

# Baseline studies for fruits, vegetables and vegetable roots in the Central & Southern Vietnam



Prepared by



- Presentation  
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Prepared for



Ministry of Trade  
Of S.R. Vietnam

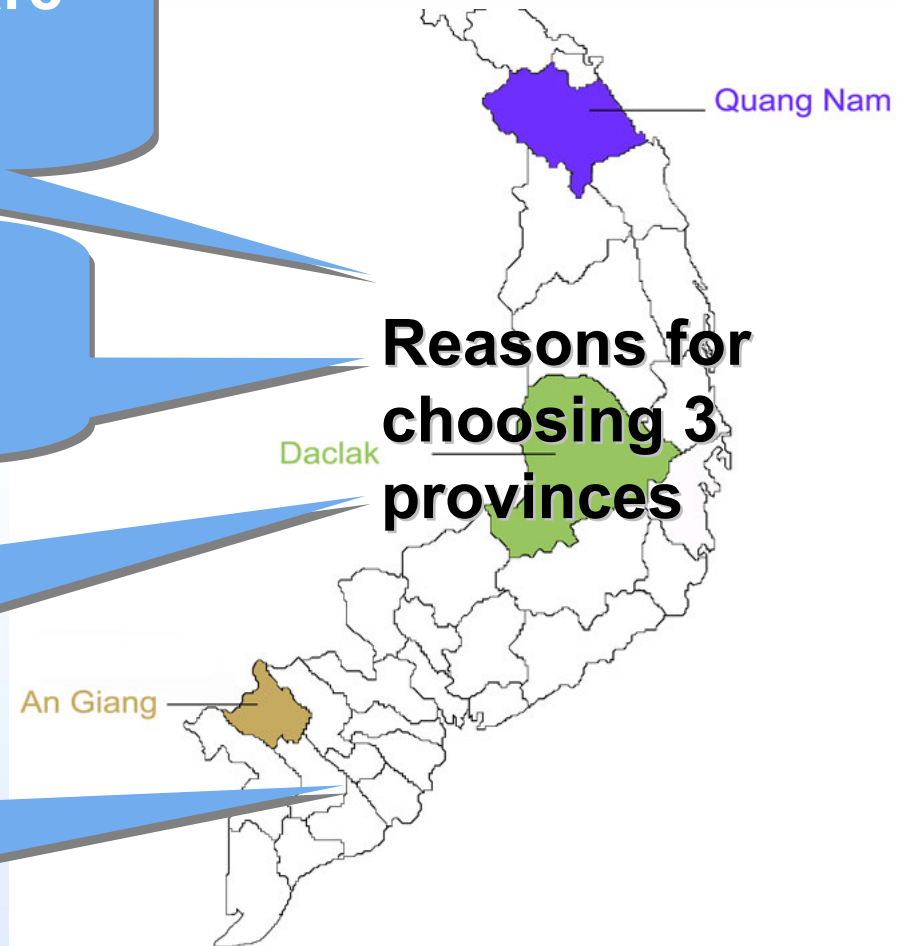
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➤ Fruits & vegetables are not yet key products.

➤ Almost no typical fruit or vegetable exists over there.

➤ Lack of information/  
database

➤ Limited investment or support projects





## Axis' tasks

### Part 1:

Research on fruits, vegetables and vegetable roots' situations in the three provinces.

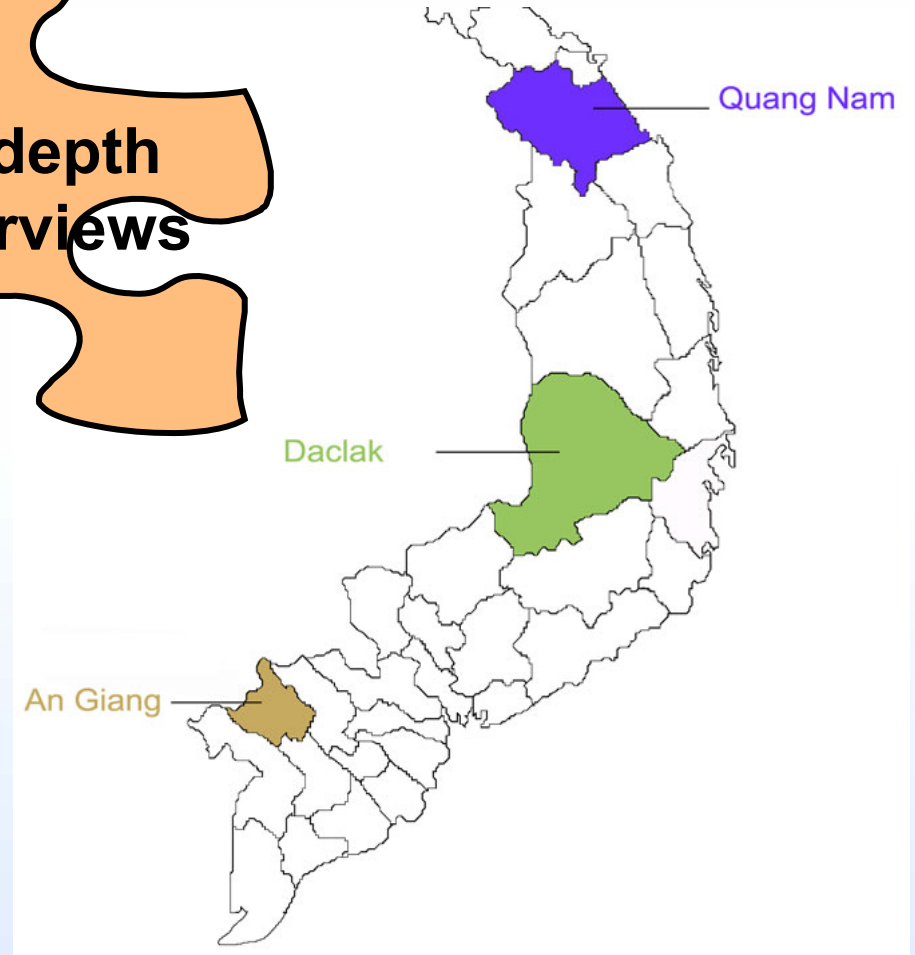
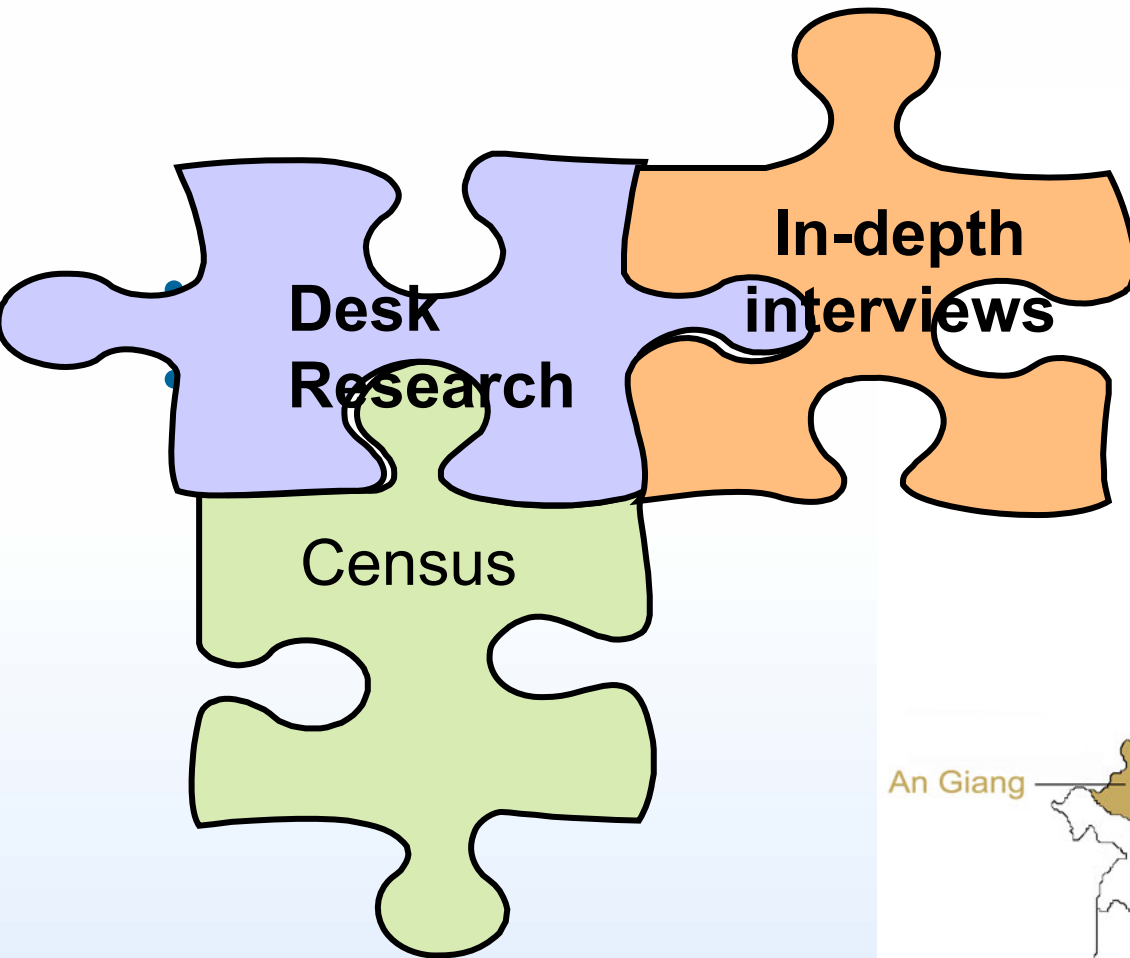
Provide assessments & recommendations for potential products.

