

Socio-economic Values of Crop Wild Relatives

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PRESENTATION OUTLINE

- 1. Introduction**
- 2. Southern Province Case Study**
- 3. Sabaragamuwa Province Case Study**
- 4. Central Province Case Study**



INTRODUCTION

Crop Wild Relatives (CWR) are the plants related to socio- economically important wild spp. which include ;

- ² food crops,**
- ² fodder and forages,**
- ² condiments,**
- ² medicinal plants,**
- ² ornamental plants,**
- ² timber plants, *etc.***

² However, socio-economic values of such plants are not well identified, therefore, encountered an extensive extraction.

² In addition, habitat destruction, and human activities leading to development also have made a limitation to their existence.

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2 As a result, they are under serious threat, and therefore. conservation has become a valid intervention.

2 Main objective of this investigation was to identify the socio-economic values of selected CWR

METHODOLOGY

Southern Province case study:

- ² The study focused on two CWR in the Southern Province
- ² *Kapuru Kurundu (Cinnamomum capparucoronde Blume)*
- ² *Thumba Karawila (Momordica dioica L.)*

Kapuru Kurundu;

- 2 The *Kanneliya* – *Dediyagala-Nakiyadeniya (KDM)* forest complex is regarded as a rich area for plant diversity



2 This complex is located in the southern part of Sri Lanka, about 35km north-west of *Galle*.

2 Surrounding villages of *kanneliya* were selected as the study location.

2 The field investigation was executed between May 2008 to December 2009 period.

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2 A series of informal discussions has been conducted with farmers in surrounding village of *kanneliya* forest reserve.

2 Discussions were held with forest officers



2 The researchers participated in the awareness workshops executed for community members.



Thumba Karawila;

² Widely distributed in *Thanamalwila*, *Jandura*, *Suriyawewa*, and *Angunukolapelessa* in *Hambantota* district.

² The study selected following locations for the field investigation.

Jandura

Yaya 17

Angunakolapelessa

2 Interviews were made with the collectors, traders, and farmers.

2 Observations were made in the field, research station, and market fairs



RESULTS

Kapuru Kurundu;

- ² ***Kapuru Kurundu* is a tree (height 15-20') with gray or brown bark (girth - 18") and also with aromatic leaves.**



Tree



Leaves



Bark



Flowers

- 2 The extraction of *Kapuru Kururndu* is prevailing in surrounding villages of *Kanneliya* forest reserve.
- 2 It was revealed that certain illegal groups are geared for this activity.
- 2 The villages where such activities are prominent have been identified as, *Walankanda, Dediyaawela, Ensawatta,* and *Weerapana.*

Potential uses and economic value

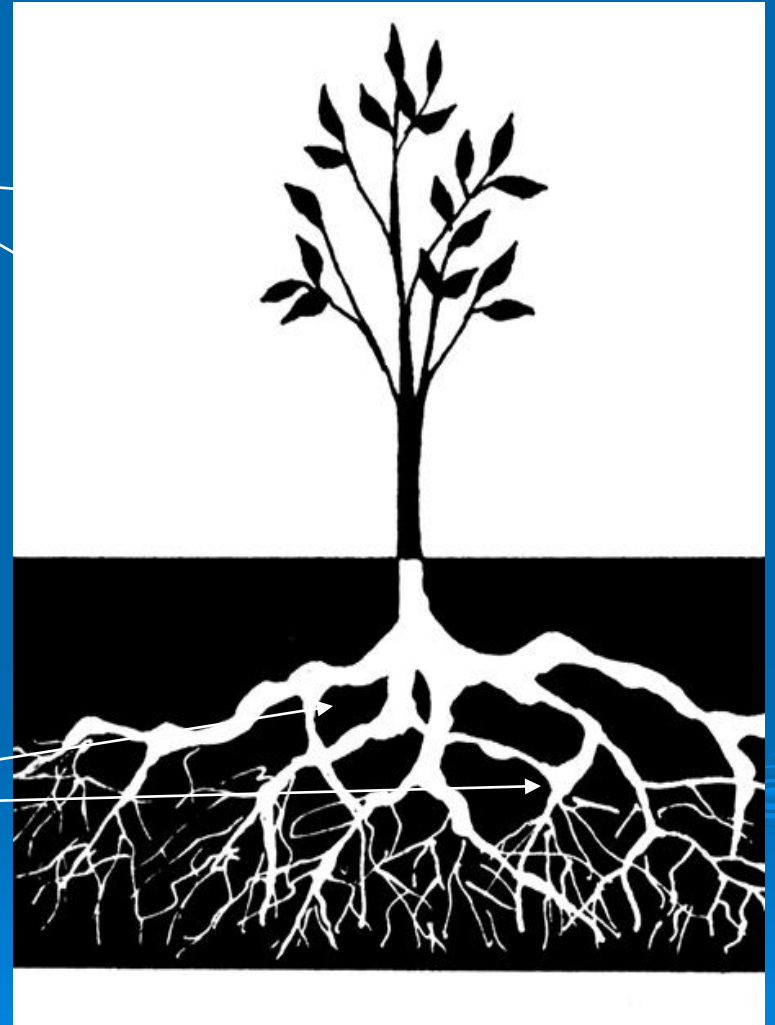
- ² Eugenol is the major component in stem-bark oil. Also the oil can be extracted from the leaves.

