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**A Rajkala**

Subject Matter Specialist (Agrl. Extension), CREED Krishi Vigyan Kendra, Ariyalur District, Tamil Nadu, India

**R Jansirani**

Professor, (Agrl. Extension), Department of Sustainable Organic Agriculture, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India

## Sustainable cashew farming for livelihood security of the farmers in Ariyalur District, Tamil Nadu

**A Rajkala and R Jansirani**

**Abstract**

India is the largest area holder of this crop and stands 2<sup>nd</sup> in production next to Vietnam. Cashew nut is being cultivated in Tamil Nadu in 142 thousand hectares with annual cashew production of 70000 tonnes during 2016-17. In Tamil Nadu, the Ariyalur district has highly diverse agro-climatic conditions and most backward peoples, which grant the potential for a remarkable agricultural production of a great diversity of crops. The traditional food crops such as paddy, groundnuts and sorghum were predominant and met the livelihood and food security of the family. Later these crops have been replaced by a single cash crop namely Cashew nut. The Kodomillet was dominated occupied areas 31.27 per cent during 80s. However, there was a drastic fall thereafter and in 1987-88 it fell to 25.17 per cent. The area under total cereals and millets also declined drastically due to the shift towards cashew crop. The proportion of area under cashew increased from 1.95 per cent in 1970-71 to 2.55 per cent in 1980-81, 12.36 per cent in 1990-91, 32.5 per cent in 2000-2001, 41.1 per cent in 2010-11 and 45.54 per cent in 2016-17. Similarly, a significant area maintain in the prominence of pulses, oil seeds. It was found that an average income from traditional crops during 2016-17 is Rs.16, 275 whereas, single cashew crop was Rs.28,625/year/acre during same year. An additional income of Rs. 25,520/year/acre reaped by the cashew growing farmers and it certainly resulted in improved livelihood and socio-economic condition of cashew farmers when compared with the farmers growing traditional crops.

**Keywords:** Sustainable farming, food security, livelihood security, employment generation

**Introduction**

Cashew was first introduced into India by Portuguese missionaries during the 16<sup>th</sup> century in Goa and Malabar Coast, which later served as the main centres of dispersal to other parts of the country (De Costa, 1978) <sup>[1]</sup>. The cashew industry in India is largely an export-oriented industry which employs great number of women to process the nuts. It was only from the 2000 to 2010 that the commercial value of cashew kernel for export and foreign exchange earnings was realized. However, the Indian processing industry has long been dependent on imported cashew nuts. The degree of import dependency has been increasing over time, especially since the mid-1980s.

The cashew is a poor men's crop but rich men's food. It is a source of income and livelihood for poor farmers. It provides employment to more than 10 lakh people both directly and indirectly, particularly in the rural areas. India is presently the largest exporter of cashew. Cashew occupied an area of 99,168 hectares with a production of 51,667 tons with the productivity of 521 kg/ha in Tamil Nadu in the year of 2016-2017. In Tamil Nadu, Ariyalur (31%), Cuddalore (30 %) and Pudukottai (8%) were the major cashew growing districts accounting for about 70 % of the total area. Ariyalur district ranked first under area cashew cultivation with 24,302 tonnes (47 Percent) and had the cashew productivity of 450 kg/ha (DCCD, 2016-17) <sup>[2]</sup>. The study was designed and carried out with the objectives of studying the factors responsible for change in cropping pattern and the improvement in socio economic condition of the farmers in the Ariyalur district of Tamil Nadu.

**Methodology**

This research used a qualitative research methodology for an in-depth study. The criteria for village selection has cashew smallholder households at more than 60 per cent of the total households in the villages and those farmers were adopted cashew crop more than 15 years. Ariyalur district consist of six blocks, among the blocks Sendurai and Andimadam block were selected based on the more area under cashew crop.

**Correspondence**

**A Rajkala**

Subject Matter Specialist (Agrl. Extension), CREED Krishi Vigyan Kendra, Ariyalur District, Tamil Nadu, India

Four villages viz., Ponparappi, Sirukalathur, Kuvagam and Thennur were selected from Sendurai and Andimadam block respectively. Total 120 cashew farmers were selected based on random sampling technique.