### Part 2:

Research on the value chains of some typical fruits & vegetables in 6 Southern provinces.

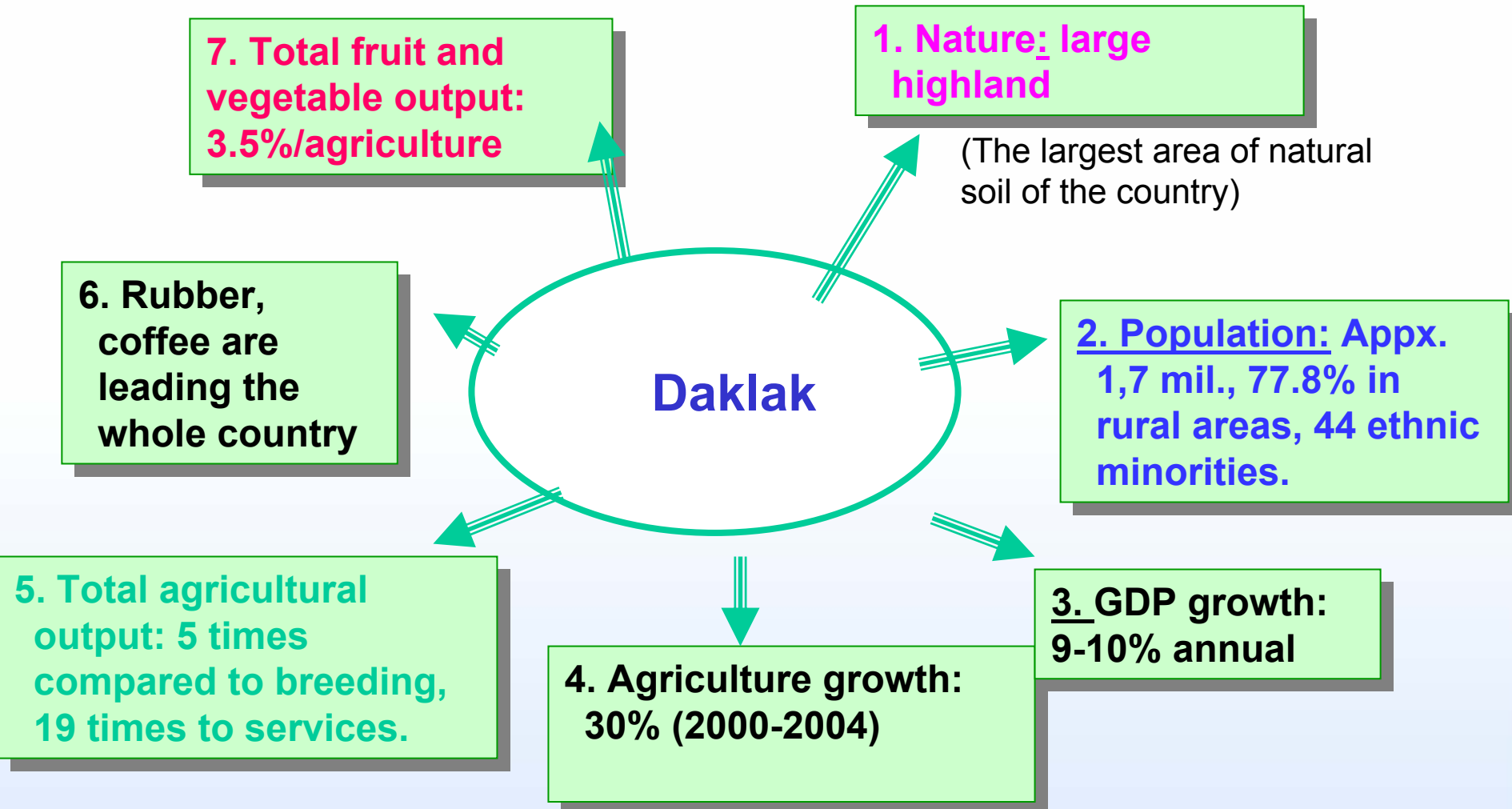
## Time line

From Jul. 2005 to Feb. 2006.



