

# Promoting cultivation of underutilized horticultural species through a dedicated nursery: a success story from Andaman and Nicobar Islands, India

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## Abstract

Andaman and Nicobar Islands are bestowed with rich phyto-diversity of horticultural significance. Out of 46,000 ha of cultivable land in the Islands, area under native perennial underutilized species is abysmal mainly due to lack of awareness and availability of their planting material. A dedicated nursery viz. Horticultural Plants Propagation Unit (HPPU) was established during 2019 in which nursery techniques were standardized for 15 native underutilized species and 33 species (including endemic and rare) are presently being multiplied. Within two years of its existence, HPPU has been a prominent source of planting material of underutilized species for local farmers, urban gardening enthusiasts, hoteliers, government and non government agencies, educational institutions, tribal and non-tribal afforestation activities. Visitors of HPPU are apprised about cultivation and utilization aspects of underutilized species being multiplied. To enhance the reach, awareness and plantation programmes are undertaken in collaboration with various stakeholders.

## Introduction

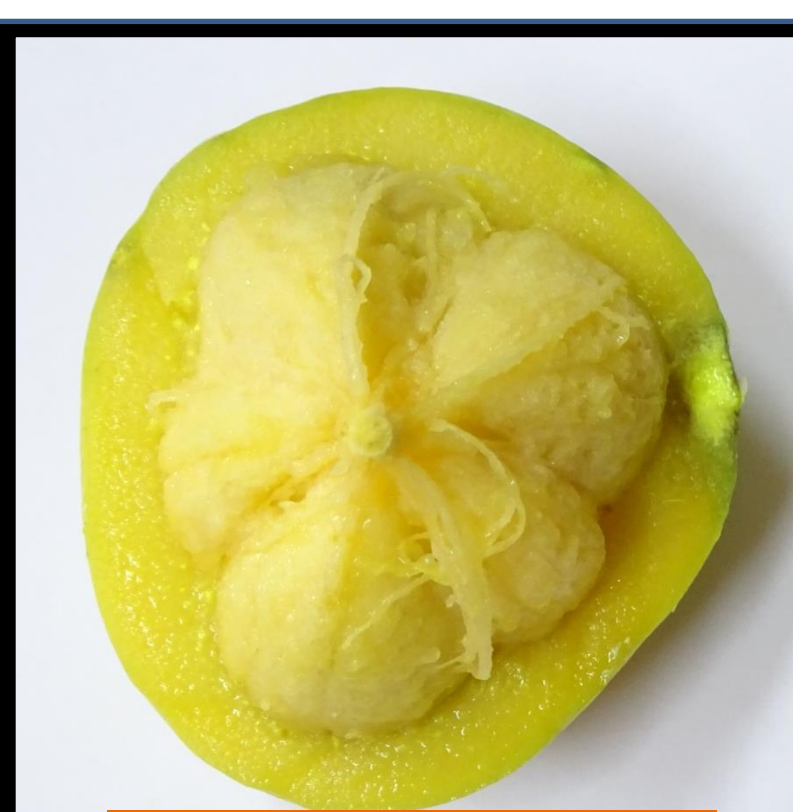
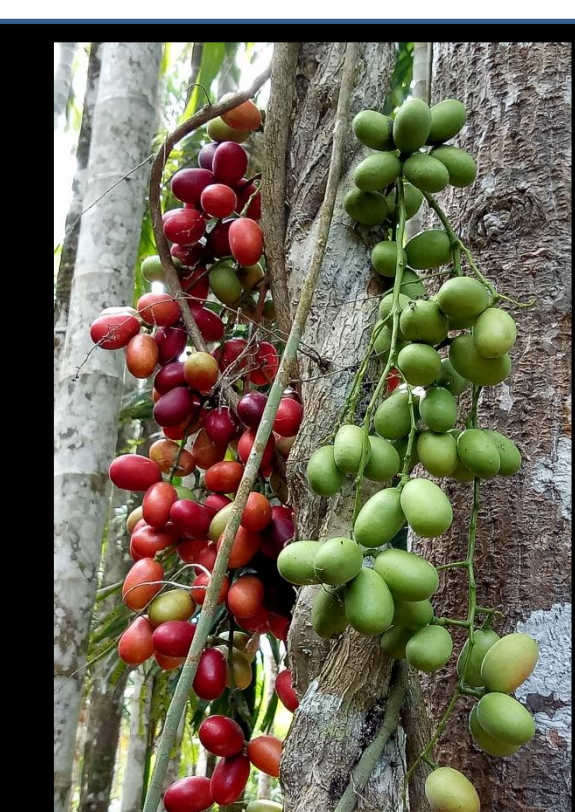
- Standardized nursery techniques for **15 native** underutilized species
- Mass multiplying **33 underutilized** species
- Source of planting material for **afforestation and farming**
- Facilitating **domestication** of novel crops identified for cultivation in the islands
- Site for **hands on training** to island youth