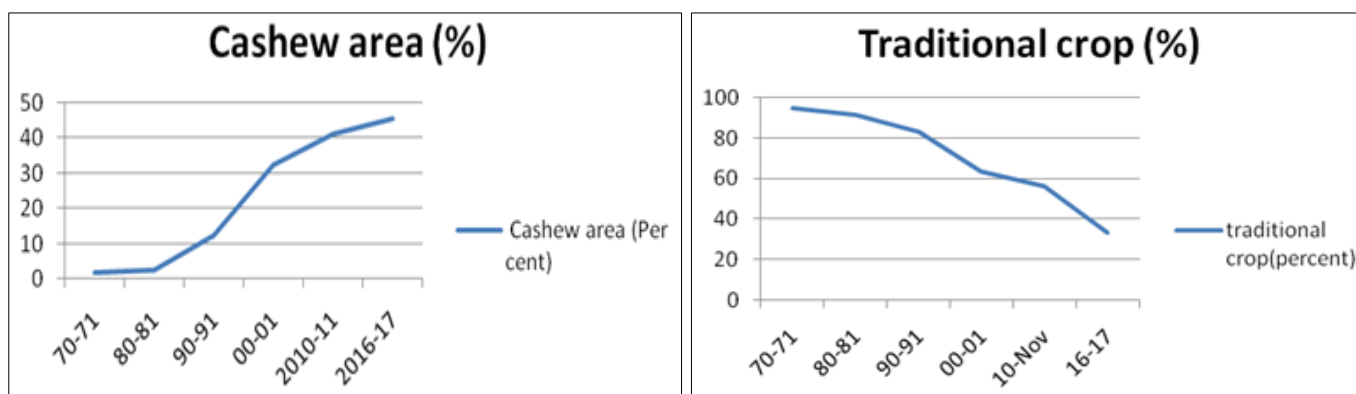
**Result and Discussion**

**Change in cropping pattern during 1980**

In 1980-81, the major crop grown in the blocks was Kodo millet. It covered 25.30 percent of the gross cropped area of 48,285 ha. The next major crop was sorghum (19.44%) followed by groundnut (11.58 %), small millets (6.59 %), pearl millet (4.25 %), green gram 3.66 (%) and blackgram (3.22 %) (Dept. of Agriculture, 2017-18). The area covered by finger millet, cotton and fruits and vegetables each ranged between 2 and 3 per cent, while the area covered by maize, red gram, black gram, sesame and chillies ranged between 1 and 2 per cent only. The rest of the crops, viz. other pulses, sugarcane and other oilseeds covered less than 1 per cent each of the gross cropped area.

**Change in cropping pattern during 2000**

While the changes in the cropping pattern in the blocks during the period 1985-86 to 2010-2015, position of the most dominant crop. Kodo millet remained more or less the same (see Fig. 1). In fact, the proportion of Kodo millet area in gross cropped area kept increasing reaching a peak of 31.27 per cent in 1983-84. However, there was a drastic fall thereafter and in 1987-88 it fell to 25.17 per cent. The area under total cereals and millets also declined drastically due to the shift towards cashew crop. The proportion of area under cashew increased from 1.95 per cent in 1970-71 to 2.55 per cent in 1980-81, 12.36 per cent in 1990-91, 32.5 per cent in 2000-2001, 41.1 per cent in 2010-11 and 45.54 per cent in 2016-17 (Dept. of Horticulture, 2017-18). Similarly, a significant area maintain in the prominence of pulses, oil seeds (Fig.1).



**Fig 1:** Trend of changing of cropping pattern at Ariyalur district from 1970 to 2017

Remarkably, significant area gains were identified in the cashew in Sendurai and Andimadam block of the Ariyalur district. For instance, in 2009 onwards, the expansion of area under cashew crop noticed increasing growth due to the technology ICAR interventions of KVK, Ariyalur. Particularly, there are two blocks jointly contributes more

than 85 per cent in the total cashew production in the district. Although, the growth of cashew nut yield is higher in a resource poor district in Ariyalur.