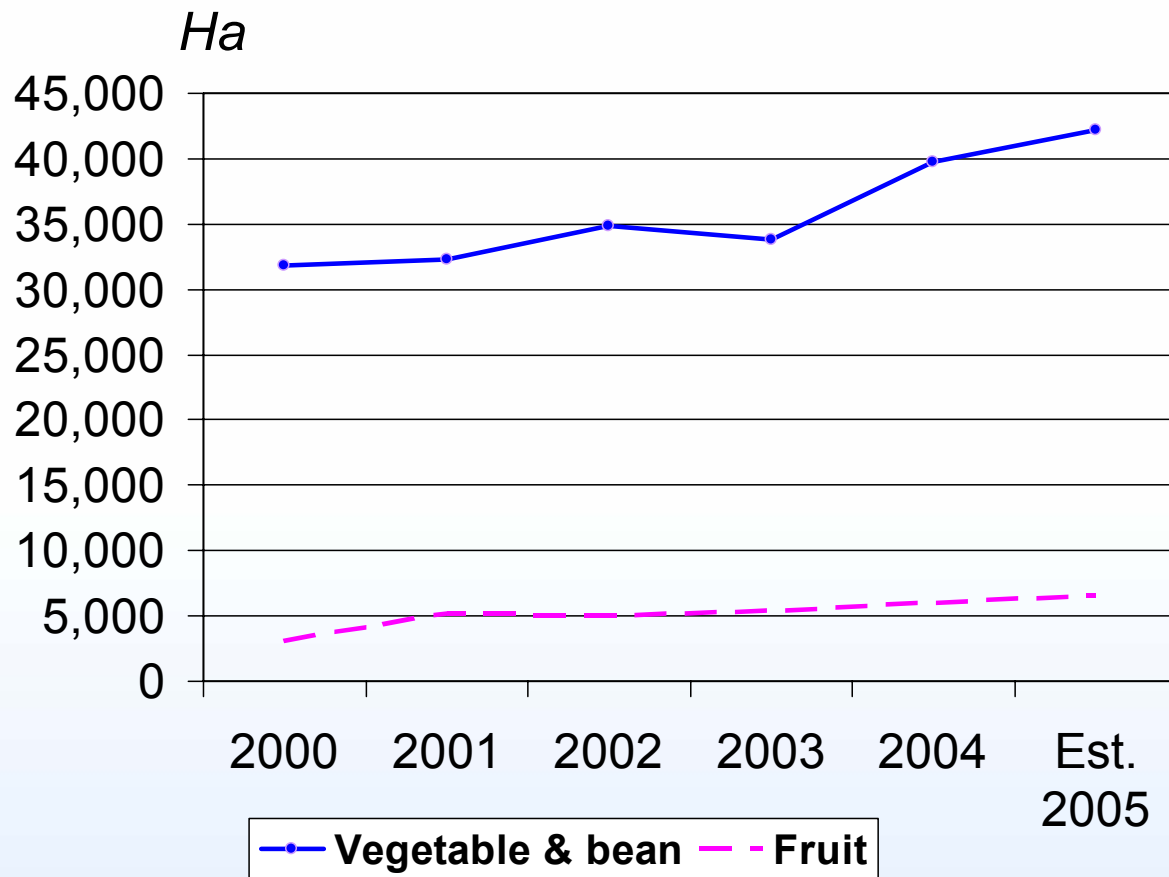
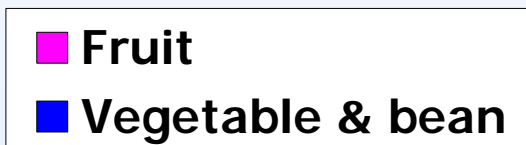
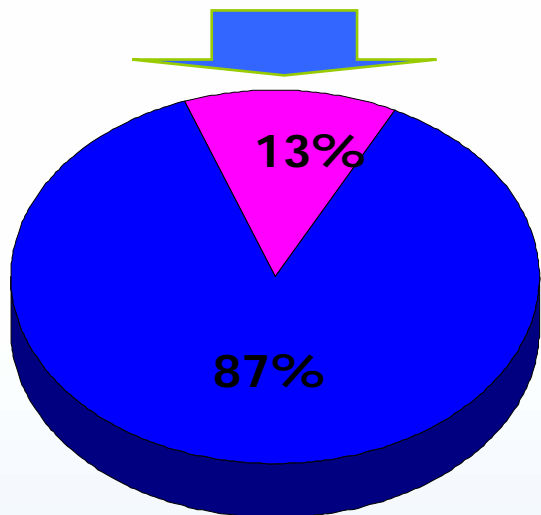
# MAIN RESEARCH FINDINGS

## 1. Daklak province



Source: GSO Daklak 2004

**Cultivation surface  
2004 = 45,714 ha**



Source: GSO

- **Growth rate 2004**
  - **Vegetables, vegetable roots: 6%**
  - **Fruits: 10 %**



# Daklak – Production Value of Cultivation 2000-2004

Product type	2000	2001	2002	2003	2004
<b>Total</b>	<b>5,760,285</b>	<b>6,577,986</b>	<b>6,463,741</b>	<b>6,348,444</b>	<b>7,041,742</b>
<b>Paddy</b>	<b>272,649</b>	<b>288,544</b>	<b>259,414</b>	<b>337,286</b>	<b>374,452</b>
<b>Maize</b>	<b>191,818</b>	<b>207,154</b>	<b>325,246</b>	<b>503,093</b>	<b>474,975</b>
<b>Flour trees for roots</b>	<b>12,684</b>	<b>14,807</b>	<b>42,956</b>	<b>49,956</b>	<b>53,037</b>
<b>Industrial plants</b>	<b>5,137,106</b>	<b>5,933,908</b>	<b>5,689,337</b>	<b>5,265,751</b>	<b>5,68,958</b>
<b>Fruits trees</b>	<b>11,100</b>	<b>13,310</b>	<b>17,390</b>	<b>23,169</b>	<b>74,990</b>
<b>Vegetables &amp; spices</b>	<b>132,902</b>	<b>117,344</b>	<b>125,523</b>	<b>147,432</b>	<b>171,501</b>
<b>Others</b>	<b>2,026</b>	<b>2,919</b>	<b>3,875</b>	<b>21,757</b>	<b>23,829</b>

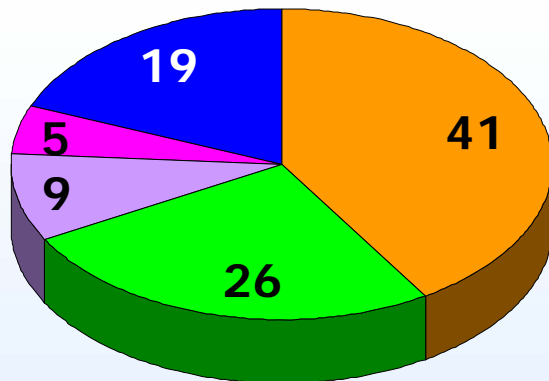
Source: [www.lamdongvn.com](http://www.lamdongvn.com)

	Output (Ton)	%
<b>FRUITS</b>	<b>68,793</b>	<b>55.0</b>
<i>Banana</i>	28,231	22.6
<i>Jackfruit</i>	17,508	14.0
<i>Durian</i>	5,996	4.8
<i>Mango</i>	3,017	2.4
<i>Others</i>	14,041	11.2
<b>VEGETABLES &amp; BEANS</b>	<b>56,386</b>	<b>45.0</b>
<i>Cucumber</i>	14,406	11.5
<i>Water spinach</i>	15, 595	12.5
<i>Cabbage</i>	7,601	6.1
<i>Kohlrabi</i>	5,826	4.7
<i>Onion/ garlic</i>	2,346	1.9
<i>Tomato</i>	10,612	8.5
<b>Total</b>	<b>125,179</b>	<b>100%</b>

**TOTAL: APPX. 413, 6 BIL. DONG**

## Fruits

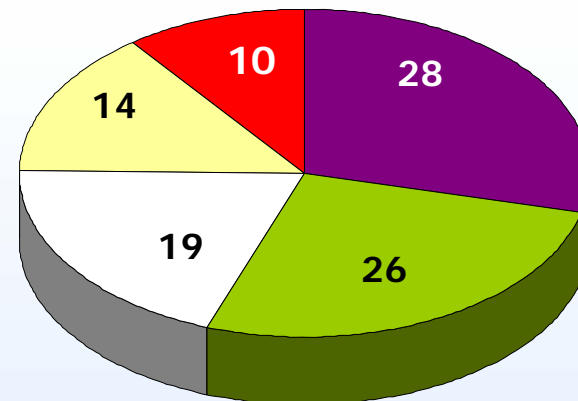
Appx. 110.17 bil. (27%)



<span style="color: orange;">■</span> Banana	<span style="color: green;">■</span> Jackfruit	<span style="color: purple;">■</span> Durian
<span style="color: magenta;">■</span> Mango	<span style="color: blue;">■</span> Others	

## Vegetables & beans

303,5 bil. (73%)



<span style="color: purple;">■</span> Water spinach	<span style="color: green;">■</span> Cucumber
<span style="color: white;">■</span> Tomato	<span style="color: yellow;">■</span> Cabbage
<span style="color: red;">■</span> Kohlrabi	

## Advantages

## Difficulties

• **GEOGRAPHICAL LOCATION, CLIMATE & NATURE**  
(Soil, water, small agricultural/ farming regions, climate, mountainous terrain...)

