

Current Status of Fresh Fruit Export in Korea

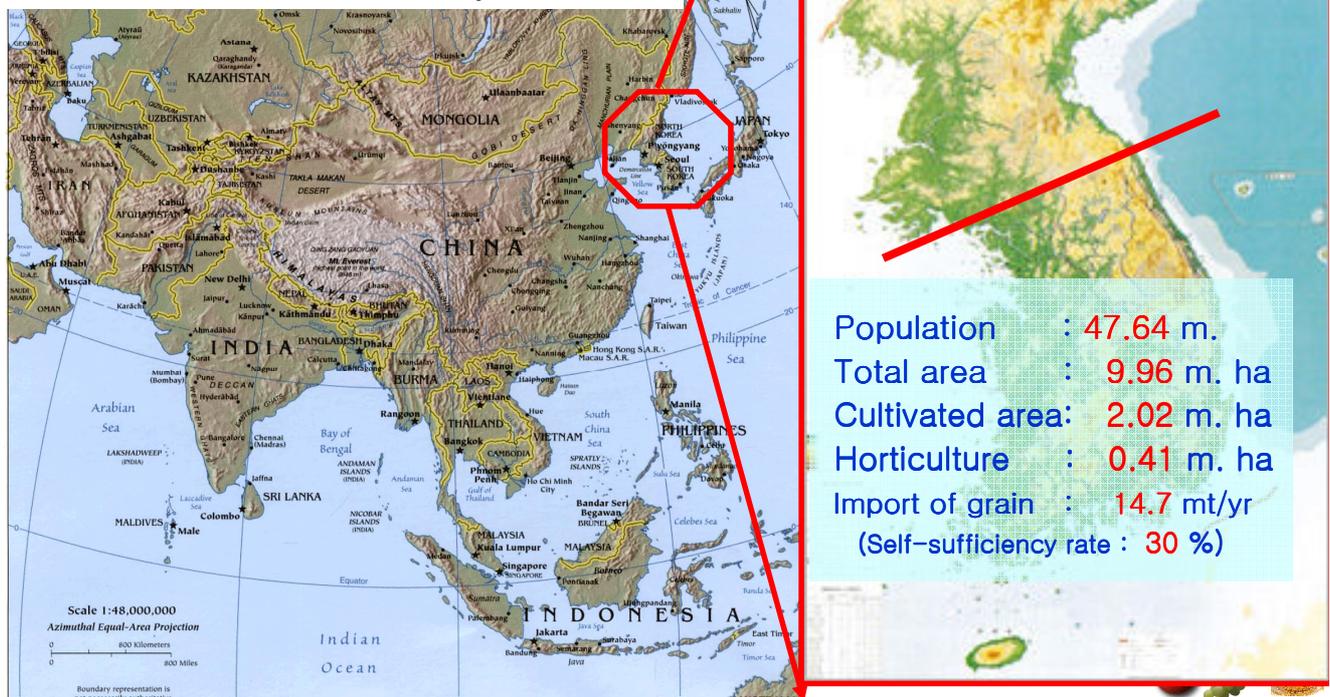
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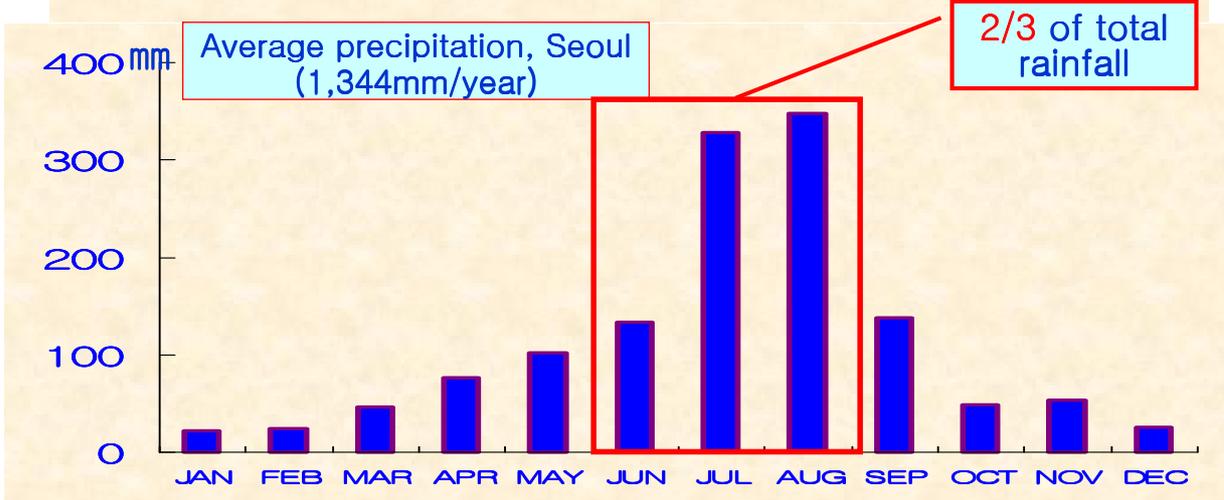
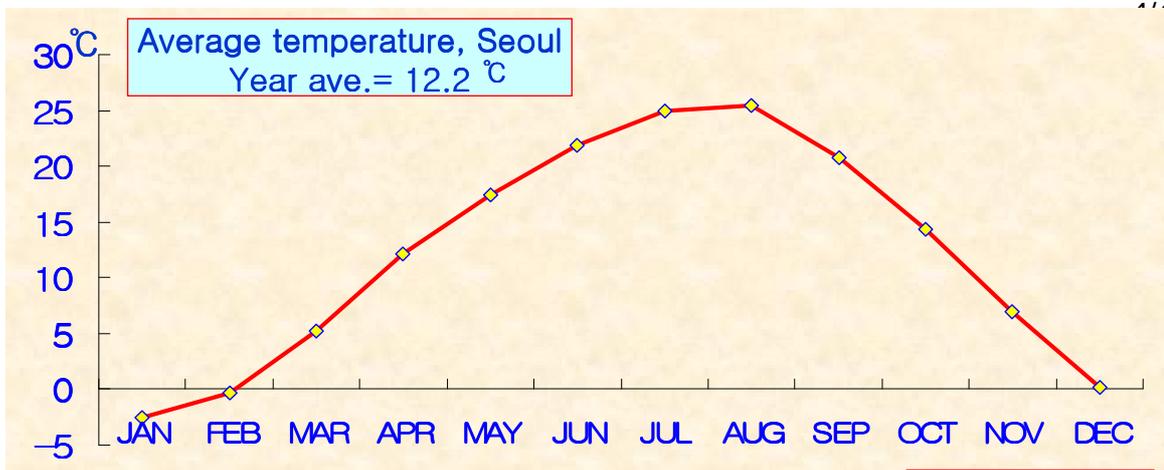
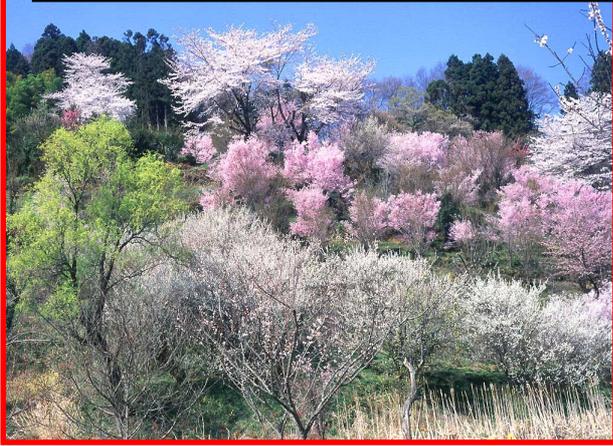
