Content list available at http://epubs.icar.org.in, www.kiran.nic.in; ISSN: 0970-6429

Indian Journal of Hill Farming

December 2017, Volume 30, Issue 2, Page 281-285

Farmer's Perception and Awareness about Tree Insurance in Namakkal, Tamil Nadu

Deepakkumar R

College of Forestry, Kerala Agricultural University, Thrissur- 680656, Kerala

ARTICLE INFO

Article history:
Received 28 November 2016
Revision Received 6 May 2017
Accepted 19 August 2017

Key words:
Tree insurance, agroforestry, tree growers, risks and drought

ABSTRACT

Agroforestry is one of the emerging field in agriculture due to efficient utilization of resources, low labour intensity and low maintenance but the sametime better yield and income. More than seventy percent of farmers having the 6-10 years experiences in the tree cultivation. Cereals and millets are the predominant crops in Namakkal taluks whereas pulses and oil seeds are predominant crops in Tiruchengode taluks. Around fifty percent of tree farmers in the sample taluks are facing weather as major risks followed by pests and human interference. These were not only reduce the yield but also loss of huge investment which may limit the scope of expansion of tree cultivation. In these context, tree insurance as a risk management tool by providing financial support to tree farmers. The present study focus on farmer's perception and awareness of tree insurance in Namakkal region in Tamil Nadu which experiences the prolonged dry spell.

1. Introduction

Present-day agriculture is facing various challenges such as technological, resources and capital constraints in agricultural crops (Ramasamy 2004). To overcome these challenges tree based farming (agroforestry) is a viable option in which judicious integration of forest trees with agricultural crops and livestocks (Chavan et al. 2015). It is one of the main alternative sources for food, fuel, raw materials to the industries and other forest products in present-day India (NRCAF 2013). Thereby this helps to improve the sustainable livelihood of famer and alleviation of poverty (Pandey 2007; Jose 2009). Even in trees cultivation also, they are risks and uncertainties such as biological variables like outbreak of pest and diseases, adverse climatic conditions like drought, flood and storm, resource risks like non-availability or poor quality of inputs and price risks, beyond the control of farmers. These were not only reduced the yield but also loss of huge investment which may limit the scope of expansion of tree cultivation (Deepakkumar and Suresh 2016). In these context, tree insurance as a risk management tool by providing financial support to tree farmers and facilitates the adoption of improved technologies and encourages higher investment, resulting in higher agricultural production (AIC 2008; Parthiban 2016). The present study deals about the risks involved in tree cultivation, awareness and adoption of tree insurance in Namakkal district.

2. Materials and Methods

The present study was conducted at Namakkal and Tiruchengode taluks of Namakkal district (Fig 1.) during June 2015 to May 2016. It receives the annual rainfall of 700 mm with average temperature of 28.3 °C and elevation of 218 MSL. Due to the low rainfall combined with prolonged dry spell leads to change in agriculture towards agroforestry in these taluks. In addition to this, there is frequent occurrences of specified perils /risks like fire, flood, drought, cyclone, storm, frost and pest & diseases either in isolation or concurrently. A total of 30 farmers households from each were randomly selected and interviewed. They were further post stratified into small (<1 ha), medium (1-2 ha) and large (>2 ha) farms based on area of land holdings.

*Corresponding author: deepakkumarforestry@gmail.com

The data from the sample farm households were collected through personal interview with the help of well-structured pre tested questionnaire. The information related to age, education, experience in farming, family details, size of the farm, asset position, liabilities, possession of livestock, cropping intensity, risks in tree cultivation, coping mechanism *etc.* were obtained from the sample respondents through survey.

3. Result and Discussion

The current studies revealed that more than 45 percent of farmers are cultivating Casuarina crops (*Casuarina* clones) in their farms (Figure 2). This is because of Casuarina trees are largely promoted by the nearby paper mills for pulpwood purposes. However eucalyptus (Eucalyptus clones), teak (*Tectona grandis*), tamarind (*Tamarindus indica*) and other tree species are recorded in the sampled farms. The socio-economic characteristics among sampled tree farmers are shown in the Table 1. The current investigation revealed that the large size farm holders (more than 2 ha) accounted for 77 percent and 87 percent of Namakkal and Tiruchengode taluks in Namakkal district respectively. This may be due to more labour consumption, higher input price, less return and more cultural operation involved in the agricultural crops leads to a lot of trouble for large farmers *i.e.* more than 2 ha (Deepakkumar and Suresh 2016).