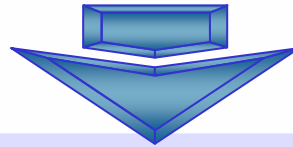
• **CULTIVATED LAND & PLAN**  
(still scattering, reform policies, surface expand)

• **MANAGEMENT POLICIES OF ORGANIZATIONS**  
(Projects and management, solutions)

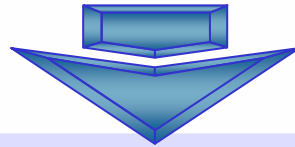
• **PRE-HARVEST**  
(Seeds, techniques, cropping and caring...)

• **POST HARVEST**  
(Harvest, preservation, consumption, export)

• **OTHERS** (information, capital etc...)



1. Supply new tree species, seeds.
2. Guide & plan for centralized cultivation.
3. Transfer and train cultivation techniques.
4. Provide & update/ notify market information to farmers (leaflets, brochures, advertisement...)
5. Financial help for rebuilding roads.
6. Support capital for farmers or providing easier procedure for loans in banks at low interest.



7. Build processing company and preliminary processing place.
8. Guide farmers how to prepare contracts to protects their benefits.
9. Encourage & support companies from other regions to come for investment in production and purchase.
10. Find consumption sources & stable markets (cooperate with supermarket chain in big market likes HCMC, Industrial zones in the Central, Binh Phuoc and Binh Duong v.v...)
11. Need the cooperation & consistent management amongst government, enterprises and farmers.

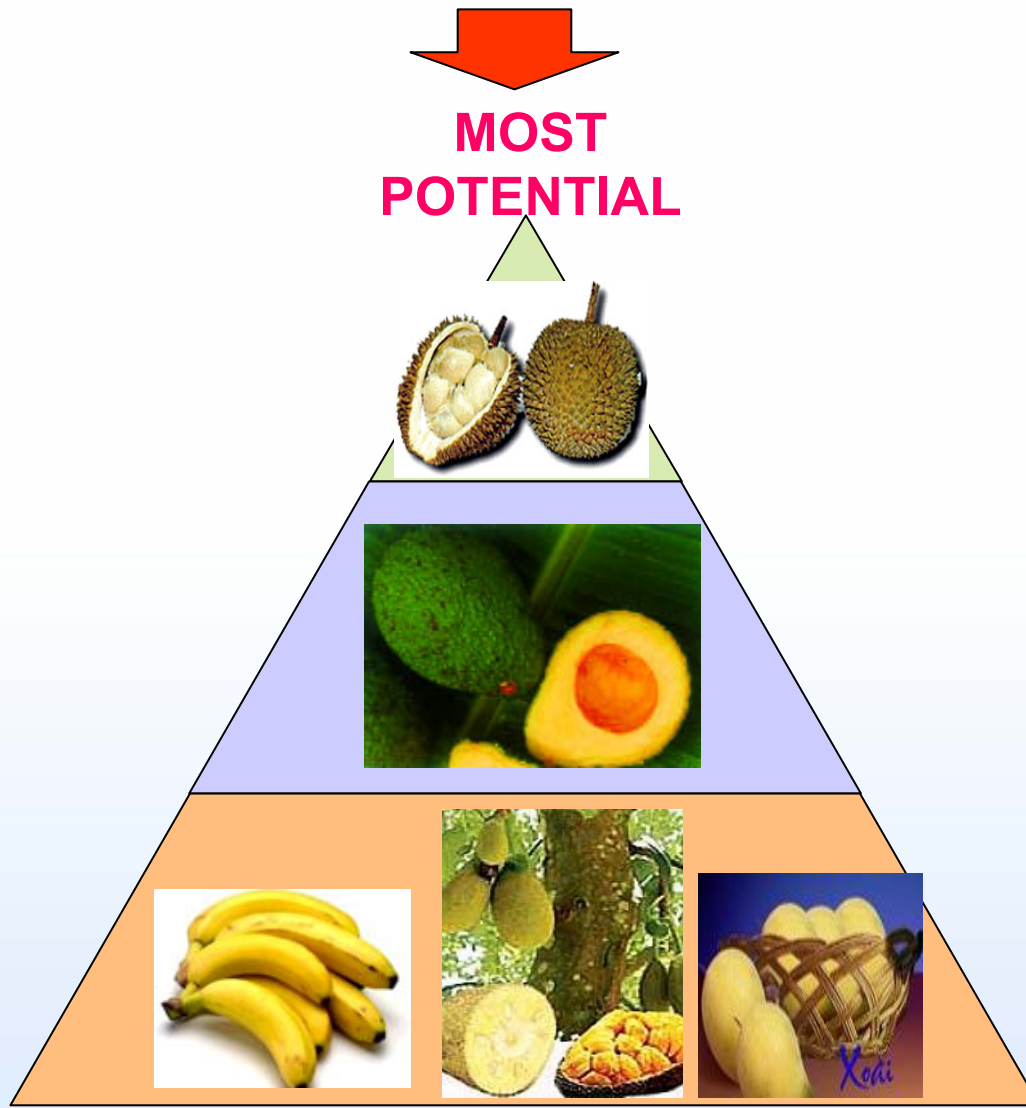
**OBJECTIVE FACTORS:**

Locates next to Lam Dong, the leader in vegetable production of the country.

**SUBJECTIVE FACTORS:**

- Customs & habits of Daklak residents
- Terrain, road & transportation of vegetable within a day.
- Red soil bazan and fruits which are potential for export.

**FRUITS = MORE POTENTIAL THAN VEGETABLES**







## 1. Durian

- ✓ Expensive, contains some medical characteristics
- ✓ Easy to grow, requires less effort for caring, suitable for red soil bazon in Daklak.
- ✓ Easy to preserve and transportation
- ✓ Economical productivity: 200-250 mil./ha
- ✓ Large domestic and export demand (Fresh and Dried)
- ✓ One of 16 products in the waiting list for being exported to the U.S
- ✓ VAC program is testing in Doan Ket, Thang Muoi, Phuoc An companies v.v.