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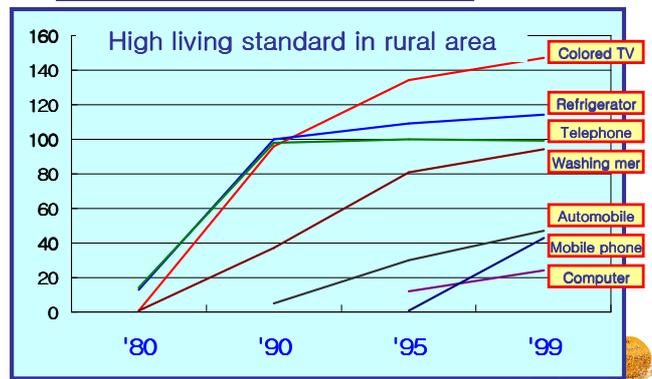
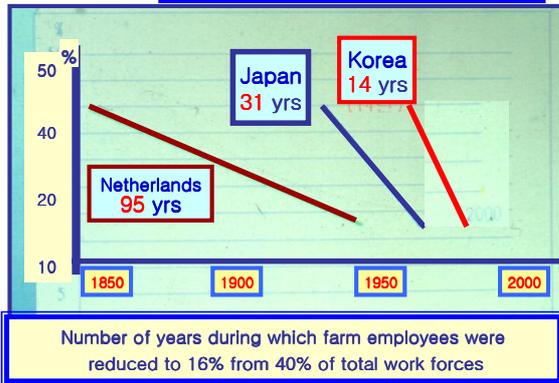
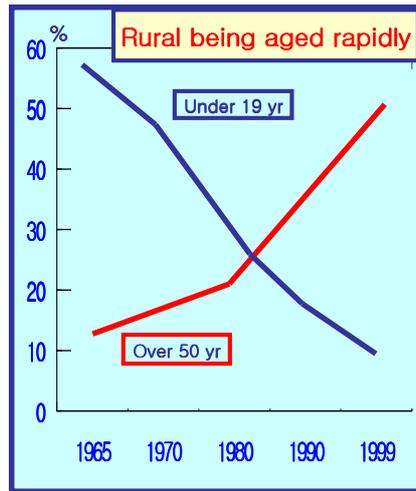
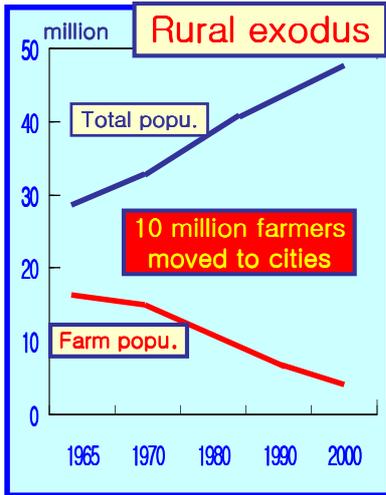
Seoul National University



