the help of a structured interview schedule. The secondary data has been collected from books, journals and websites. The researcher has selected 60 sample respondents from different villages of Tirunelveli Taluk. The convenience sampling method was used. Simple statistical tools such as tabulation, percentage, weighted average Ranking, Chi – Square test was used to analyze the collected data.

VI. RESULT AND DISCUSSION

Table 1: Age wise classification of the respondents

S. No	Age (in years)	No of respondents	Percentage
1.	Below 20	5	8
2.	21 -30	8	13
3.	31 – 40	16	27
4.	41 – 50	20	34
5.	Above 50	11	18
	Total	60	100

Source: Primary data

It is clear from the table 1 that majority 20(34%) of the respondents are at the age group between 41-50 years, 16 (27%) of the respondents are between 31-40 years, 11(18%) of the respondents are above 50 years, 8(13%) of the respondents are between 21-30 years, 5(8%) of the respondents are below 20 years.

Table 2: Marital status of the respondents

S. No	Marital Status	No of respondents	percentage
1.	Married	53	88
2.	Unmarried	7	12
	Total	60	100

Source: Primary Data

It is evident from the table 2 the majority 53(88%) of the respondents are married and 7(12%) of the respondents are unmarried

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Table 3: Educational Qualification

S. No	Qualification	No of Respondents	Percentage
1.	Illiterates	14	23
2.	SSLC	18	30
3.	HSC	10	17
4.	UG	12	20
5.	Diploma	6	10
	Total	60	100

Source: Primary Data

It is assessed from the table 3 that majority of 18(30%) of the respondents are completed SSLC, 14(23%) of the respondents are Illiterates, 12(20%) of the respondents are completed UG Degree, 10(17%) of the respondents are completed HSC, 6(10%) of the respondents are diploma holders.

Table 4: Annual Incomes

S.No	Annual Income	No of Respondents	Percentage
1.	Upto Rs. 50000	25	42
2.	Rs. 50000-Rs.100000	15	25
3.	Rs.100000-Rs.200000	12	20
4.	Above Rs.200000	8	13
	Total	60	100

Source: Primary Data

The table 4 shows that the majority of 25(42%) of the respondents annual income is upto Rs. 50000, 15(25%) of the respondents annual income is between Rs.50000 – Rs.100000, 12 (20%) of the respondents income level is between Rs. 100000 – Rs.200000, 8(13%) of the respondents anuual income is above Rs.200000.

Table 5: Level of awareness about the agriculture Technology

S. No	Level of Awareness	Aware	Not Aware	Neutral	Total
1.	Soil Test Laboratories	32	18	10	60
2.	Scientific Method of Cultivation	30	25	5	60
3.	Agriculture Schemes for farmers	40	14	6	60
4.	New Agricultural Subsidies	39	18	3	60
5.	Mechanised Agricultural Implements	31	25	4	60
6.	High Yield Variety of Seeds	35	20	5	60
7.	Modern Marketing Techniques	38	20	2	60
8.	Water Irrigation Techniques	44	13	3	60

Source : Primary Data

From the above table 5 it is clear that majority of 32 respondents are having awareness about the soil test laboratories, 30 respondents are having awareness about scientific methods of cultivation, 40 respondents are having awareness about the agriculture schemes for farmers, 39 respondents are having awareness about new agriculture subsidies, 31 respondents are aware about mechanized agricultural implements, 35 respondents are aware about high yield variety of seeds, 38 respondents are aware about the modern marketing techniques and 44 respondents are aware about the water irrigation techniques.

Table 6: Opinion regarding Impact of Technology in Agriculture Mechanization

S. No	Impact	SA	A	N	DA	SDA	Total
1.	Saves time	34	15	4	5	2	60
2.	Saves Labour energy	24	9	8	15	4	60
3.	Reduce Drudgery	27	10	12	10	1	60

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4.	Cut down production cost	17	16	7	12	8	60
5.	Reduces post-harvest Losses	27	9	15	6	3	60
6.	Boosts crop output	36	12	3	2	7	60
7.	Increase farm Income	24	17	5	4	10	60
8.	Increase Productivity	25	12	2	5	6	60

Source: Primary Data

From the above table 6 it is clear that 34 respondents are strongly agree the statement of time saving, 24 respondents are strongly agree the statement of Saves Labour energy, 27 respondents are strongly agree the statement of Reduce Drudgery, 17 respondents are strongly agree the statement of Cut down production cost, 27 respondents are strongly agree the statement of Reduces post-harvest Losses, 36 respondents are strongly agree the statement of Boosts crop output, 24 respondents are strongly agree the statement of Increase farm Income and 25 respondents are strongly agree the statement of Increase Productivity

Table 7: Opinion regarding Impact of Technology in Marketing

S. No	Impact	SA	A	N	DA	SDA	Total
1.	Reduce the Lengthy marketing channels	15	25	3	5	12	60
2.	To know the demand for the agriculture produce	33	18	2	3	4	60
3.	Easy to know the marketing Information	29	24	4	2	1	60
4.	Storage Facilities for perishable goods	16	32	5	1	6	60
5.	Support online Trading	11	35	7	4	3	60
6.	IT support consumer trust	21	29	1	4	5	60

Source: Primary Data

Hypothesis: H0 There is no significant relationship between educational qualification and Opinion regarding Impact of Technology in Marketing

Table 8: Chi-Square Result

Mean	Standard Deviation	Calculated Value	Table Value	Degrees of freedom	Significance Level	Result
34	16	5.34	15.51	8	5%	Accepted

Source: Computed Data

As the calculated value is less than the table value, **the hypothesis is rejected at 5% level of significance.** Hence, there is a significant relationship between educational qualification and level of opinion about the employment problems.

Table 9: Opinion regarding impact of Technology in production

S. No	Impact	SA	A	N	DA	SDA	Total
1.	HYV Seeds	16	12	7	10	15	60
2.	Multiple Cropping System	17	21	2	12	8	60
3.	Chemical Fertilizer	17	24	4	10	5	60
4.	Water irrigation techniques	28	19	1	8	4	60
5.	Land Levelling	26	15	5	11	3	60
6.	Post harvest machinery	21	27	3	2	7	60

Source: Primary Data

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From the above table 9 it is clear that majority of 16 respondents are strongly agree the statement of HYV Seeds, majority of 21 respondents are agree the statement of multiple cropping system, majority of 24 respondents are agree the statement of chemical fertilizer, majority of 28 respondents are strongly agree the statement of water irrigation techniques, majority of 26 respondents are strongly agree the statement of land leveling and majority of 27 respondents are agree the statement of post harvest machinery.

VII. CONCLUSION

The use of advance and modernized machineries and equipments will helps in reducing the hard work. There is a much scope for farm mechanization which increases the production and productivity, better utilization of irrigation facilities, adopting of multiple cropping system etc; use of post harvest machinery helps in value addition and also creates employment opportunities. However, the modern technology is changing the way that humans operate the machines, GPS locators, as computer monitoring systems and self-steer programs allow the most advanced tractors and implements to be more precise and less wasteful in the use of fuel, fertilizer or seed. In future, there may be mass production of driverless tractors and other agriculture machinery which use electronic sensors and GPS maps.

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