

## A FARMER INNOVATION ON COCONUT PALM CLIMBING DEVICE PRESENTS EMPLOYMENT OPPORTUNITIES FOR RURAL YOUTH

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### Introduction

Unemployment of rural youth is considered as a serious social problem. Hence, technological interventions having potential for generating employment opportunities for rural youth should be given emphasis while planning for sustainable development in farm sector. Harvesting of coconuts and plant protection operations in the crown of coconut palms is quite a difficult task owing to the tall, non-branching growth habit of palms. The traditional way of climbing palm is quite tedious, risky and requires lot of skill. Earlier days, skilled labourers belonging to certain communities were engaged in climbing coconut palms for harvesting nuts, crown cleaning and toddy tapping. Due to various socio-economic factors, the number of such traditional skilled palm climbers is steadily declining. Difficulty to get the service of skilled coconut climbers in time and their high wage rate are thus perceived as important constraints.

It was a challenge to the technology developers to fabricate a simple, safe and easy to use device for climbing coconut palms, which could even be operated by an unskilled person. It was in this background that a competition was held for



*Training programme for rural youth on coconut climbing organized by Krishi Vigyan Kendra, CPCRI*

fabrication of implements and devices useful to the coconut cultivators in connection with the Diamond Jubilee celebrations of Central Plantation Crops Research Institute (CPCRI), Kasaragod

way back in 1978. Mr. M. J. Joseph, that time a young farmer from Chemberi village of Kannur District in Kerala State, took up this challenge. With his innovative idea he fabricated a novel mechanical

device for climbing coconut palms and was exhibited during the celebrations. Prototype of the mechanical palm climber developed by Mr. Joseph was well appreciated by the scientists and it also attracted the attention of coconut growers.

Encouraged by the appreciation and financial support received during the exhibition he modified the climbing device to the present form. The instrument was patented in the year 1985. Mr. Joseph, 86 years old, from Muthukulathil House, migrated from a village called

climber, because he himself has experienced the physical strain and drudgery involved in the traditional method of climbing arecanut and coconut palms in his younger days. That time onwards he used to think about developing a simple, safe and cheap mechanical device that would reduce the physical strain and drudgery of palm climbers.

### Coconut palm climbing device

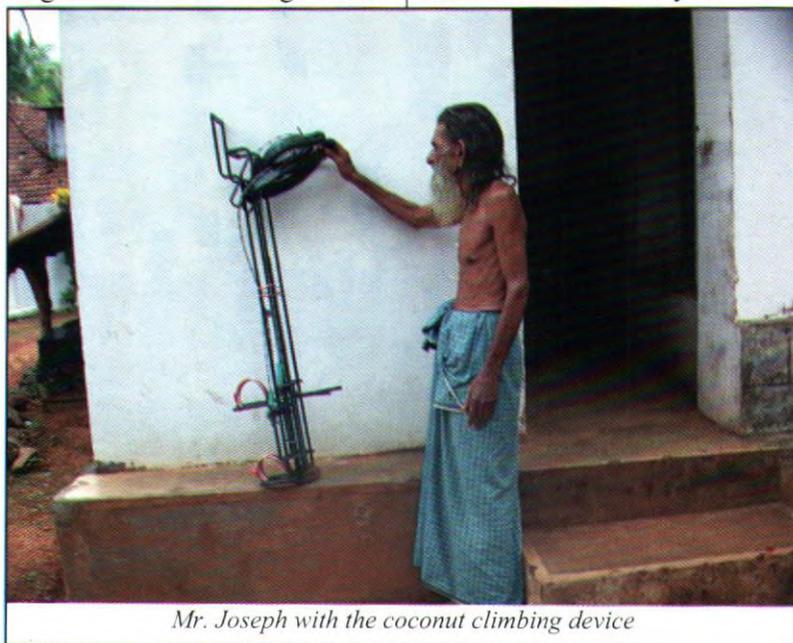
Though Mr. Joseph had the idea of making a palm climber, fabrication of the same was not an easy task. His

in 1981, he established St. Mary's Industries and Research Centre, his own workshop, and started the fabrication and sales of coconut palm climbers. According to Mr. Joseph, so far, about 10,000 units of palm climbers have been sold out.