Typical temperate climate with four distinct seasons



Drastic changes happened in Korean rural society



The most serious **problem** faced in Korean agriculture

Rice
Productivity
= 5t/ha =
The highest

X

Rice price,
5-9 times
Higher
The highest

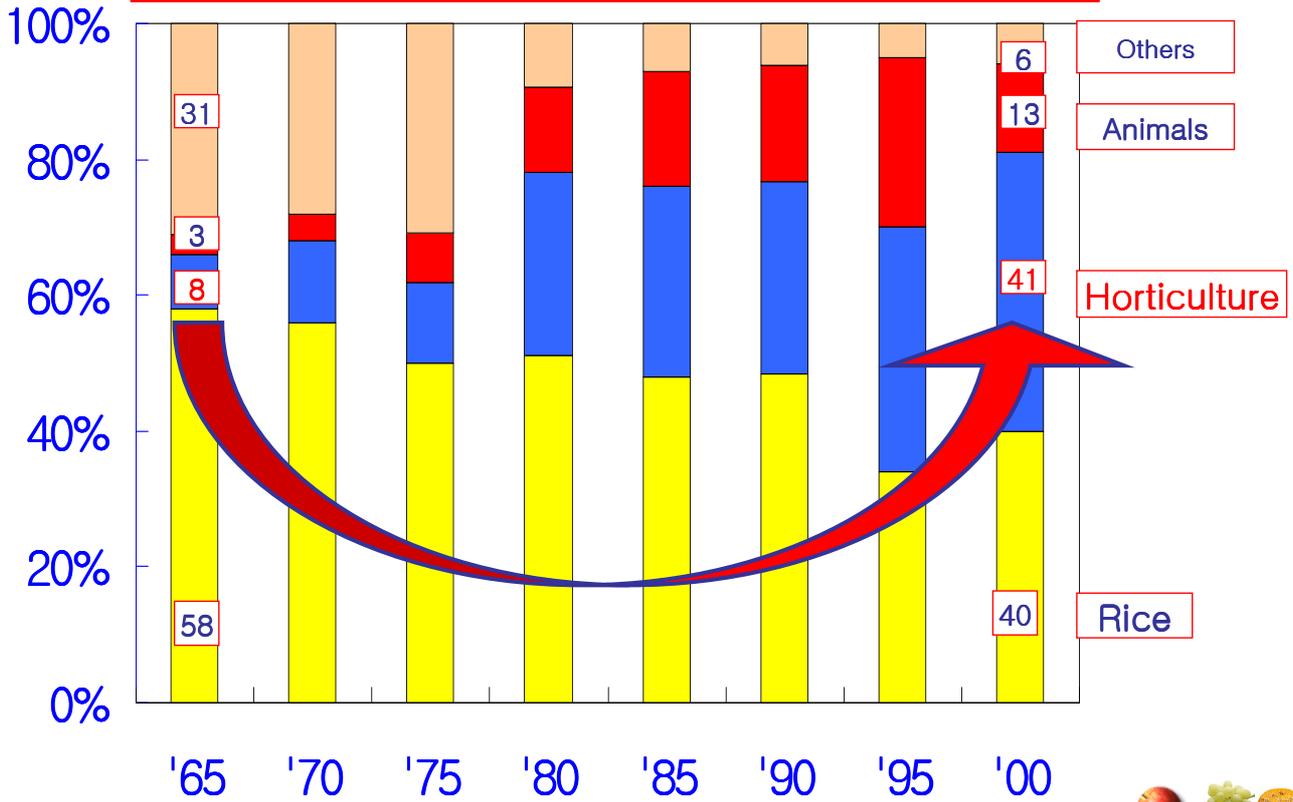
=

Our farmers
are still
poor,
even
poorer

Because our farm size is **too small**
(1.39ha/household, 2002)



The horticulture industry has become increasingly important in Korea



Production value of Horticultural Crops in Korea, 2004





Kimchi: major usage for vegetables in Korea,
More than 200 different kinds of Kimchi available,

No Kimchi, No Korean



The product value (\$ million) and their market shares of ten major vegetables in Korea
(These 10 crops formed 80% of the total)

1st

\$1,130 M. (20%)

2nd

\$ 478 M. (9%)

3rd

\$ 477 M. (9%)

4th

\$ 457 M. (8%)

5th

\$ 455 M. (8%)

6th

\$ 438 M. (8%)

7th

\$ 343 M. (6%)

8th

\$ 320 M. (6%)

9th

\$ 239 M. (4%)

