

# ISSUES AND SOLUTIONS OF FRESH FRUITS EXPORTS IN INDONESIA



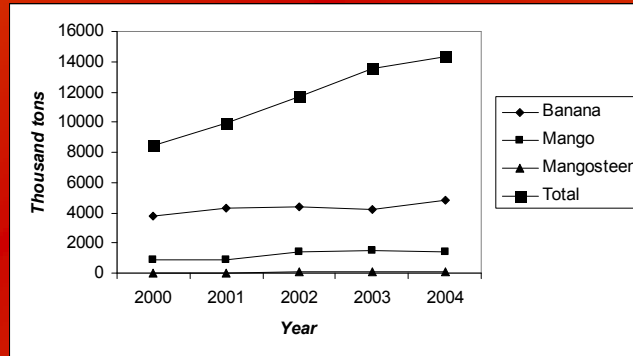
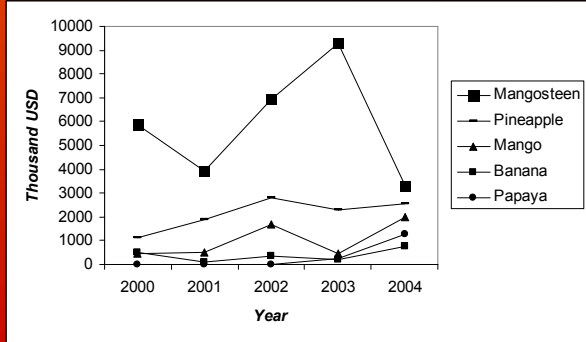
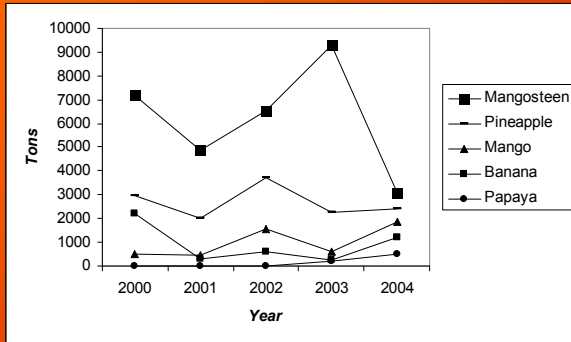
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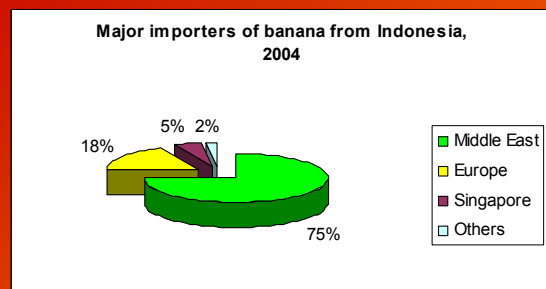
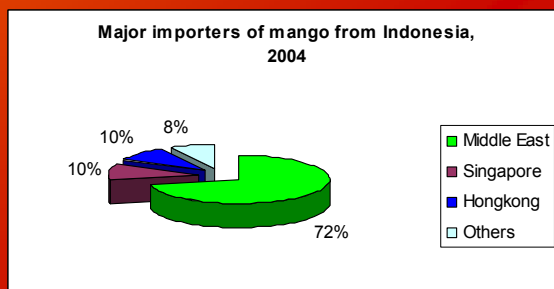
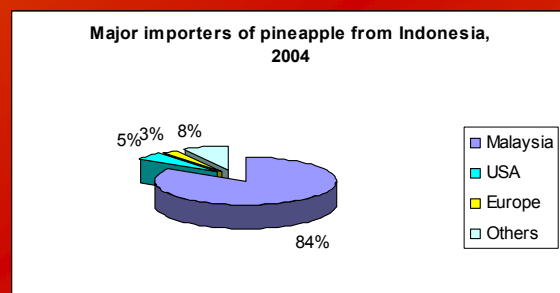
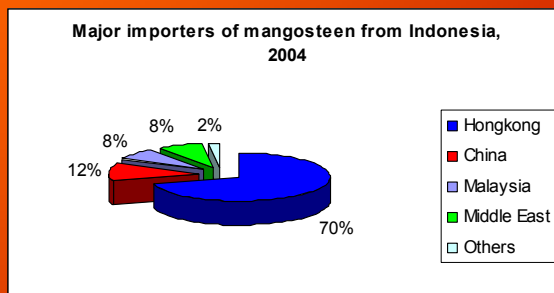
APCAEM  
International Seminar on Enhancing Competitiveness of Asian Fruits  
Bangkok, Thailand, 18-19 May 2006