# Vietnamese vs. Thailand Durian

Species/breeds Features	Ben Tre Durian (small seed)	Dong Nai Durian (Small seed)	Thai Durian (Monthong)	Sáu Ri Durian
Shape	Sphere	Ellipse	Cylinder	Ellipse
Thorn	Rounded, thin	Sharp, thick	Sharp, Medium	Sharp, Medium
Skin color	Green	Dark green	Yellow green	Grey green
Number of seeds/ fruit	6-25	8-10	9-12	10-16
Inside color	Light yellow	Yellow	Yellow	Yellow
Softness	Very soft	Soft	Soft	Very soft
Dryness	Not good	Good	Good	Not good
Fiber	None	None	Very little	None
Smell	Fragrant	Fragrant	Medium	Fragrant
Taste	Sweet & creamy	Sweet & creamy	Sweet & creamy	Sweet & creamy
Productivity (number of fruit/ tree)	90-120	100-150	60-80	100-150
Fruit weight (kg)	3,1 kg	1,88 kg	2,5-4,5 kg	2-2,5 kg
Flesh (%)	28,8	29,6	39,6	34,0

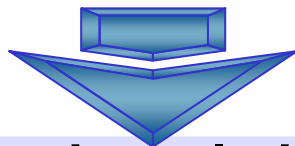
- Has highest protein content
- For fresh eating and easy to process
- One of 9 fruits granted for development priority in Vietnam (2010 program)
- Daklak avocado receives prizes/ awards in Good Fruit Contests in Southern provinces (2000, 2004)
- Can be grown in between coffee trees and sold in the replacement of coffee when the coffee price falls down.



## 2. Avocado

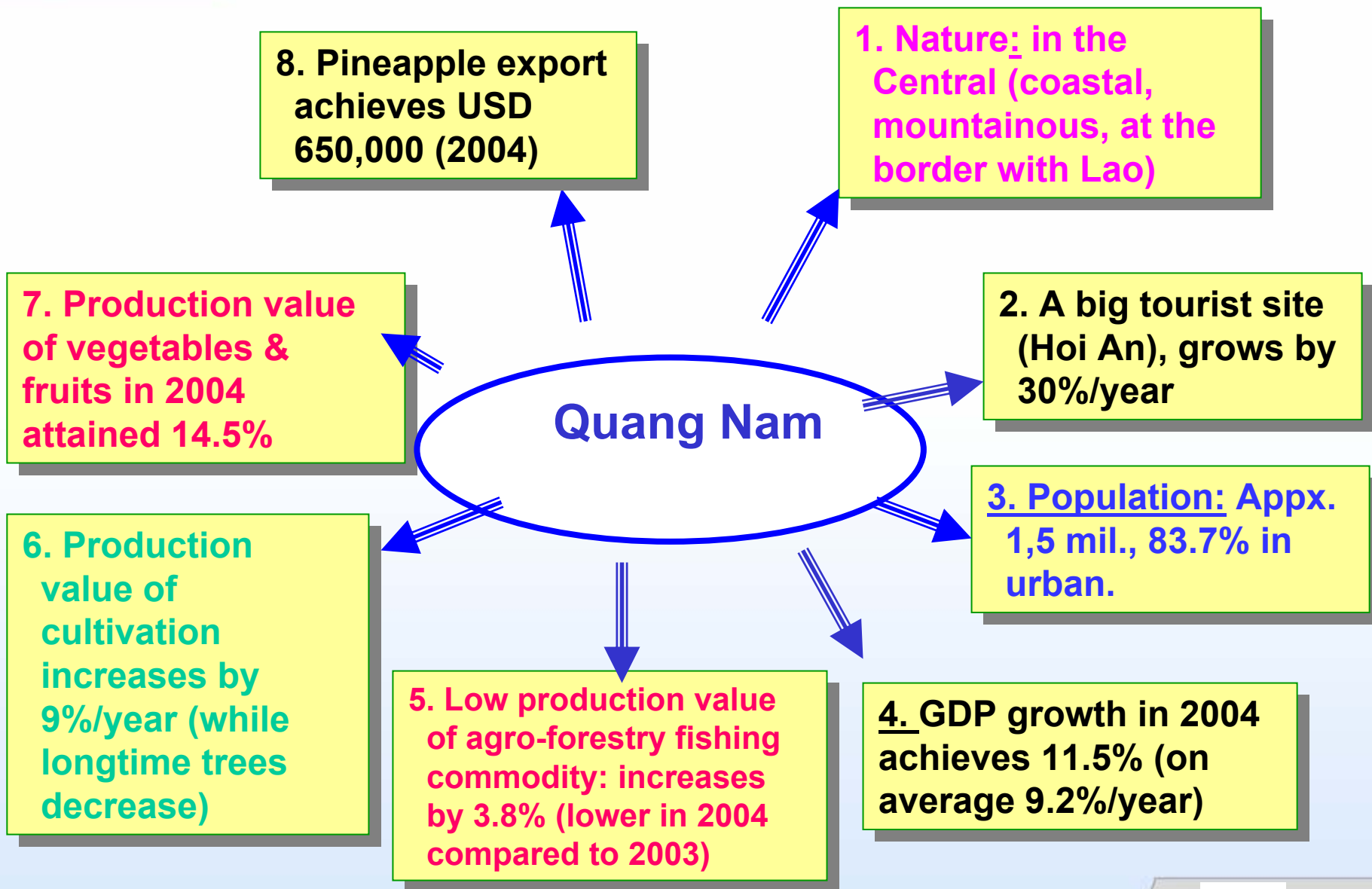


***Concerns: Domestic selling & consumption prices are low, Avocado needs export markets.***

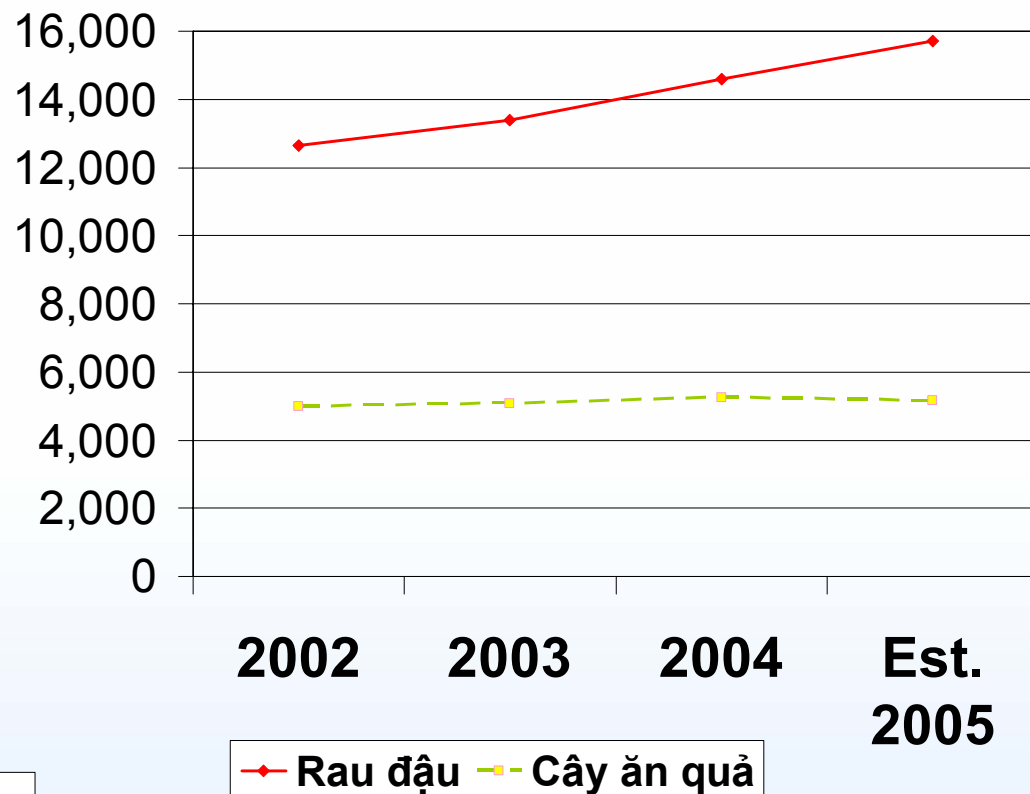
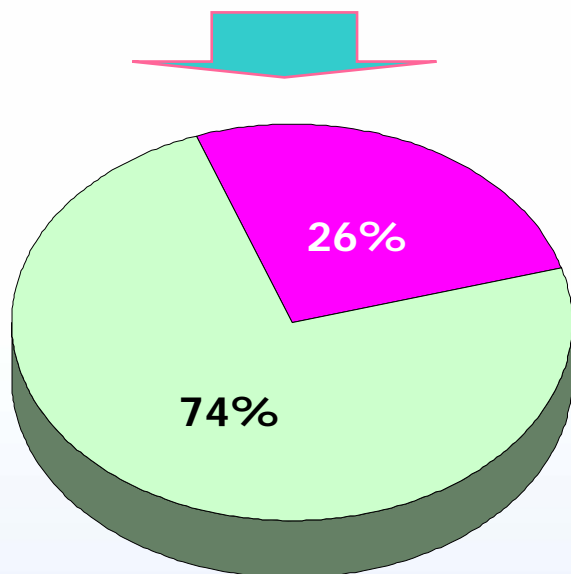