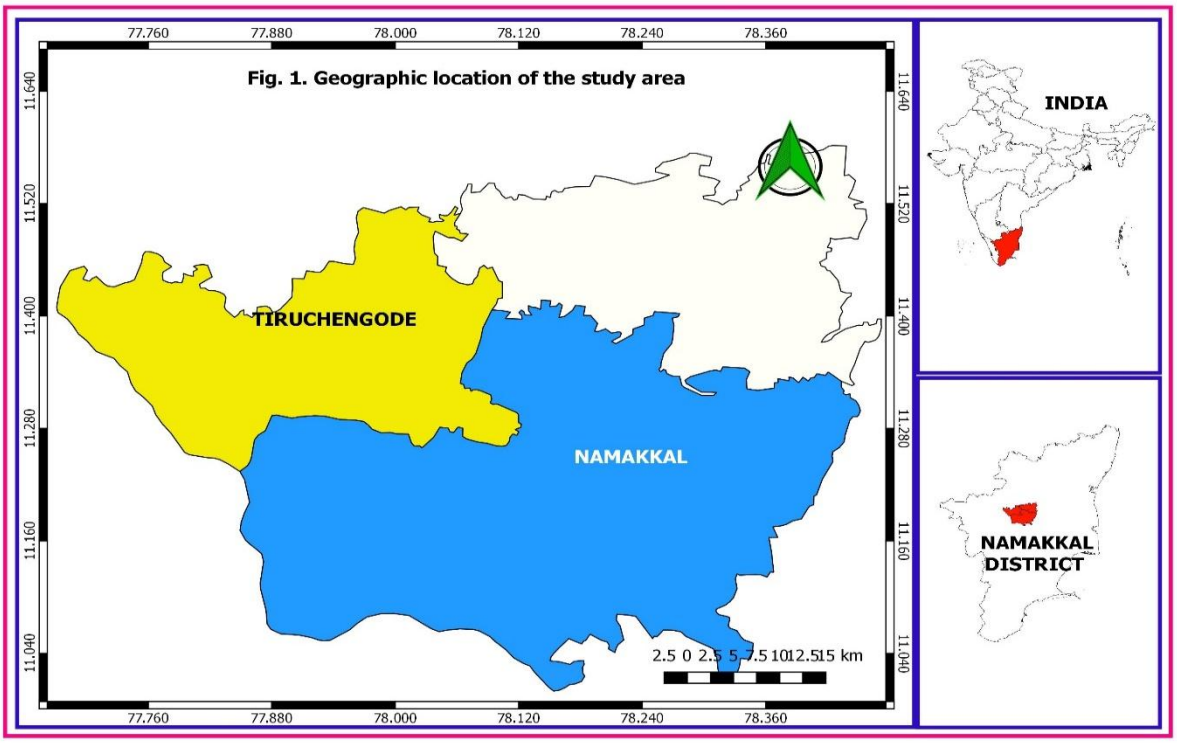
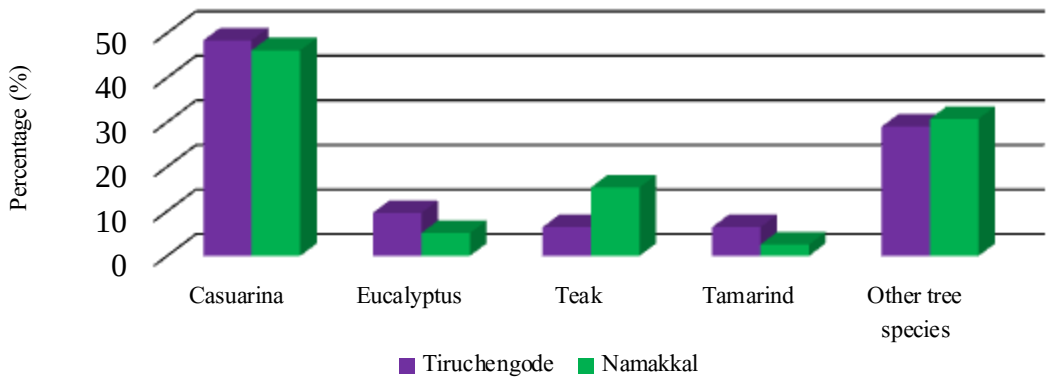