A General view of Horticultural Plants Propagation Unit (HPPU) at ICAR-CIARI, Port Blair

## Species being multiplied at HPPU

| Family         | Species (names in red indicate native species of Islands)   |
|----------------|---|
| Anacardiaceae  | <i>Spondias dulcis</i>  |
| Apiaceae       | <i>Eryngium foetidum</i>  |
| Clusiaceae     | <i>Garcinia andamanica</i> , <i>G. celebica</i> , <i>G. cowa</i> , <i>G. dhanikhariensis</i> , <i>G. dulcis</i> , <i>G. gummi-gutta</i> , <i>G. kydia</i> , <i>G. mangostana</i> , <i>G. xanthochymus</i> |
| Euphorbiaceae  | <i>Baccaurea ramiflora</i>  |
| Lauraceae      | <i>Cinnamomum tamala</i> , <i>C. verum</i>  |
| Malpighiaceae  | <i>Malpighia punicifolia</i>  |
| Menispermaceae | <i>Haematocarpus validus</i>  |
| Moraceae       | <i>Artocarpus camansi</i> , <i>A. heterophyllus</i>   |
| Myrtaceae      | <i>Syzygium aqueum</i> , <i>Syzygium malaccense</i>   |
| Oxalidaceae    | <i>Averrhoa bilimbi</i>   |
| Passifloraceae | <i>Passiflora edulis</i> var. <i>flavicarpa</i>   |
| Piperaceae     | <i>Piper chaba</i> , <i>P. longum</i> , <i>P. pendulispicum</i> , <i>P. sarmentosum</i>   |
| Poaceae        | <i>Cymbopogon flexuosus</i>   |
| Rutaceae       | <i>Aegle marmelos</i> , <i>Citrus grandis</i> , <i>C. limon</i>   |
| Tiliaceae      | <i>Grewia calophylla</i>  |
| Zingiberaceae  | <i>Curcuma amada</i> , <i>C. mangga</i>   |