1. Guide and training knowledge/ skills of growing durian & avocado in between coffee trees.
2. Combine with the University of Ban Me Thuot developing the project of growing grafted avocado.
3. Cultivate in large area (from 100 ha to 1000 ha – export)
4. Provide more information on processed products from durian & avocado, and on preservation for fresh avocado.
5. Call for investment into the Tam Thang fruit processing factory.
6. Do branding for Daklak avocado.
7. Find export market for avocado.

## 2. Quang Nam Province



**Cultivation surface  
2004 = 19,844 ha**



Source: GSO

- **Growth rate 2004**
  - **Vegetables: 15%**
  - **Fruits: 3 %**

Đ/v: Mil. dong

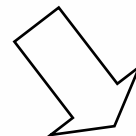
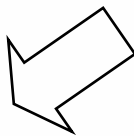
Year	2002	2003	2004
<b>Total</b>	<b>1,381,776</b>	<b>1,488,959</b>	<b>1,640,601</b>
<b>I. Annual trees</b>	<b>1,159,948</b>	<b>1,303,272</b>	<b>1,479,495</b>
1 Cereal trees for seeds	843,596	974,087	1,100,745
2. Vegetables	198,070	202,201	222,367
3. Annual industrial trees	116,199	124,786	154,263
4. Other annual trees	2,084	2,197	2,121
<b>II. Longtime trees</b>	<b>205,093</b>	<b>168,635</b>	<b>147,515</b>
1. Longtime industrial trees	25,096	27,593	22,558
2. Fruit trees	122,527	127,281	114,424
3. Other longtime trees	57,470	13,761	10,532
<b>III. Cultivation by products</b>	<b>16,734</b>	<b>17,052</b>	<b>13,592</b>

(Source: Annual Statistics Book Quang Nam 2004)



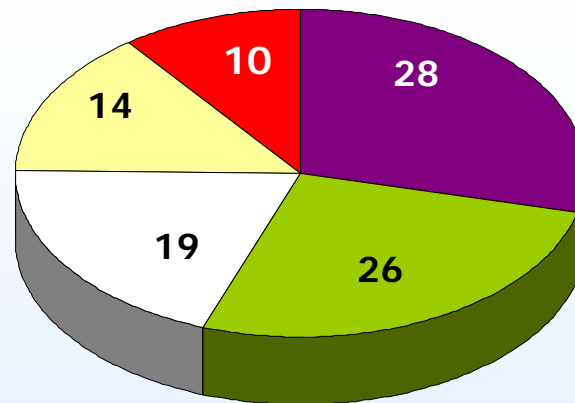
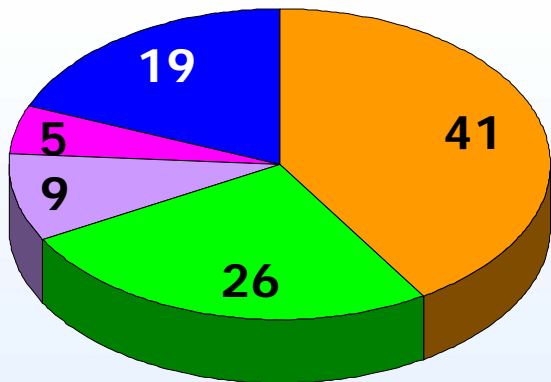
	Output (Ton)	%
<b>FRUITS (Ton)</b>	<b>170,282</b>	<b>57</b>
<i>Banana</i>	<b>100,000</b>	<b>33</b>
<i>Pineapple</i>	<b>30,460</b>	<b>10</b>
<i>Mango</i>	<b>4,500</b>	<b>1</b>
<i>Fruits with segment</i>	<b>4,360</b>	<b>1</b>
<i>Others</i>	<b>30,962</b>	<b>10</b>
<b>VEGETABLES</b>	<b>130,680</b>	<b>43</b>
<i>Vegetables of leaves (cabbage, spinach...)</i>	<b>78,408</b>	<b>26</b>
<i>Vegetables of fruits (tomato, bean...)</i>	<b>32,670.00</b>	<b>11</b>
<i>Others</i>	<b>19,602.00</b>	<b>7</b>
<b>Total</b>	<b>300,962</b>	<b>100%</b>

**Total: 336,8 bil. dong**



**Fruits**  
**114,424 bil. (34%)**

**Vegetables**  
**222,4 bil. (66%)**



- Banana
- Jackfruit
- Durian
- Mango
- Others

- Spinach
- Tomato
- Kolhrabi
- Cucumber
- Cabbage

## Advantages



## Difficulties



• Geographical location, climate

• Cultivation land and planning

• Seeds

• Pre & Post harvest

• Management policies of organizations

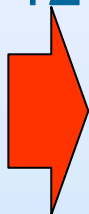
• Others

**MOST  
PONTENTIAL**



## 1. Lon Bon

- ❖ Is a famous specialty of QN.
- ❖ Links with the legend from Gia Long dynasty, and QN tourism.
- ❖ Currently being grown a lot in Dai Loc, & planned to increase cultivation surface in 2010.
- ❖ Simple, easy to grow, can be grown in between mangosteen, durian trees.
- ❖ Economic value: about 14 ton/ha, 100 - 120 mil. dong/ha/crop)



**Concerns:** *Low domestic consumption*  
*Lengthy harvesting period*  
*Not consistent in product quality*

## 2. Durian

- Suitable with geographical weather and soil in QN.
- QN durian crop is in the contrary season to the South's.
- High demand from the Southern market, especially HCMC, good export value.
- The output of QN durian is as high as the South's, appx. 15-20 ton/ha if being cultivated and cared for, the turnover could reach 250-350 mil dong/ha (Chín Hóa, Monthong species)

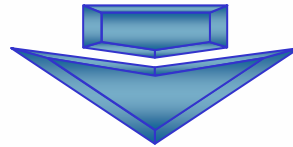


- Is a specialty as well as having additional value in dyeing industry (its skin)
- High production value, high output at 25 ton/ ha, turnover could reach about 300-350 mil dong /ha)