10th

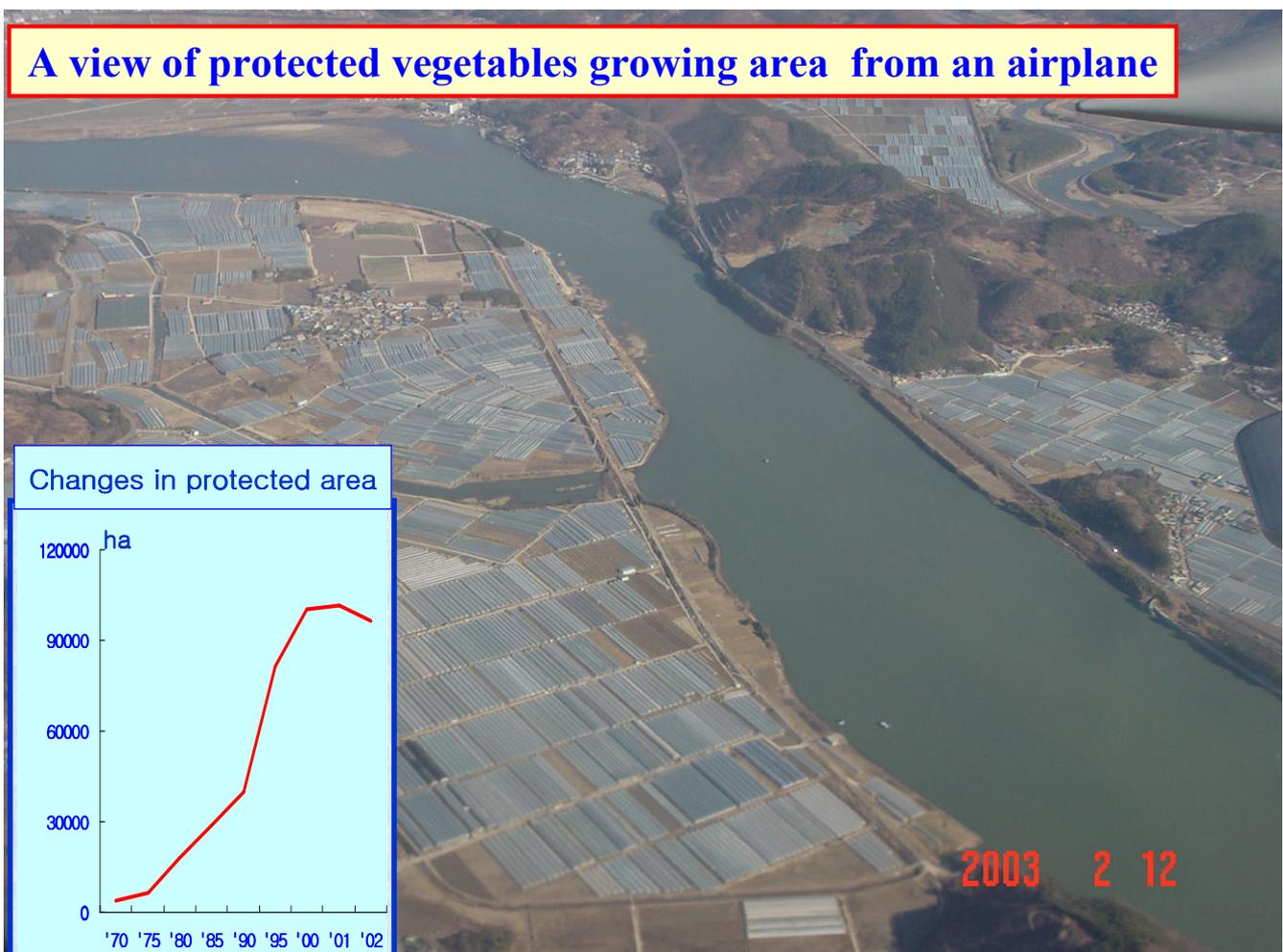
\$237 M. (4%)



Major fruits in Korea (2004)



A view of protected vegetables growing area from an airplane



**Super-high tech for pepper production
(fully automated glasshouse)**

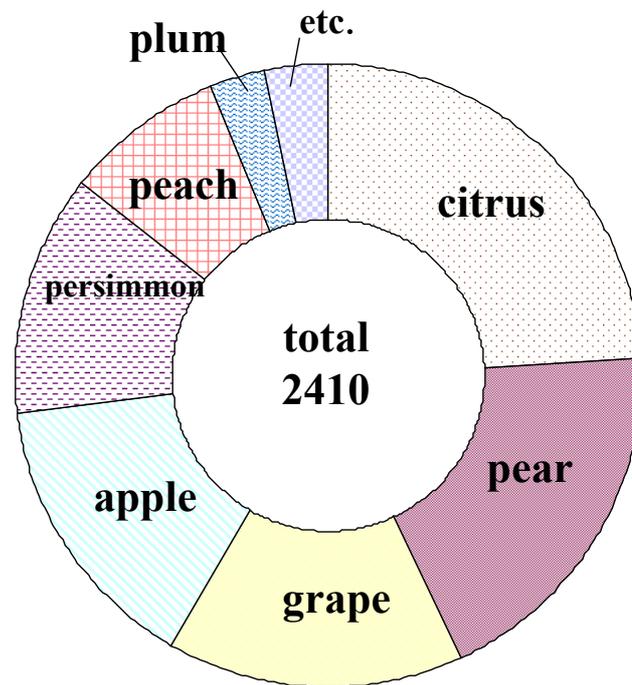


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Table 1. Fruit production in Korea. (10³ M/T)

	1998	2000	2002	2004
Citrus	511	563	642	584
Pear	259	324	386	452
Grape	397	475	422	368
Apple	459	488	433	357
Persimmon	260	287	281	299
Peach	151	170	187	200
Plum	39	51	57	72
Etc	73	66	71	78
Total	2,153	2,428	2,500	2,410



Fig. 2. Fruit production (10³M/T) in 2004.**Table 2. Export value of horticultural crops from Korea. (M US\$)**

