

**Overripeness in pears transported
from Everett (USA) to Rotterdam
by m.v. "Shikishima Reefer"
in Dec./Jan. 1989/1990.
Report 3**

Drs. S.P. Schouten

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OVERRIPENESS IN PEARS TRANSPORTED FROM EVERETT,U.S.A. TO ROTTERDAM BY
M.V. "SHIKISHIMA REEFER" IN DEC/JAN 1989/1990. Report 3.

Reaction on the letter of Ing. O. de Groot of Harmsen & de Groot, dated 21st September 1992
(Reference Re: m.v."Shikishima Reefer").

Submitted to: Ruys & Co bv
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Written by: Drs S.P. Schouten

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Comments on De Groot's letter from 21st september 1992.

De Groot used the "Calendar of Availability" to prove that Anjou pears are on the market from October to June, Bosc from August to April and Comice from August to March the next year.

Quote

However, the U.S.A. pears harvested in August/September and the beginning of October originate from California while the pears of subject consignment came from northern states, such as Oregon and Washington. The latter states have their harvest period later in the year from October through November, due to their locations hundreds of kilometers North of the production areas in California.

Unquote

My remarks are:

1. In the same "Calendar of Availability" we see, that in August already some pears came from Washington. This share rises from 8% in September until 20% in November for Washington. For Oregon there is a rise from 8% in September until 58% in November. These figures are from USDA reports of unloads in 38 U.S. cities in 1959-1960, quoted by De Groot. It means, that commercial harvest has already started at least in September in Washington and Oregon.

2. We must realize, that some time is used between picking in the orchard and delivering these fruits to the cities. This time is needed for picking, grading, packing and transport. This means, that the "Calendar of Availability" is always behind the picking times.

3. The statement of De Groot on picking times for pears in the U.S.A. is completely wrong. Let us look at some facts from literature on d'Anjou pears.

- According to Chen and Mellenthin (1981) the first day of commercial harvest for d'Anjou pears was on 4th September for Oregon.

- According to Boonyakiat et al (1983) this date was 8th September in 1982.

- According to Hansen and Mellenthin (1962) early harvest of d'Anjou pears for Oregon was on 2nd and 3rd September in 1959 and 1960 respectively. "Early harvest" in this case is the commercial harvest or some days before commercial harvest.

- According to Meheriuk and Lau (1988) commercial maturity of d'Anjou pears was in the last week of September in 1982 and in 1984 (north from Washington) in Summerland, Canada.

4. If d'Anjou pears would be picked in October and November, these fruits would develop core browning according to Hansen and Mellenthin (1962), who indicated 20th and 23rd September 1959 and 1960 as "late".

Conclusion: Commercial harvest for d'Anjou pears grown in Oregon is much earlier than October and November indicated in the letter of De Groot. Data from literature indicate picking times in the first half of September for Oregon and even in Canada harvest is before October. As a consequence, my statement on "about 3 months old" for the involved consignments was correct.

Quote

The pears exported by Messrs Dendros, beyond doubt, have been unripe and recently harvested/packed.

Unquote**Comments:**

I like to stress upon the necessity of early harvest of pears, which must be stored for long periods. Much evidence is available on the relation between late picking and overripeness. Two possibilities are present for the pears of the "SHIKISHIMA REEFER":

a. The pears were picked on the right early dates. This means, that the pears must have produced ethylene before transport by the vessel. In this case the pears are not affected by the ethylene produced by apples in the same cold room during transport (see rapport 2).

b. The pears were picked late. These fruits must have been very sensitive to overripeness. If this has happened to the pears of the "SHIKISHIMA REEFER", an explanation for the overripeness has been found.

Final Conclusion: The cause of overripeness of the pears of the "SHIKISHIMA REEFER" is not a consequence of loading the pears together with apples, but must be found in events before transport to Europe.

References:

Boonyakiat D., P.M. Chen, R.A. Spotts and D.G. Richardson: Effect of Harvest Maturity on Decay and Post Harvest Life of 'd'Anjou' Pear. *Scientia Horticulturae*, 31, 131-139 (1987).

Chen P.M and W.M. Mellenthin: Effects of Harvest Date on Ripening Capacity and Postharvest Life of 'd'Anjou' Pears. *J. Am. Soc. Hort. Sci.* 106(1): 38-42 (1981).

Hansen E. and W.M. Mellenthin: Factors Influencing Susceptibility of Pears to Carbon Dioxide Injury. *Proc. Am. Soc. Hort. Sci.* 80, 146-153 (1962).

Meheriuk M. and O.L. Lau: Effect of Two Polymeric Coatings on fruit Quality of 'Bartlet' and 'd'Anjou' Pears. *J. Am. Soc. Hort. Sci.* 113(2): 222-226 (1988).