The device consists of a pair of units, one each for left and right side, made of MS rod, wire rope and hard rubber pad made of discarded rubber tyres. Each unit consists of a foot rest with a belt to hold the foot, handle to hold, body frame and palm holding pad and ropes. The unit consists of a lengthy handle to be fixed to the palm to the left hand side by bringing the ropes round the palm and insert into the 'U' hook provided. The ends of both the ropes are fastened to the bolt provided. The same procedure needs to be followed for the right hand side unit also.

### Operation of the climbing device

- Before climbing, the operator needs to fix the climbing device, both left and right units, to the palm with the help of the wire rope provided.
- After fixing the unit to the palm, the operating person holds the handles of both the units first and then climbs on the units by keeping both legs in the foot rest provided.
- Then the right unit of the device is lifted by hand to



*Mr. Joseph with the coconut climbing device*

Muzhoor in Kottayam District along with his family to the hilly terrains of Puranjan, Chemberi in Kannur District in search of cheap land for cultivation in the year 1948 when he was a 27 years old. A person having innate engineering skill, Mr. Joseph devoted his energy and brain for developing the palm

main constraint was the non availability of a workshop facility in the near vicinity. Chemberi that time a remote village and was not having any such facility including proper transportation. The nearest workshop where he could do even welding works was 20 k.m. away at Taliparamba. In

about 30-40 cm after loosening the rope with the help of the right leg.

- After lifting the unit, press the foot downwards to hold the palm firmly by the rope and pad provided.
- Repeat the operation by the left unit without releasing the body weight from the left unit. The operation will be repeated to reach the required height.
- For climbing down, the reverse operation will be followed, ie, release the wire rope of the left unit by lifting the foot rest. Bring down the left unit by 30-40 cm and then put the body weight on the left foot rest. The same procedure should be followed for the right unit. While climbing down, care should be taken not to overlap the ropes of the climbing units. This may lead to jamming of the device.

Using this device, a coconut palm of 40 m height could be climbed in 1-2 minutes, while it takes 4-5 minutes for the traditional climbing method.

### Awards and recognition

Mr. Joseph has been bestowed with many awards and recognitions for his coconut climbing machine, the first ever device in the world for climbing coconut palms. His invention was very much appreciated and he got a prize

and certificate of merit in the competition organised in connection with the Diamond Jubilee celebrations of Central Plantation Crops Research Institute (CPCRI) in 1978. In 1985, Mr. Joseph was awarded Rs.15,000/- as cash prize for his invention by the National Research Development Corporation of India (NRDC). In 2002, the National Innovation Foundation, Ahmedabad, recognized him for the grass root level innovation.

### Employment opportunities for rural youth

Mr. Joseph believes that palm climbing device would provide employment opportunities for unemployed youth. Recently he organized training programmes on coconut climbing for the selected members of women's Self Help Groups from Kannur District. His four sons are engaged in fabrication and sales of palm climbers. They are running their own workshops for the same in different localities.

Many labourers are using the mechanical climber for climbing coconut palms. State government of Kerala implemented schemes to popularize the use of coconut climbing device under the Comprehensive Coconut Development Programme. Under the decentralized planning programme being implemented since the last few years, many local grama panchayats also encouraged

the use of the palm climbing device by providing subsidy for purchasing the same.

The potential for training unemployed rural youths for coconut climbing using this mechanical device is well appreciated by various agencies like Central Plantation Crops Research Institute, Coconut Development Board, local bodies and NGOs. Accordingly many rural youths, including women, are trained in coconut climbing as an income generating activity.

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