## INTRODUCTION

- ❑ Indonesian exports of fresh fruits have been fluctuating, whilst the fruit production remained relatively stable.
- ❑ Major fresh fruit exports are mangoesteen, pineapple, mango, banana, and papaya.
- ❑ Total export value is less than 1 % world share market and about 10 % out of the total volume of production.
- ❑ Major importing countries are Hongkong for mangoesteen, Malaysia for pineapple, and Middle East for mango and banana.



## MAJOR IMPORTING COUNTRIES FOR INDONESIAN FRESH FRUITS EXPORTS



## ISSUES

- ❑ Competition with domestic fruit market for the price of prime quality and total demand.
- ❑ Requirement of intensive effort for introducing and adoption of good practices due to more small-scale growers.
- ❑ Lack of integrated system to meet increasing hi quality and food safety standard of importing countries.
- ❑ Driven to choose either supplying the export market or the domestic one.

## STRENGTHENING INST. INVOLVED IN FRUIT DEVELOPMENT

- ❑ Foundation of CETROFS (Center for Tropical Fruits Studies) since 1997, stationed at IPB, sponsored by Min. Res. & Technol.
- ❑ Improved agricultural practices of mangoesteen small scale growers increasing the export quality from 5 % to 40 % of production.
- ❑ International cooperations to implement GAP such as the project of Integrated Horticultural Development in Upland Area sponsored by JICA



Before improvement

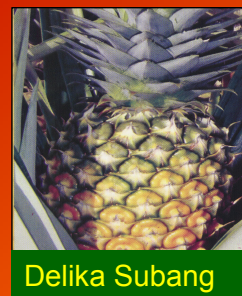
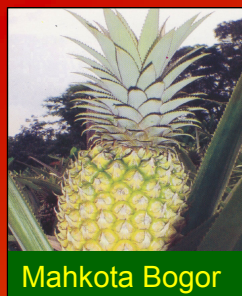
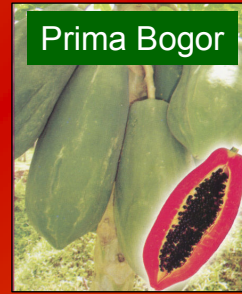
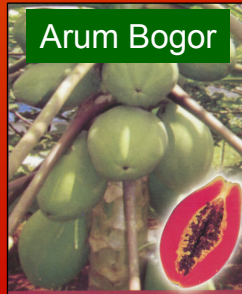
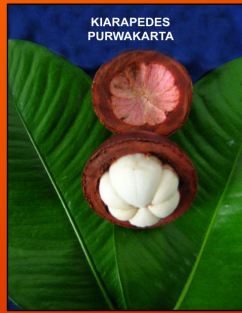


After improvement

## DEVELOPMENT OF NEW HYBRID VARIETIES

- ❑ New hybrid varieties has been released for mangoesteem, pineapple, papaya, banana and melon.
- ❑ Germ plasms have been collected : 61 pineapple genotypes, 75 papaya, and 230 banana.
- ❑ Genetic markers for some fruit varieties have been determined.