**Concern: Lengthy harvesting period (4-5 year)**

## 3. Mangosteen

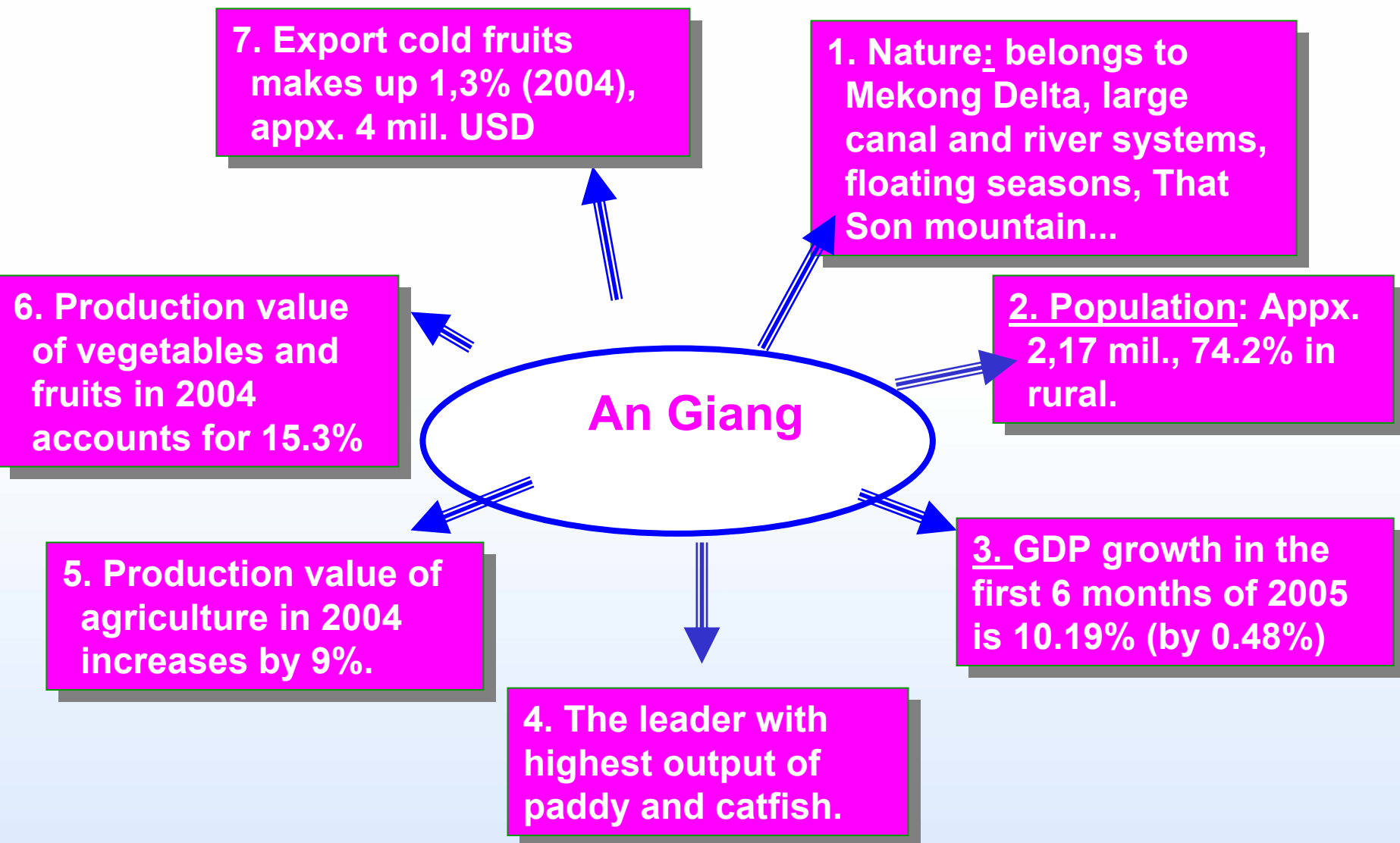




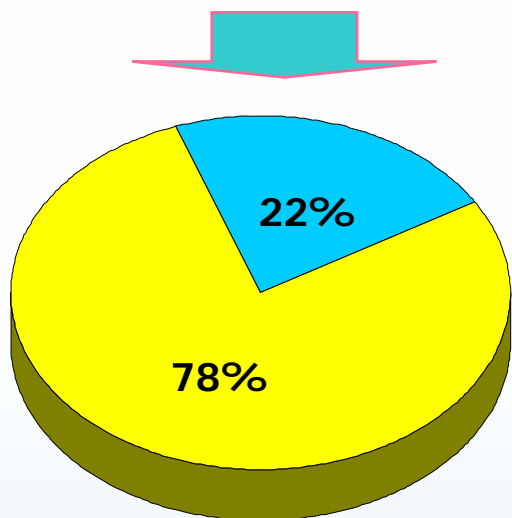
1. **Provide financial supports** for establishing grafted trees/ gardens in Quang Nam (Bon Bon, grapefruits)
2. Support for **the project of growing Bon Bon** in Dai Loc, expanding to other districts.
3. Guide & training knowledge/ skills of cultivating, caring, harvesting & preserving fruits in general and Bon Bon in particular.
4. Enhance capacity of the fruit processing factory in Quang Nam ( for pineapple, banana, mango etc...)
5. Build brands for pineapple and Bon Bon