Figure 2. Details trees cultivated by sampled farmers



Hence the tree cultivation helps the large farmers by maintaining large crop area, low labour intensity, off season utilisation of resources, less farm inputs and also optimum profits. There is necessary to the creating awareness about short rotation, high yielding tree varieties, improved technology and market information for the small and medium farmers in order to cultivation of trees. The average size of sampled land holding varies between 0.90-4.45 ha which indicates the scale of operation and the extent of farm income. The medium size family (3-5 members) are dominant in both taluks with more than 75 % which indicates the support of family labour to sustaining labour requirement. However, it may also depends on the age and educational qualification of head. From table 1 the higher number of adopters of tree cultivation have more than 70 % are older age (more than 51 years) groups and also more than 60 percent are above secondary schooling (HSC) in both taluks. So farmers who are adopted tree cultivation in their farms has more educational status and older age groups may be more exposure towards modern agro-technologies like tree cultivation. Elder aged farmers are could not maintain agriculture crops due to lack of considerable profit. Also younger (next) generation are lack of interest in farming may be another reason. So it is urgent need to the creation of new schemes and new agriculture programs to motivate and retain the younger generation in agricultural and allied activities.

The present study resulted that the farm assets accounts for 76% and 83% of the total assets in Namakkal and Tiruchengode taluks respectively. During off-season, the asset position of households will helps them to choosing coping up strategies for maintaining their livelihood. Tiruchengode taluk has relatively highest asset value when compared to the Namakkal taluks. The more number of farmers borrowed money from the co-operative banks as a crop loan and less amount of money borrowed from the private lender in both taluks. Livestocks population are considered as liquid cash in the emergency situations. More number of livestock in the Tiruchengode taluks indicates the make utilisation of large pasture existed in these region. In both taluks non-farm (Business and other related activities) activities generates more income and employment fallowed by agriculture. Tiruchengode farmers earns more income due to more dependence of non-farm and off-farm activities. In both taluks, farmers have rich experience in farming about twenty years (Table 2). This indicates these farmers are involved in agriculture at very younger age and there gained more farm experience. These farmers are also couldn`t make considerable profit in agricultural crops due to lack of improved technologies, more input costs and more labour intensity.

More than seventy percent of farmers having the 6- 10 years experiences in the tree cultivation. It is because of farmers are showing the increased interest in cultivation of tree crops in their field, so there is need to development of the cost-effective, profitable and innovative technologies to retain these farmers. The suitable tree planting season was October–November in both taluks. Cereals and millets are the predominant crops in Namakkal taluks whereas pulses and oil seeds are predominant crops in Tiruchengode taluks. This is because the small farmers aims to earn more income from more number of agriculture crops and intercrops in tree cultivation. As like Agri-crops in tree crops also, farmers are facing various risks namely drought, heavy rainfall, pests and diseases *etc.* In order to relieve from these risks farmers are practicing some coping strategies which are learned from their past experience. Around fifty percent of farmers in the sample taluks are facing weather as major risks followed by pests and human interference. In both taluks only 15 % of farmers aware about tree insurance which indicates that the still not reaching tree insurance to the farmers. Mostly these farmers came to awareness about the farmer to farmer communication. It indicates there is a need to create awareness about tree insurance schemes through various means of communications.

Even though more insurance companies have announced tree crop insurance programmes (Deepakkumar and Suresh 2016), only less than farmers are insured their tree crops. Since the programme at its initial stage, tree insurance products should be designed in simple manner and simplification of the procedure by implementing agencies. More than thirty five percent of the sampled farmers are agreed that there is higher premium rates for tree insurance products in both taluks. So the burden of higher premium rates of tree crop insurance may be partly shared by the industries / state /central governments like that of agricultural crops. Since most of the farmers are opinion that government, banks and forest based industries come forward in order to insure their trees against the unexpected perils/risks. Table 2 shows that lack of promotion of tree insurances by various means. So, various stakeholders *viz.,* forest based industries, government and financial institution should come forward to create awareness in order to bear the burdens of tree growers.

Conclusion

Tree insurance is one of the important tool to increase agroforestry/forestry cover in the country which should be incorporate in the agroforestry packages. Since large scale tree based farming are in sprouting stages in India, insurance and credits facilities will boost the adoption of agroforestry among the resource poor farmers.