**Change in income from the traditional crops to cashew farming**

**Table 1:** Economics of cashew diversification in Ariyalur district

Village	Cropping Pattern	1980's Net income/year/acre (Rs.)	2016-17 Net income/year /acre (Current year) (Rs.)	2016-17 Net income from Cashew/year/acre (Rs.)
			Single Cashew cropping	Single Cashew cropping
Ponparappi	Groundnut /Blackgram Kodo millet	3689	21500	28000
Sirukalathur	Kodo millet/ Cowpea/ Bajra	2941	15600	28800
Kuvagam	Kodo millet / ragi	2840	11600	28900
Thennur	Kodo millet / Cowpea/ Bajra	2950	16400	28800
	Average	3,105	16,275	28,625

Table-1 depicts that during 1980's farmers belongs to Ponparappi, Sirukalathur, Kuvagam, and Thennur villages adopted the traditional cropping pattern and an average income was found to be Rs. 3105. In the year 2016-17 there was difference in income earned between the farmers who adopted the cashew crop. It was found that an average income from traditional crops during 2017-18 is Rs.16, 275 whereas it is Rs.28,625/year/acre for the cashew farmers during same

year. An additional income of Rs. 25,520/year/acre reaped by the cashew growing farmers and it certainly resulted in improved livelihood and socio economic condition of cashew farmers when compared with the farmers growing traditional crops.

**Change in employment generation from the traditional crop to cashew**

**Table 2:** Employment generation of cashew diversification in Ariyalur district

Year	1980-81	1990-91	2000-01	2015-16
Traditional cropping pattern Manday/ year	65	36	30	97
Cashew cultivation Manday/ year	70	97	128	156

The information furnished in the Table-2 reveals the difference in employment generation between the traditional cropping pattern and cashew production system. There was a gradual up and down in man day / year i.e. during 1980 – 81 it was found to be 65 manday / year but during 1990 – 91 and 2000 – 01 it was decreased to 36 & 30 manday / year because people migrated to milling industries as there was less income from traditional crops. In later year 2015 – 16 it was again increased to 97 manday / year. In cashew cultivation, manday / year was found to be 70 during 1980 – 81 but during 1990 - 91 it was increased to 97 and 2000 – 01 it was 128. During the year 2015 – 16 the manday / year was increased to 156 as people from milling industries came back to farming practices because cashew cultivation generates more employment to the rural people for various operations such as pruning, weeding, water harvesting measures, plant protection, harvesting and processing.

### Ensuring food security through cashew crop

Cashew is known as cash crop for farmers. As per the fact cashew cultivation increases income generation of farmers as it has less cost of cultivation than the traditional crops and also the market value of cashew is high in current scenario. Apart from this, the processed cashew nut has high demand in market and has high export value which certainly increases farmers' income.

Cashew is a perennial crop which generates various employment opportunities for rural people throughout the year at various stages. Cashew cultivation includes various practices such as pruning, weeding, creation of water harvesting structure, harvesting, processing etc., in the recent technology package. These operations required maximum of labour force which leads to employment generation among the rural people.

Previous data from a 2010 household survey (Anon, 2010) [3] also reveals that cashew accounts for 26% of the income (net of remittances) in female-headed households and for 35% in male-headed households. As such, cashew is the most important source of monetary income, in addition to being the core of both economic performance and poverty reduction. As it is a perennial cash crop, it acts as source of income and employment generating point for both land holders and labours. Due to the better income from cashew farmers could ensure their food needs.

### Conclusion

It could be concluded that there was the tremendous change in cropping pattern adopted in the Ariyalur District. The change in cropping pattern from traditional crops to cashew cultivation. The cashew crop paved the way for improved food security, income and employment generation through sustainable cashew farming in the Ariyalur district of Tamil Nadu.

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