	2000	2001	2002	2003	2004
Vegetables	187	190	169	194	230
Fruits	45	56	82	71	86
Flowers	30	32	32	45	49
Total	262	278	283	210	355



Table 3. Export value of fruits from Korea.**(M US\$)**

	2001	2002	2003	2004	2005
Pear	19.6	34.1	30.1	35.2	56.1
Apple	3.0	14.2	7.7	5.2	7.8
Citrus	4.9	5.7	4.3	5.6	3.4
Persimmon	4.4	4.6	2.3	3.6	5.6



Oriental pears

'Nittaka':

79% of oriental pear production
 crisp in texture
 good to eat as soon as harvested
 large and round to slightly flatten
 bronze-russet skin



Apples

'Fuji':

80% of apple production

late season cultivar

large, high sugar, firm flesh texture

yellow-green with red highlights

excellent for eating fresh

good balance of high sugar and organic acid

very long storage life



Citrus

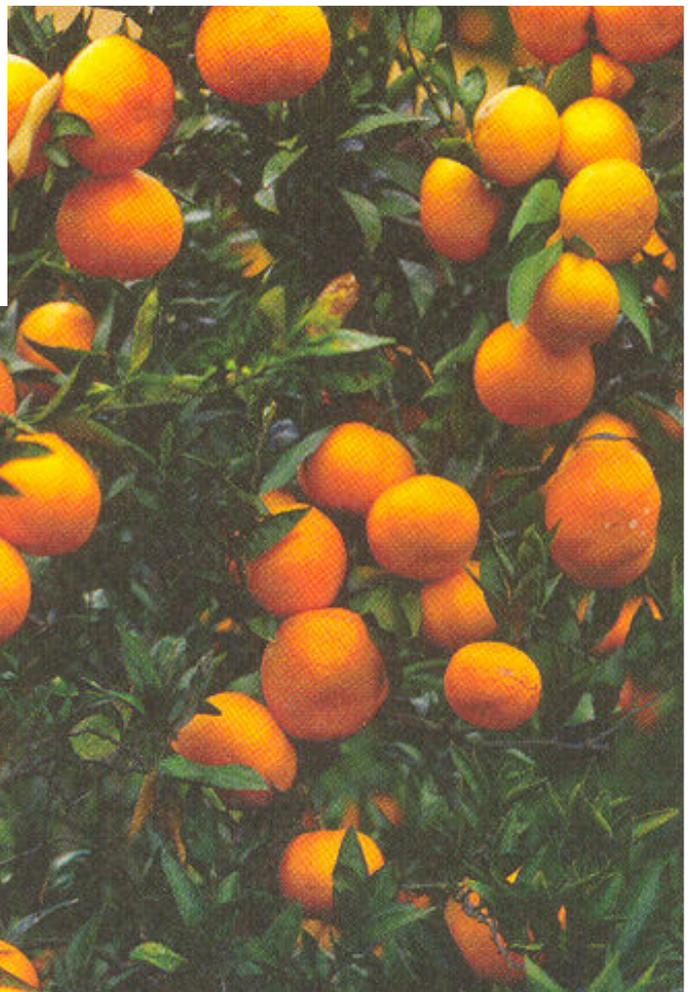
'Satsuma Mandarin':

98% of citrus production

very tolerant to cold weather

sweet, seedless fruit with delicate flavor

Rind is loose and can easily be removed.



Persimmons

sweet persimmon and astringent persimmon

'Fuyu':

82% of sweet persimmon production

Excellent flavor for eating



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Postharvest research in Korea

1950's: no postharvest research

1960's: common stores with clay bricks (apple, pear)

MA storage with PVC film (persimmon, vegetables)

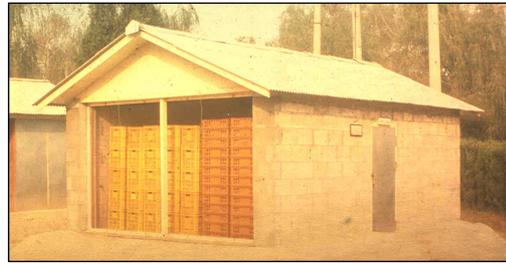
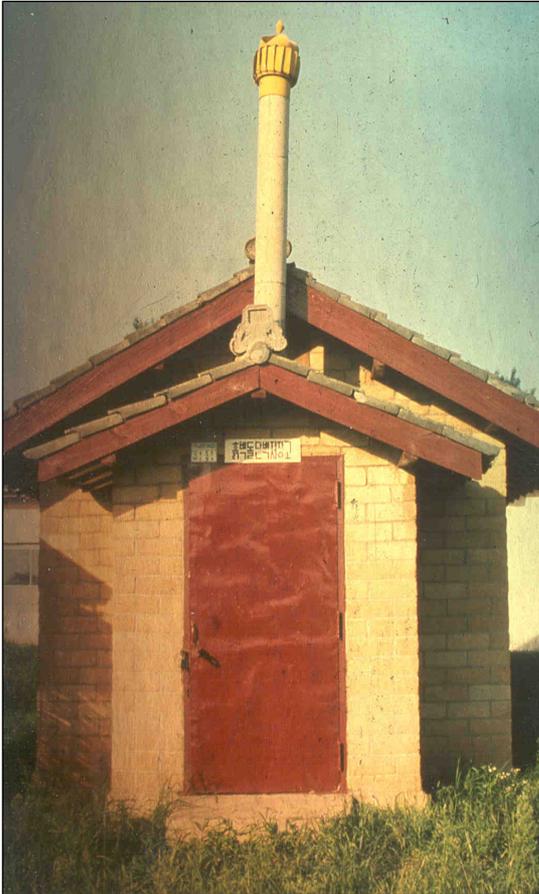
1970's: MA storage

storage for national security

pretreatment technology

some postharvest physiology (respiration)