Table 1. Socio-economic characteristics of tree growers

S. No.	Parameters	Category	Tiruchengode	Namakkal
1.	Land holding (%)	Small (< 1 ha)	13	17
		Medium (1 - 2 ha)	43	30
		Large (> 2 ha)	77	87
2.	Average Size of Holding (ha)	Small (< 1 ha)	0.87	0.94
		Medium (1 - 2 ha)	1.56	1.88
		Large (> 2 ha)	4.32	4.59
3.	Size of Family (%)	Small (<3members)	13	10
		Medium (3 - 5 members)	77	87
		Large (> 5 members)	43	37
4.	Age Distribution of Head (%)	Young (< 35 years)	10	13
		Middle (36 – 50 years)	43	47
		Elder(> 51years)	80	73
5.	Educational Status of the Head (%)	Illiterate	13	20
		Primary Schooling	43	50
		Secondary Schooling	60	40
		Collegiate Education	17	23
6.	Farm Assets (%)		76	83
7.	Household Assets (%)		24	17
8.	Liabilities	Private Money Lenders	10	1
		Co-op Bank – Crop Loan	60	69
		Co-op Bank – Jewel Loan	20	22
		Other sources	10	8
9.	Employment Generation	Agriculture	23	26
		Livestock & Poultry	20	24
		Off Farm	27	23
		Non-Farm	30	27
10.	Income Generation	Agriculture	28	39
		Livestock & Poultry	16	15
		Off Farm	9	11
		Non-Farm	47	34

At present only few tree species are covered under the tree insurance, there is develop the suitable insurance guidelines for various tree species. Also disseminate information about tree insurance to the various stakeholders and various means of communication. It will ensure the sustainable livelihood improvement of rural farming communities, rehabilitation degraded land, minimise the hazards of climate change and continuous supply raw materials to industries.

Acknowledgments

I am grateful to the tree growers of the Namakkal district for their kind response.

Table 2. Perception of tree insurance among respondents

S. No.	Parameters	Category	Tiruchengode	Namakkal
1.	Farming experience (%)	<10 years	3	0
		11 – 20 years	27	17
		> 20 years	70	83
2.	Cropping intensity (%)	Cereals and millets	0.25	0.60
		Pulses and oil seeds	0.55	0.42
		Commercial crops	0.03	0.02
		Horticultural crops	0.12	0.21
		Forestry crops	1.52	1.00
3.	Tree cultivation experience (%)	< 5 years	37	40
		6 – 10 years	77	83
		> 10 years	20	10
4.	Risks/perils in tree cultivation	Pests	29	30
		Diseases	5	7
		Weather#	57	50
		Human interferes##	10	13
5.	Awareness about tree insurance	Aware fully	20	17
		Aware partially	27	40
		Not aware	53	43
6.	Number of farmers insured	Insured	13	7
		Not inured	87	93
7.	Source of information	Companies	21	6
		Banks	0	0
		Farmers	64	76
		Newspapers	7	0
		Others	7	18
8.	Constraints in tree insurance	Insufficient promotion*	29	24
		Higher premium rates*	34	47
		Procedural difficulties	12	21
		Difficulties to getting no-dues	0	6
		More time taken to get insurance product	21	12
		Biased loss assessment	0	0

*Multiple Answers, # Weather indicates drought, rainfall, flood, cyclone *etc.* ## Fire, Illegal felling, smuggling, *etc.*

References

AIC [Agriculture Insurance Company] 2008. Agriculture insurance company of India ltd. www. aicofindia.com/AICEng/General Documents / Product.../WBCIS_FAQ.pdf, Accessed 25 November 2016

Chavan SB, Keerthika A, Dhyani SK, Handa AK, Newaj R, K Rajarajan (2015). National agroforestry policy in India: a low hanging fruit. Curr Sci 108(10): 1826-1834

Deepakkumar R, SR Suresh (2016). Tree insurance in India. Van Sangyan 3(3): 40-45

Jose S (2009). Agroforestry for ecosystem services and environmental benefits: an overview. Agrofor Syst doi: 10.1007/s10457-009-9229-7

NRCAF [National Research Centre for Agroforestry] 2013. Vision 2050. National Research Centre for Agroforestry, Jhansi

Pandey DN (2007). Multifunctional agroforestry system in India. Curr sci 92(4): 455-463

Parthiban KT (2016). Tree Insurance-An Innovative Intervention in Industrial Agroforestry. Ind For 142(5): 445-450

Ramasamy C (2004). Constraints to growth in Indian agriculture: needed technology, resource management and trade strategies. Ind J Agrl Econ 59(1): 1-41