### 3. An Giang Province



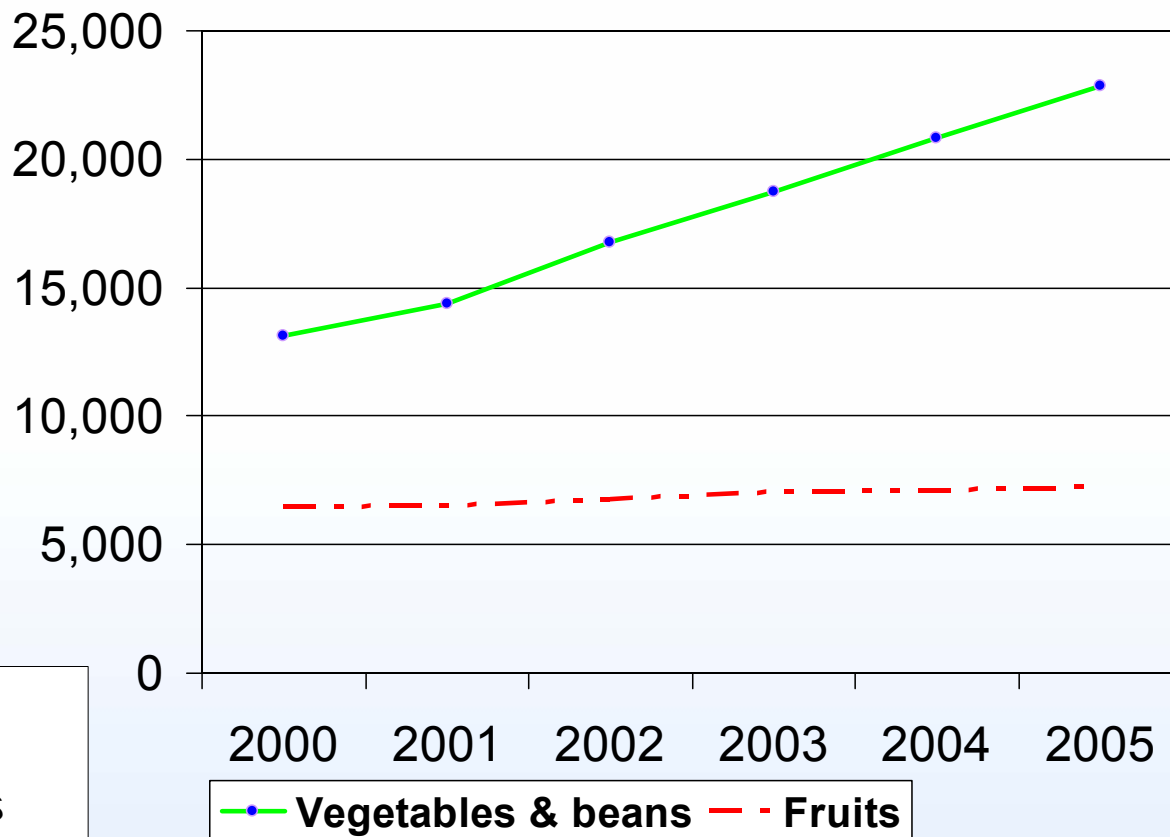


**Cultivation Surface**  
**2004 = 32,456 ha**



Fruits

Vegetables & beans



• **Growth rate 2004**

• **Vegetables: 12%**

• **Fruits: 1%**

Source: GSO

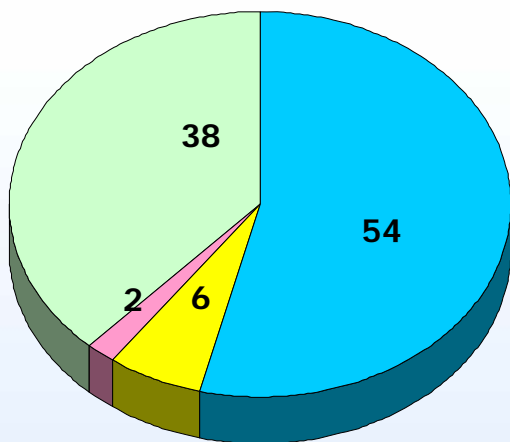
	Output (Ton)	%
<b>FRUITS (Ton)</b>	<b>79,666</b>	<b>13.5</b>
<i>Banana</i>	<i>43,019.64</i>	<i>7.3</i>
<i>Mango</i>	<i>4,779</i>	<i>0.8</i>
<i>Soursop</i>	<i>1,593</i>	<i>0.3</i>
<i>Others</i>	<i>30,273</i>	<i>5.1</i>
<b>VEGETABLES</b>	<b>510,000</b>	<b>86.5</b>
<i>Mustard</i>	<i>99,920</i>	<i>16.9</i>
<i>Gourd, pumpkin</i>	<i>39,500</i>	<i>6.7</i>
<i>Cabbage</i>	<i>41,471</i>	<i>7.0</i>
<i>Onion &amp; garlic</i>	<i>31,781</i>	<i>5.4</i>
<i>Others (Cucumber, tomato, soya bean...)</i>	<i>397,800</i>	<i>67.5</i>
<b>Total</b>	<b>589,666</b>	<b>100%</b>

Nguồn: GSO, The Agricultural Development Dept., Axis

**TOTAL: Appx. 1,526 Bil.**

## Fruit

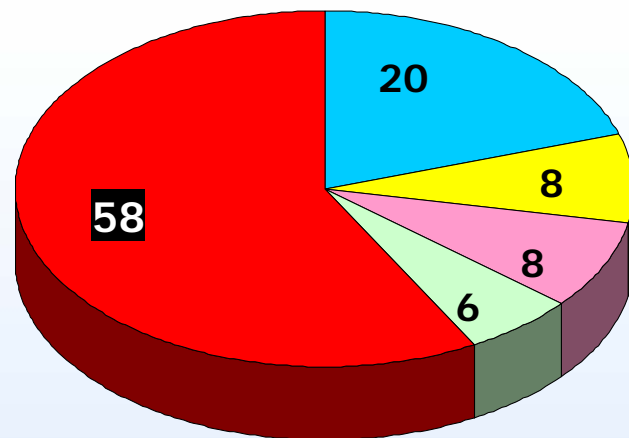
**335 Bil. (22 %)**



■ Banana ■ Mango ■ Soursop ■ Others

## Vegetables & beans

**1,191 bil. (88%)**



■ Mustard ■ Gourd, pumpkin  
■ Cabbage ■ Onion & garlic  
■ Others

**VEGETABLES =  
MORE POTENTIAL  
THAN FRUITS**

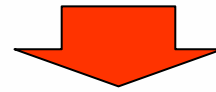
➤ Experience in export & market

➤ Advantageous natural conditions (canals, floating seasons)

➤ Large cultivation surface (natural, paddy field, water surface)

➤ Experience in growing different vegetables.

➤ Already have 2 cold vegetable processing factory which belongs to Antesco



**MOST  
POTENTIAL**



- Long-established experience in cultivation.
- High export demand/ consumption in European markets (currently accounting for 60% of total vegetables exports in An Giang).
- The supply material satisfies only 22% of factory capacity.
- Easy & advantageous growing conditions (can be grown on the paddy field alternatively in-between the paddy cropping)
- Short harvest period of time (at least 45 days), fast circulated capital.
- Reasonable profit (appx. 24 mil./ha)
- Grow for young baby corns and at the same time for animal rearing (using the trunks).



## 1. Baby corn

## 2. *Mush room*

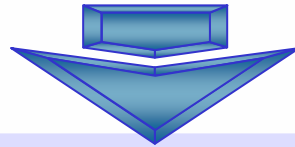
- Straw for Summer-Autumn seasons can be used for alternative growing of mushroom.
- Simple, easy to grow and short harvesting time.
- High economic value (about 20 mil./ha).

Concern: Preservation & Transportation



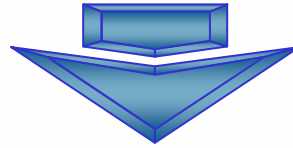
2. Mushroom





1. Have solutions to eliminate damage/ loss + techniques of planting in floating seasons.
2. Train farmers how to preserve and store vegetables after harvesting and transporting (by boat..)
3. Support preliminary processing place, product central location for Cooperative and farmers (beyond Antesco system)
4. Build brands for baby corn, mush room and Thanh Ca mango
5. Continuously develop & execute GAP program for vegetables in An Giang

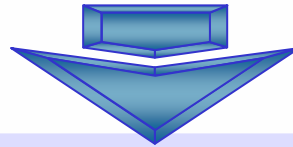
# CONCLUSIONS & RECOMMENDATIONS



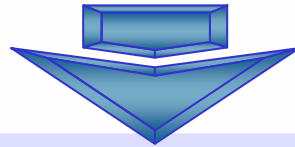
**DAKLAK = AVOCADO & DURIAN (++++)**

**QUANG NAM = BON BON (+)**

**AN GIANG = VEGETABLES (BABY  
CORN, MUSH ROOM)  
(++++)**



1. Provide new species/ seeds
2. Orient and plan for production central location
3. Transfer and train knowledge/ skills of cultivation.
4. Update & transfer market information for farmers.
5. 5. Build brands



6. Build processing factory, preliminary processing place.
7. Guide how to construct a contract.
8. Encourage, support companies from other regions to come for investment into production and purchase.
9. Find sources of stable consumption markets.
10. Provide financial aids to farmers and traders
11. Co-operate and manage consistently between the government, enterprises and farmers.

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