1980's: low cost storage

standard fruit store

packaging and filler

cold storage

1990's: postharvest technology for globalization

cold-chain system

packaging with functional films

CA storage with nitrogen generator

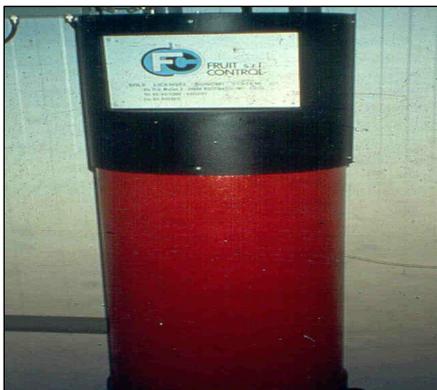
2000's: well-being era

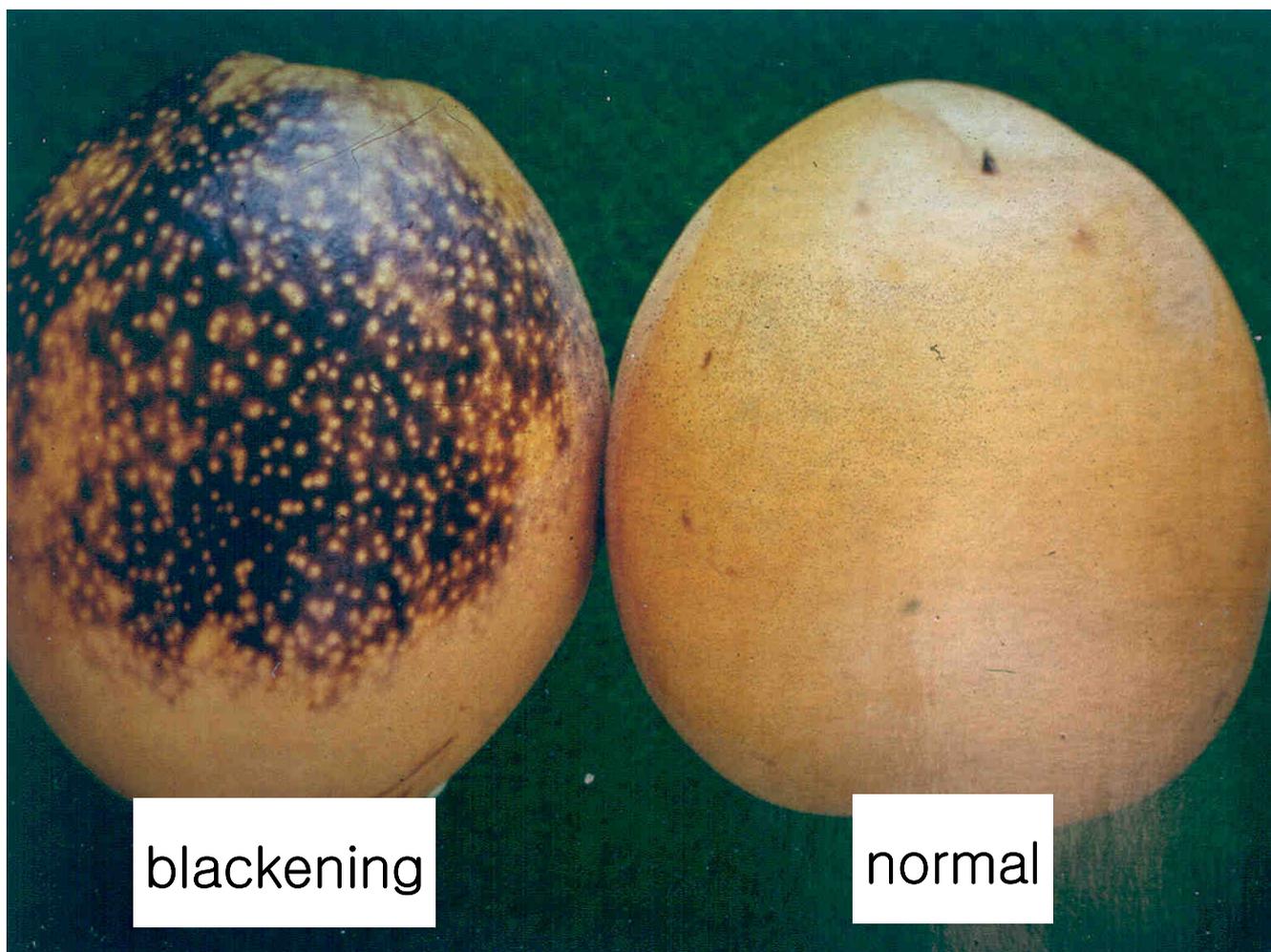
nutritional quality

phytonutrients

convenient food

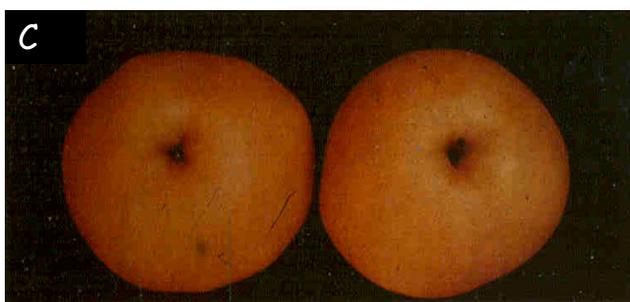
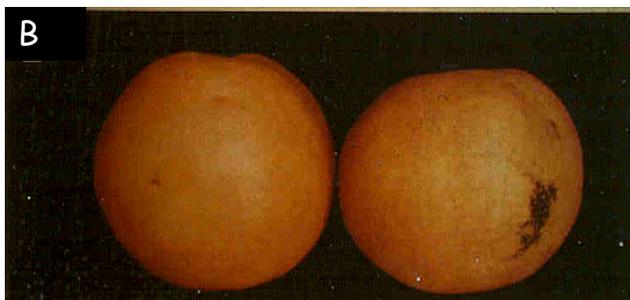
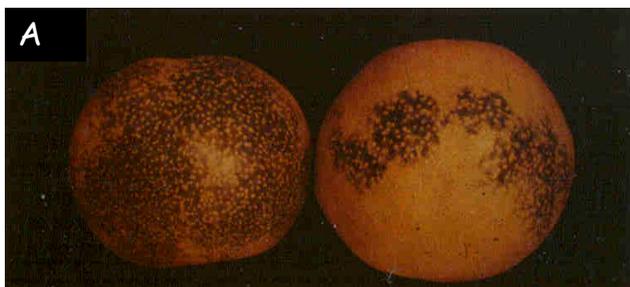
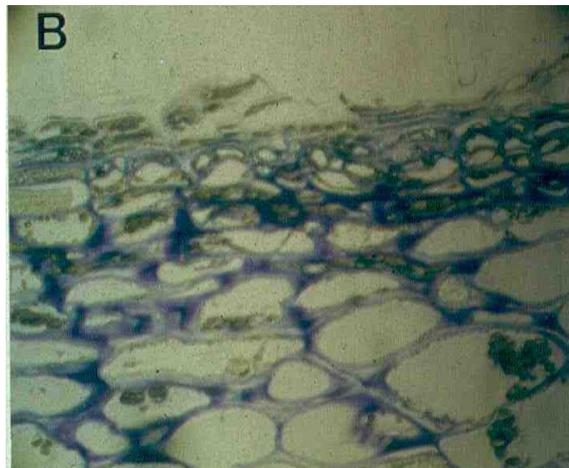