## Research Results on Technological Development

### DNA markers for sex expression in papaya



Male

Female

Hermaphrodite



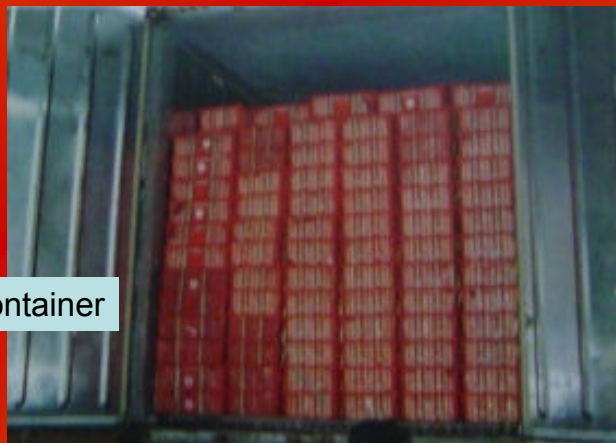
## SUPPLY CHAIN & COLD CHAIN DISTRIBUTION SYSTEM

- ❑ Construction of packing houses at the prod. center and sub-terminal agribusiness at district cities.
- ❑ Implementing cold chain distribution system from the growers to exporters.
- ❑ Improving sea-freight handling at the inter island connection.
- ❑ Introducing CA and MAS for sea-freight to importing countries.



Packinghouse at Bekasi, West Java

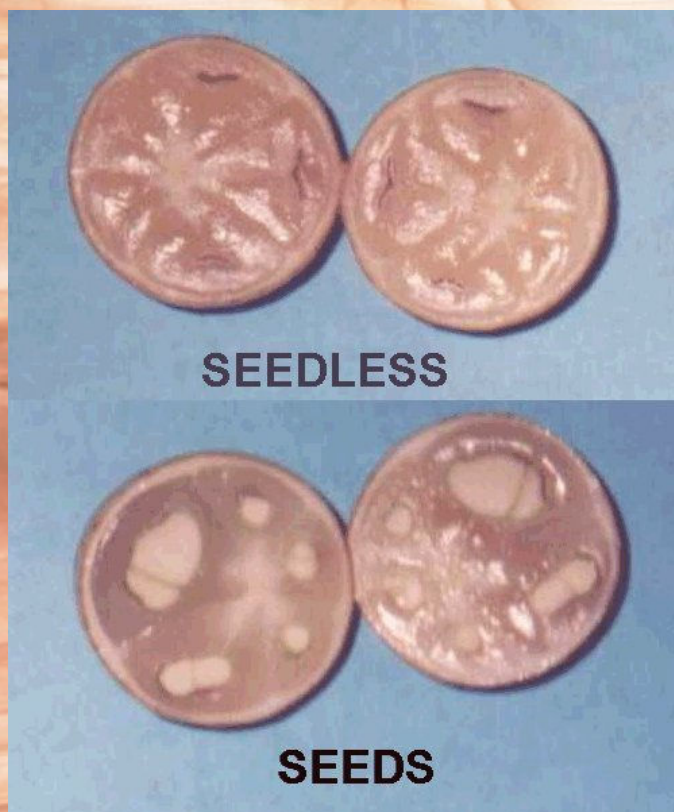




Refrigerated container

## RESEARCH AND DEVELOPMENT: NON-DESTRUCTIVE QUALITY EVALUATION

- ❑ Grading of lanzone to separate seedless fruits using visible light.
- ❑ Grading of mango by color using image processing and by taste using NIR reflectance.
- ❑ Evaluating the maturity and ripeness of durian using ultrasonic method.
- ❑ Detecting maturity, ripeness, and defects of mangoesteen using ultrasonic.