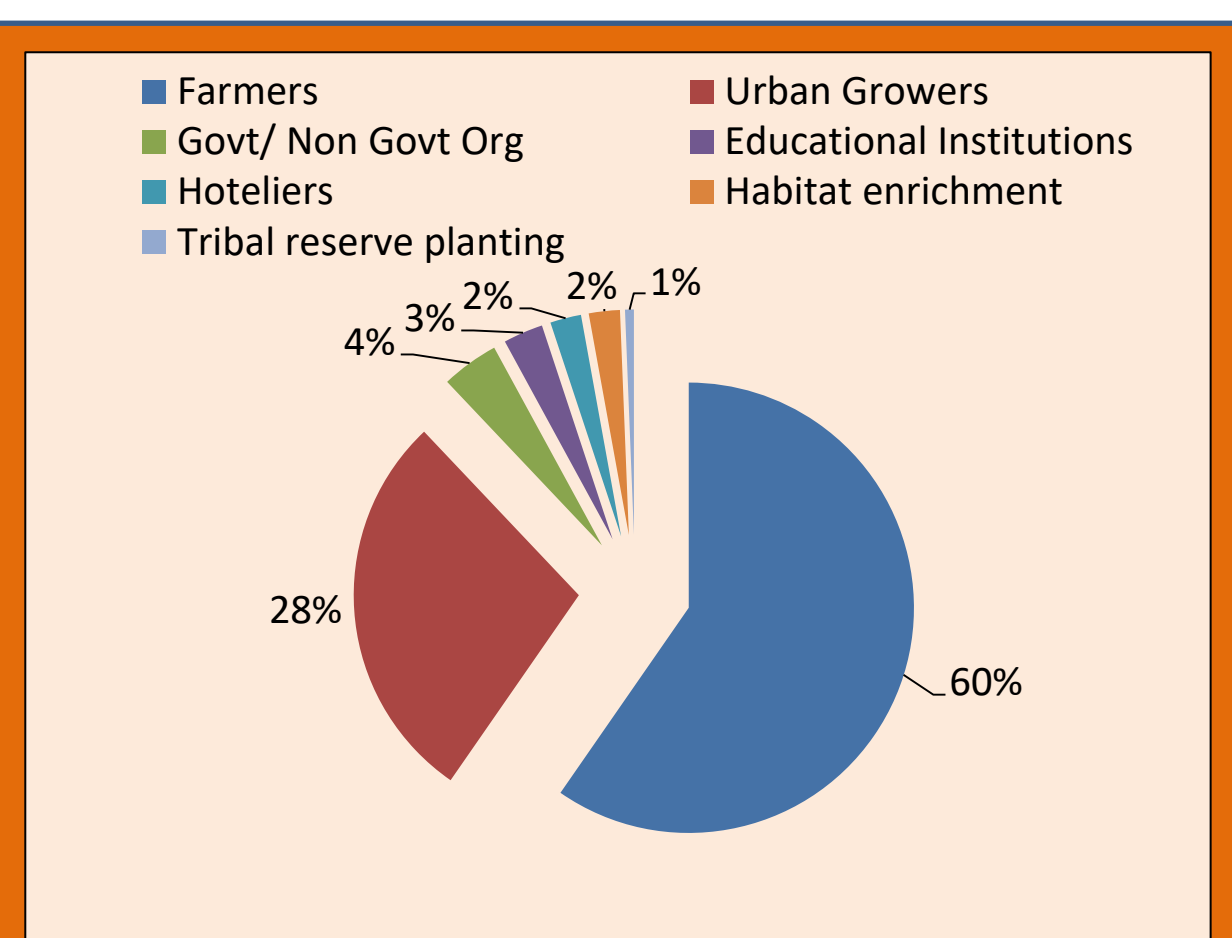
*Haematocarpus validus*

*Garcinia dhanikhariensis*

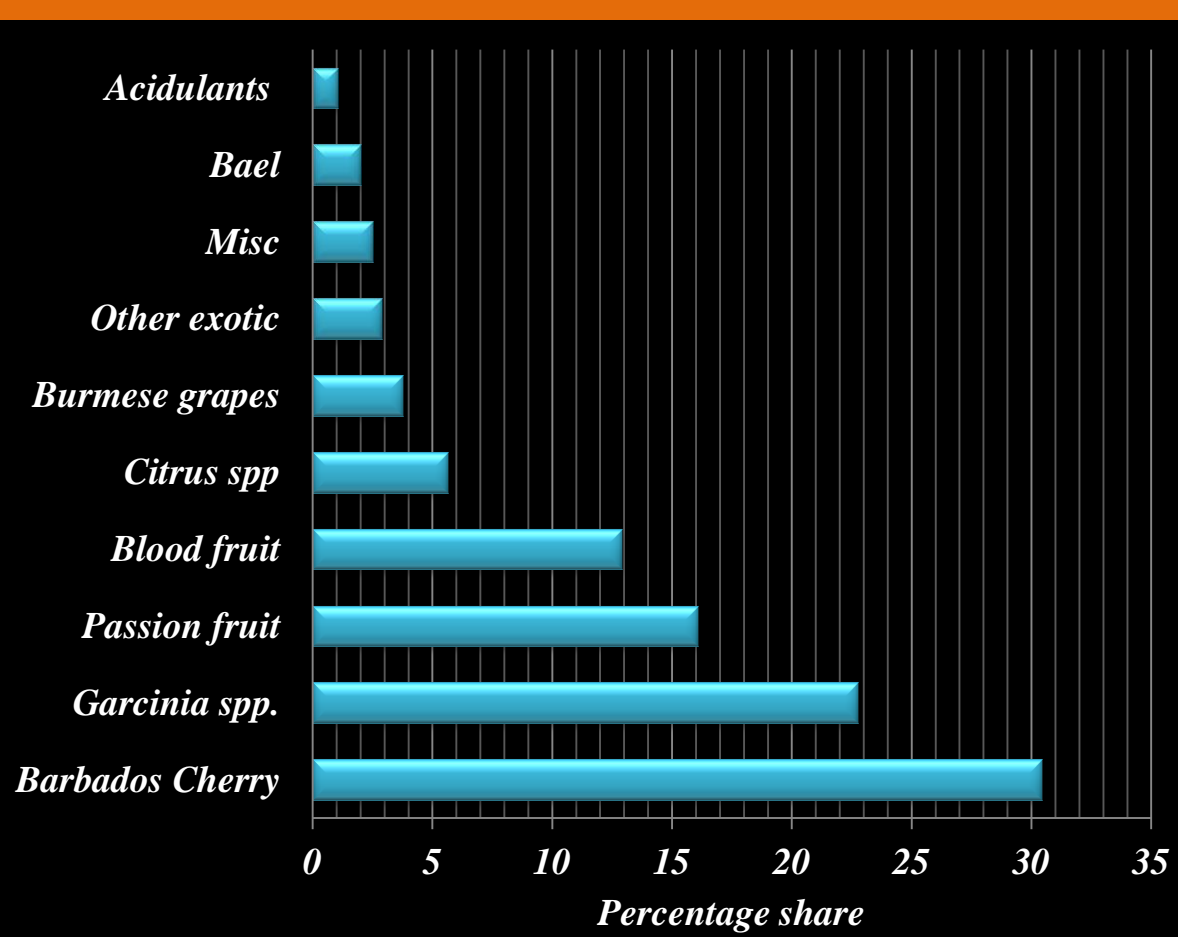
*Garcinia andamanica*

*Piper pendulispicum*

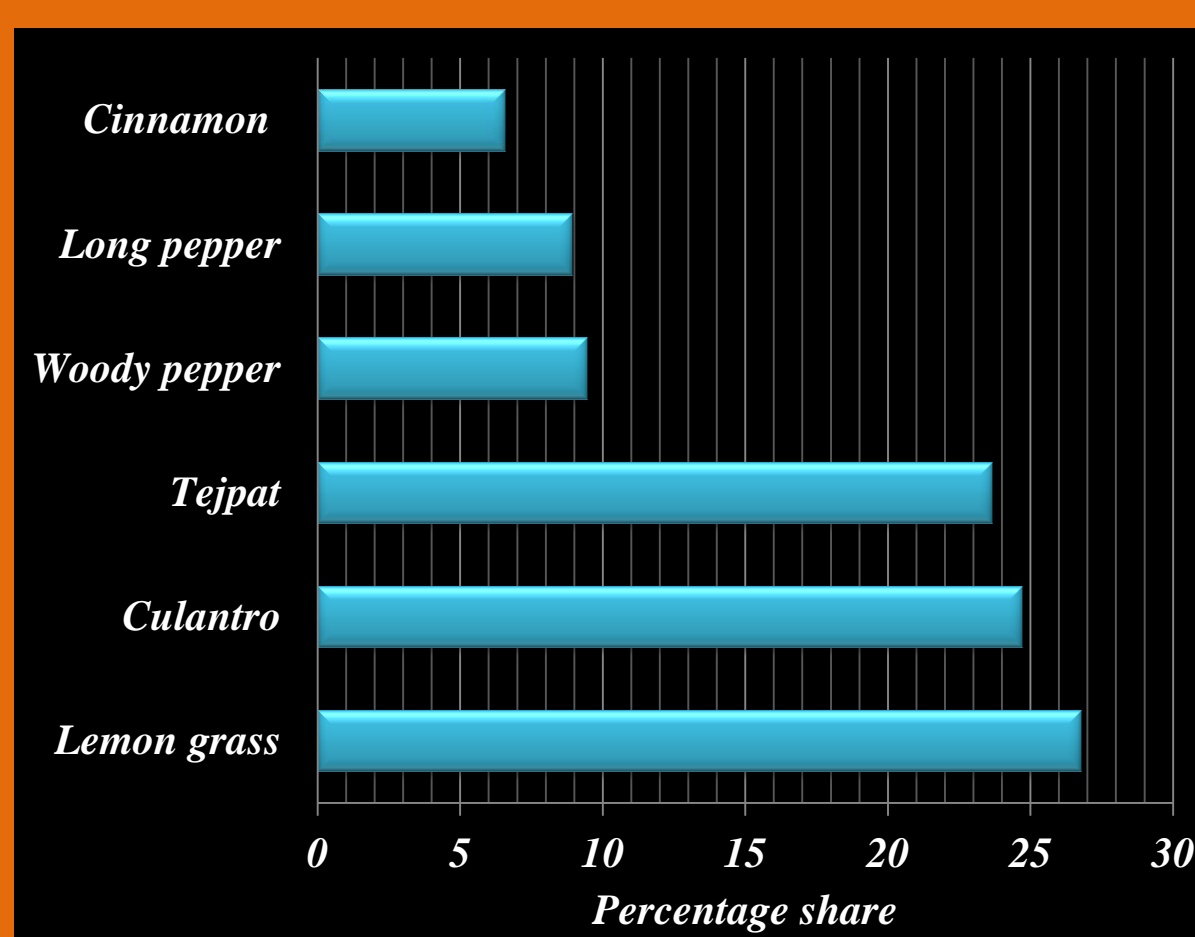
## HPPU Facilitating Domestication of novel crops in the Islands



## Stakeholders benefitted



## Share of Underutilized fruits in distribution from HPPU



## Share of minor Spices in distribution from HPPU



HPPU: Glimpse of planting material of underutilized species being transported to far flung tribal island for afforestation



HPPU: Educating island youth through hands on training on propagation

## Conclusion

Thus, HPPU has contributed in conservation of native species through promotion of their cultivation apart from providing livelihood and nutritional security to the native and settler island dwellers. .