blackening

normal



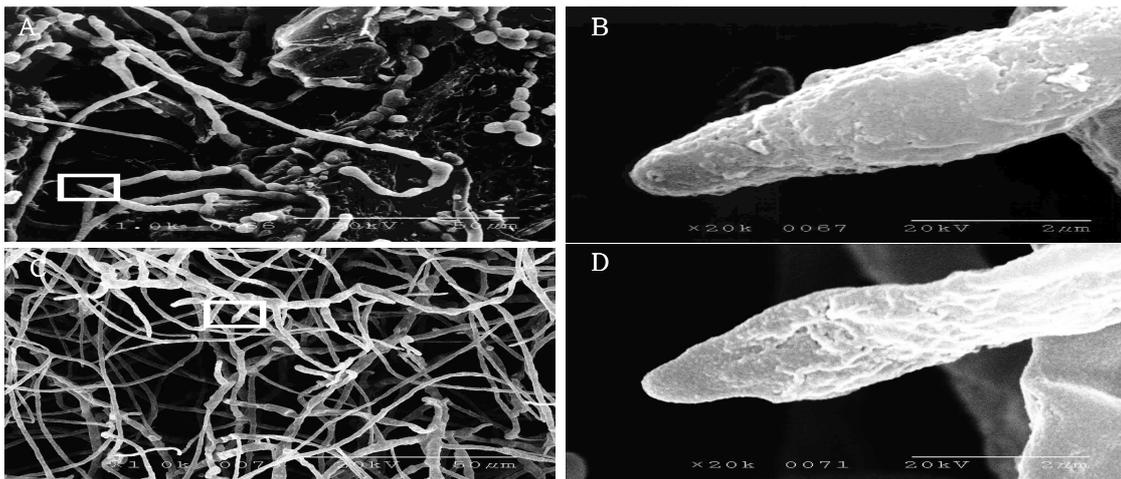


Fig. 35. Scanning electron micrographs of the conidial shapes and acervulus of *Gloeodes pomigena* isolated from black stain Niiitaka pear fruit skin. A, Colony separated from black stain pear fruit skin($\times 1k$); B, Colony separated from black stain pear fruit skin($\times 20k$); C, Cultured colony separated from black stain pear fruit skin($\times 1k$); D, Cultured colony separated from black stain pear fruit skin($\times 20k$).