Eugenol

- ² Camphor is the major component in its root-bark oil.

- ² The bark, smelling of nutmeg or cloves is sold as a medicine.

Camphor



- 2 Traded with other endemic cinnamon spp. (*wal-kurundu*)

- 2 The wholesale market price of *wal-kurundu* was between Rs. 250 to 350/kg whereas cinnamon was marketed for Rs. 400/kg

- 2 *Kapuru-Kurundu* is directly used as a local medicine for toothache, bronchitis, rheumatism, snake bites, and fractures.
- 2 In addition, eugenol is a chemical used for western medicine, industrial preparations, pesticides, *etc.*

Thumba Karawila;

² A perennial crop with tuberous root.

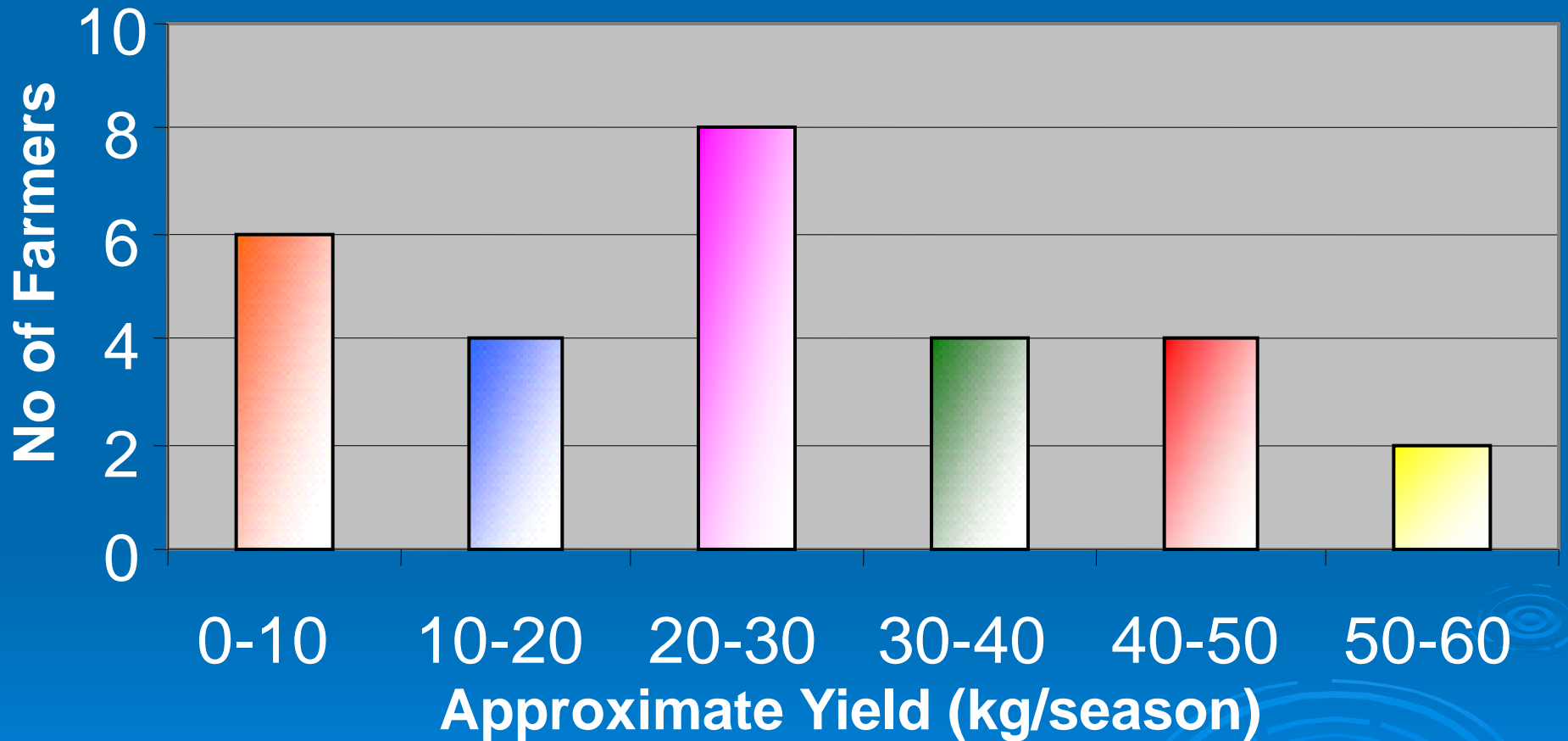


2 In the study area, community members do not cultivate *Thumba Karawila*.

2 Villagers used to go to the jungle at the beginning of the fruiting season,

- live in temporary huts**
- Train the plants and provide protection**

² Yield for one season



² Cost of production of the crop is very low

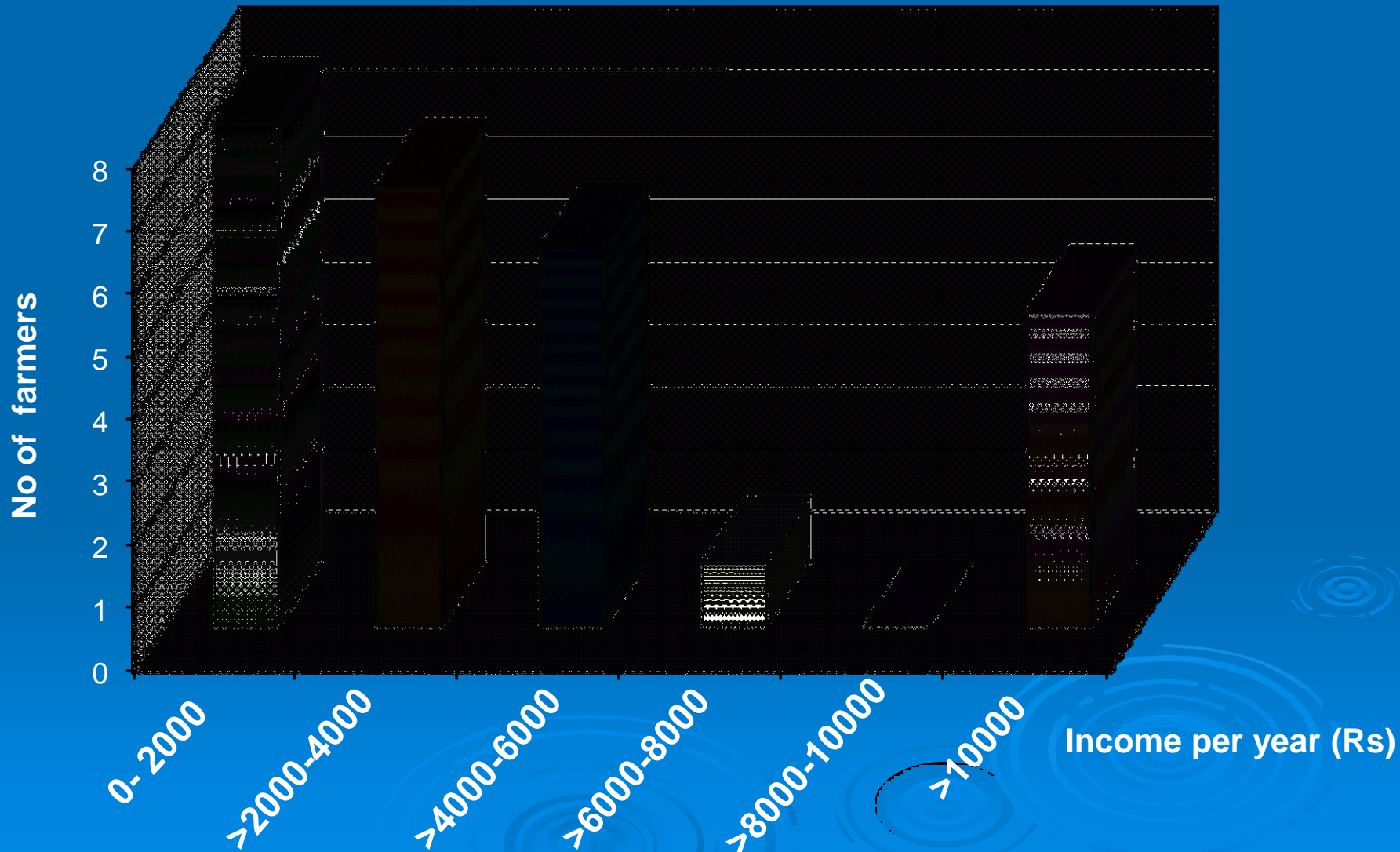
- 2 The phenolic compounds contained in the fruits have an inhibitory effect on amylase and glucosidase enzyme activity
- 2 Reduce glucose release during carbohydrate digestion
- 2 Further, *Thumba Karawila* is used as a medicine for bowel affections and urinary complains.

- 2 Wildly used as a vegetable. Price of the fruit in the market is significantly higher with compared to other vegetables.
- 2 The retail market price for fruits fluctuates between Rs. 140 to 200 /kg



Farmers can obtain a significant income.

Annual income from Thumba Karawila



CONCLUSIONS

- 2 *Kapuru-kurundu* has a significant economic value, especially because of its chemical composition (medicinal value).
- 2 *Thumba-Karavila* is regarded as a healthy vegetable (without pesticide residuals). Therefore market price is very attractive for the traders.
- 2 However, the crops are still confined to jungles and reserves, and the demand exceeds the supply. Hence, conservation and propagation will be warranted for their existence.