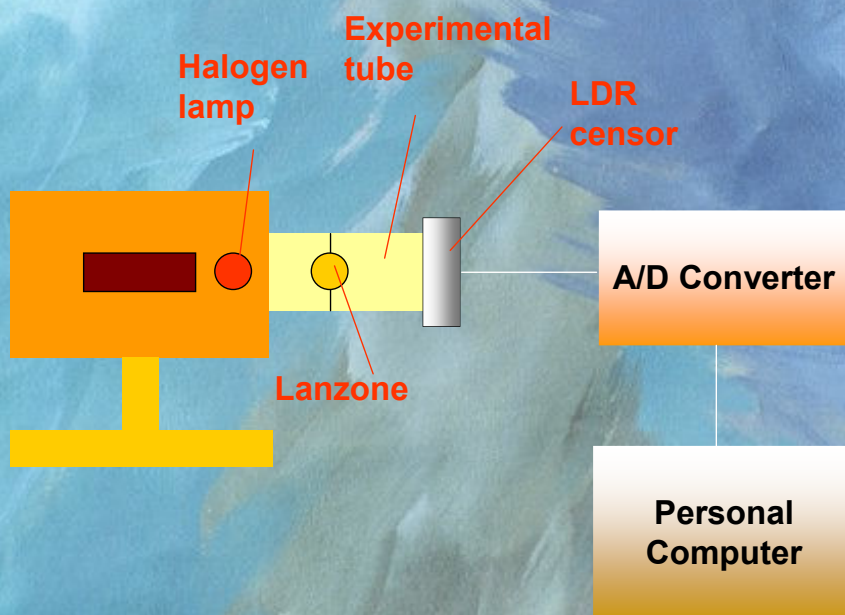


**CROSS-SECTION  
OF SEEDLESS  
LANZONE FRUIT  
AND FRUIT WITH  
SEEDS**

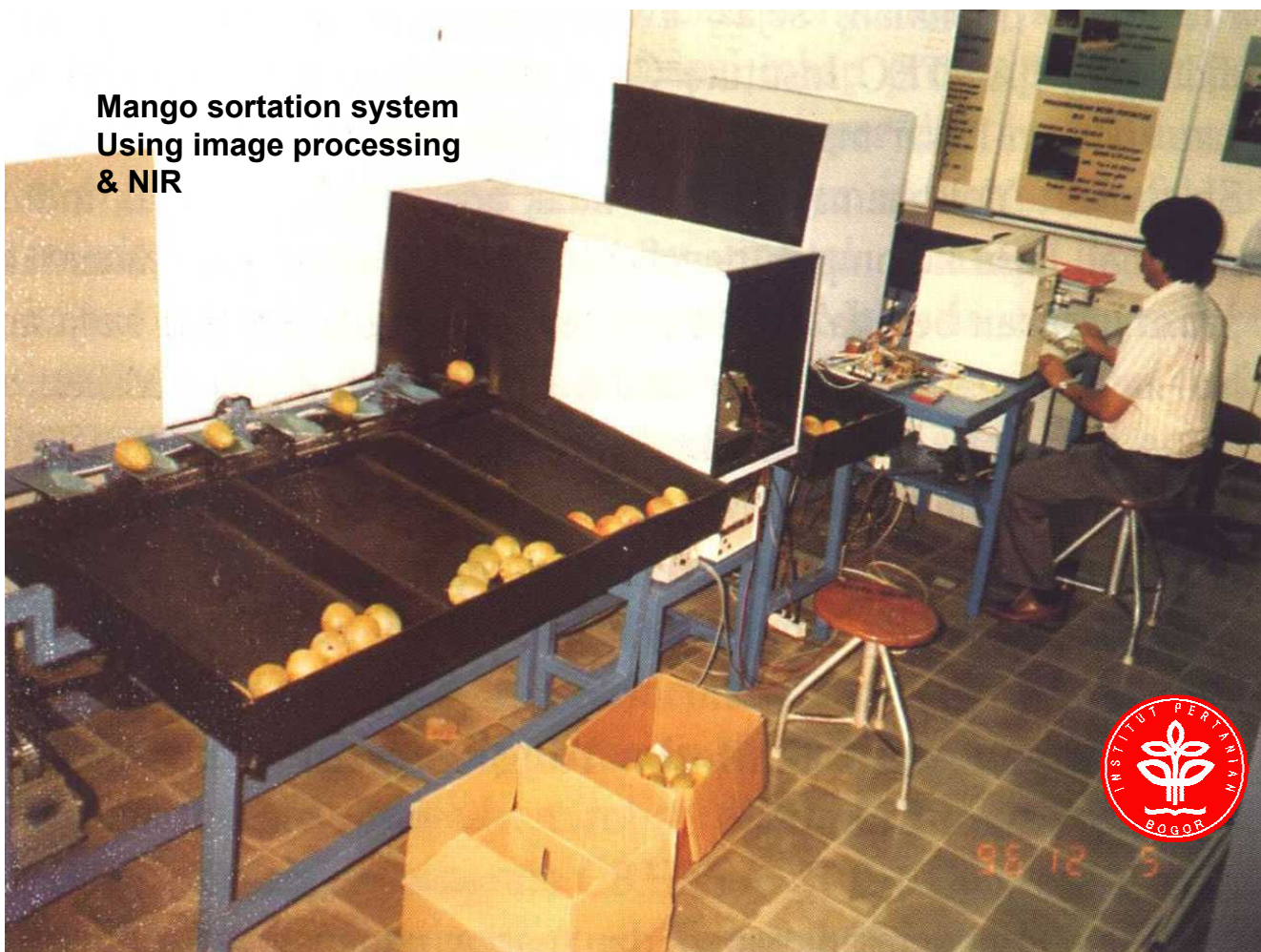




# EXPERIMENTAL SET-UP

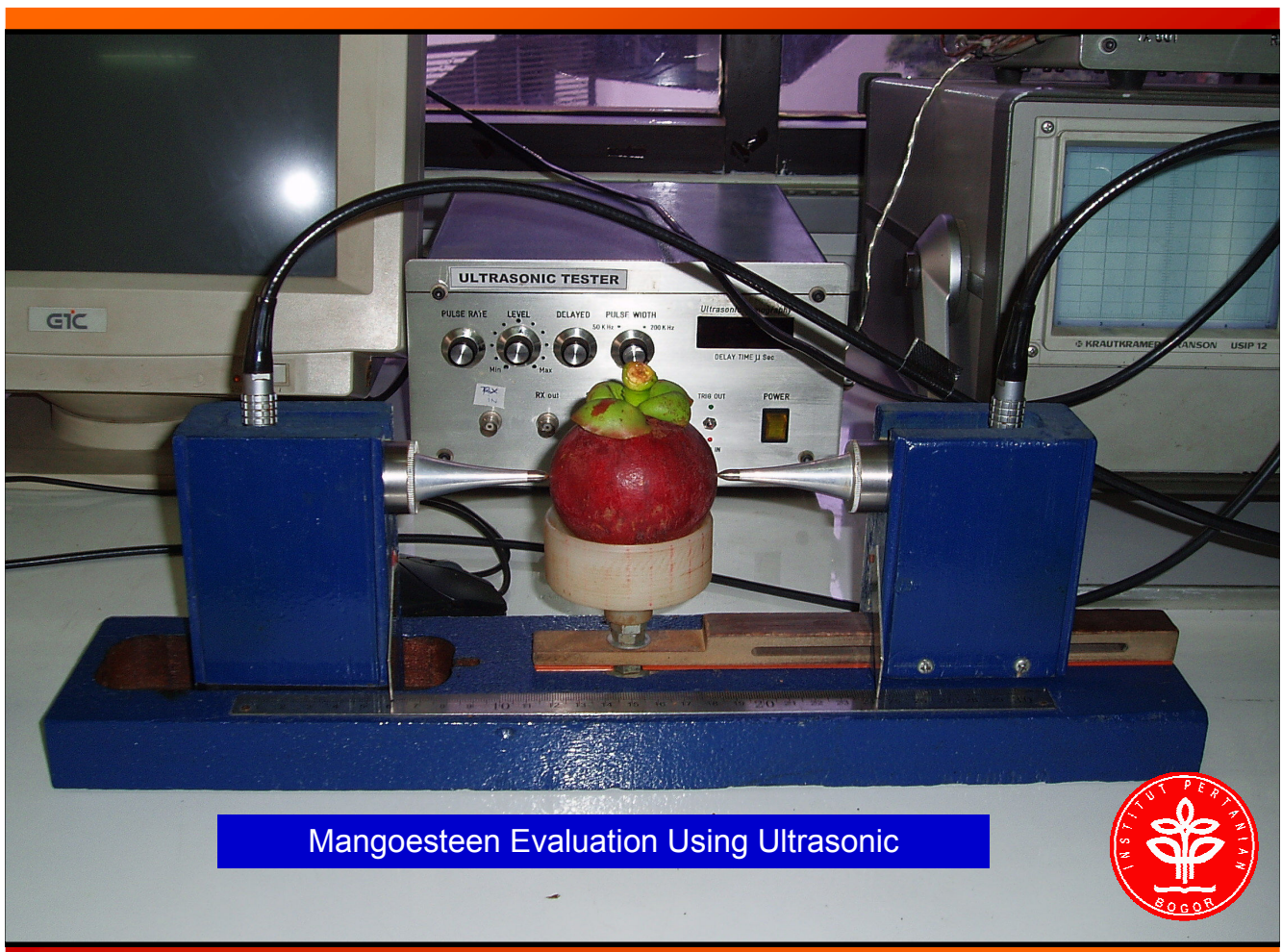
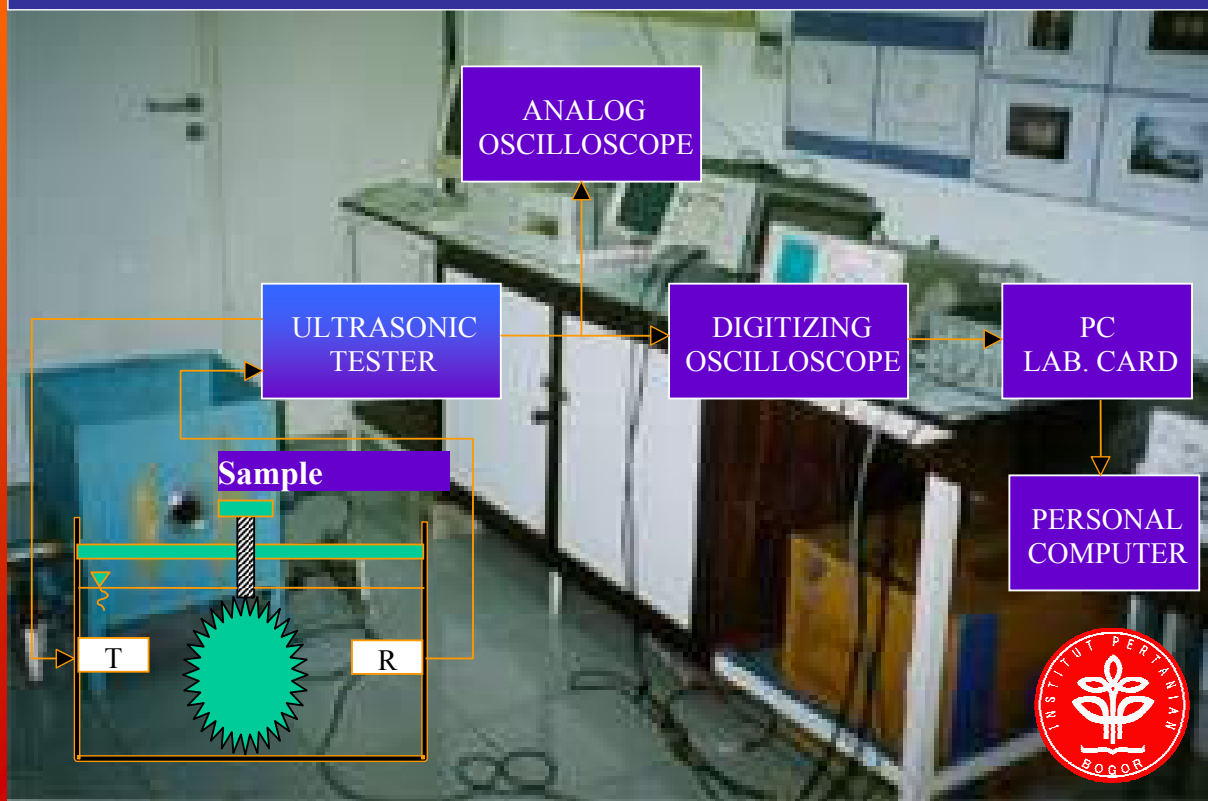


**Mango sortation system  
Using image processing  
& NIR**





# Experimental Set-up for Durian Evaluation Using Ultrasonic





## RECOMMENDATIONS

- ❑ R & D cooperations should be established thru APCAEM network.
- ❑ Development of certification system for standard export quality & food safety supported by own lab. in each APCAEM member which is recognized by all.
- ❑ Available website concerning updated market info & consumer preferences of each APCAEM member.
- ❑ Networking of assoc. of fruit growers & exporters.



Thank  
you