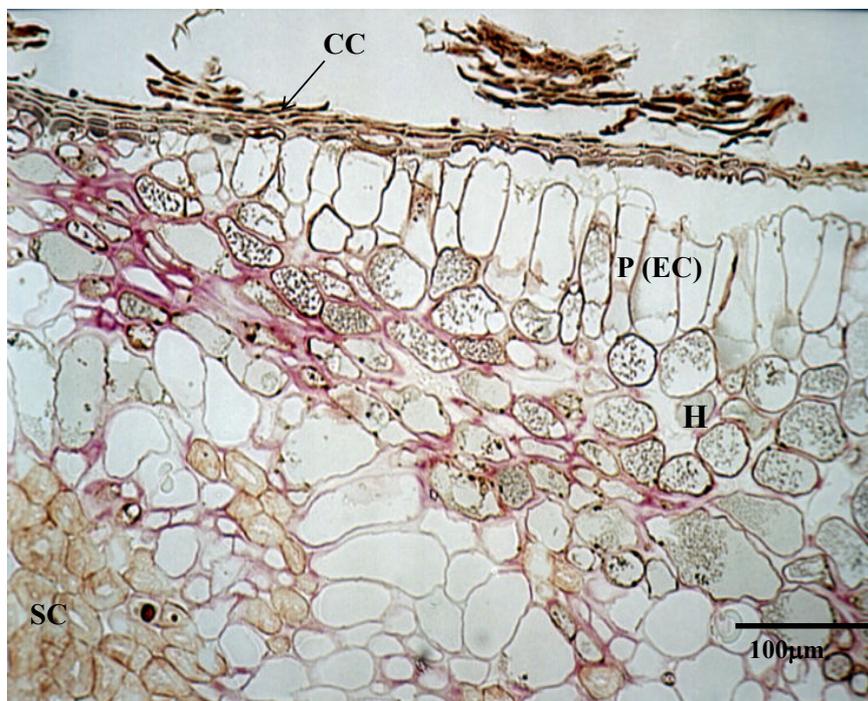
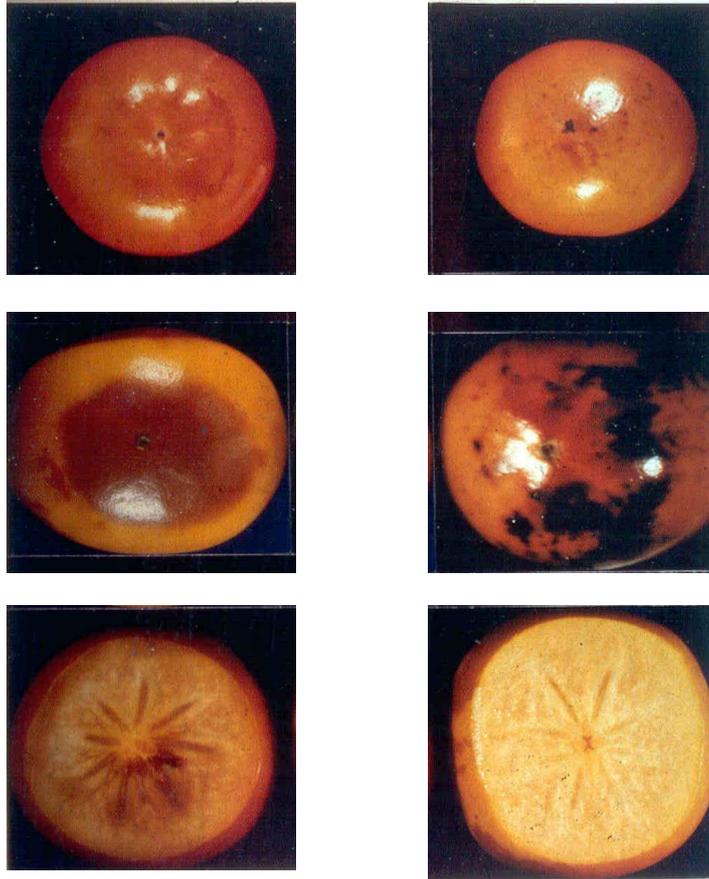


Fig. 20. Anatomical structure of skin tissue on Niitaka pear fruit showing initiating and terminating portion of the peeling-off disorder. CC, cork cell; H, hypodermis; P(EC), phellogen (elongated cell).





Agricultural & Fishery Marketing Corporation (AFMC)

in charge of exports and imports of agricultural products in Korea

main duty:

- collection of agricultural and fishery trade information
- promotion of sales, and public relations development in overseas markets
- participate in major international exhibitions
- operate Korean food exhibitions and overseas exhibitions
- install export public relations in partner trading countries

operate financial assistance programs:

- wholesale market construction loans
- advanced payment loans
- shipping promotion loans

Overseas offices:

- Japan (Tokyo, Osaka), Netherlands (Rotterdam), U.S.A. (New York, LA)
- Russia (Moscow), Singapore, and China (Beijing, Shanghai)



Recommendations:

Labor-saving technologies should be developed for improving price competitiveness.

Restructuring of fruit production and marketing systems are needed to reduce production cost.

It is essential to develop the **modernized systems for postharvest operations**.

Improving the **brand values** of Korean fruits into the overseas' markets is also important.

Systematic **export promotion** programs should be implemented.

Development of **new varieties** is needed through new biotechnology technique.



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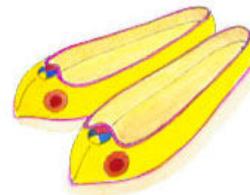
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Welcome to Korea

A view of Korea from satellite



See you in SEOUL,
Thanks

