

Additional notes for the given results

1. Variety

If a variety has not (yet) an official name the selection or testing number or the provisional name is used here. In general, trade names are not given, because using such names could suggest relations between commercial institutions and (independent) research. Only if the variety is mainly known under its trade name this name will be given in brackets.

2. Sanitary status

vf = virus free

vt = virus tested

nt = not tested/sanitary status unknown

4. Year of planting

Experimental trees were planted in the spring of the mentioned year. Because of favourable planting conditions, trees can sometimes be planted in November or December of the preceding calendar year. Also then the mentioned year is considered as the year of planting. The age of the experimental trees is only given if no maiden trees were planted.

5. Number of experimental trees

Observations concerning susceptibility to pests and diseases are always carried out in the plot without or with less application of fungicides; the other (field) observations are carried out with fruits from, or in the other plot.

Experimental trees, that were once excluded from the trials for any reason are never used for observations again.

Replanted trees do not serve as experimental trees.

6. Tree vigour (Quince MC+interstem)

1 = extremely weak

3 = weak

5 = intermediate (Conference)

7 = vigorous (Doy. du Comice)

9 = extremely vigorous

7. Tree habit

1 = extremely upright

2 = extremely upright to upright

3 = upright (Doy. du Com., B.C. Will.)

4 = upright to spreading (Conference)

5 = spreading

6 = spreading to drooping

7 = drooping (Clapp's Fav., B.A.Lucas)

9 = weeping

8. Leaf condition (optional)

1 = extremely poor

3 = poor

5 = intermediate

7 = good

9 = excellent

Observations on vigour, habit and leaf condition are done in the 2nd/3rd and in the 5th/6th growing season.

9. Tree size

See annexe 1. Tree volume is determined by measuring two tree diameters (AB, CD) at the height of the lowest branches and by measuring the height of the central leader (h). The formula $V = \frac{\pi}{4} r^2 (h:3)$ gives the tree volume. Measurements are done at the beginning of the 5th growing season after winter pruning.

10. Date of full bloom

The date on which 80% of the flowers on old(er) wood has opened and/or first petal fall occurs. Annual observation.

11. Amount of flowering

1 = no or very few flowers

3 = few flowers

5 = intermediate bloom

7 = heavy bloom

9 = very heavy bloom

The amount of flowering
is determined annually.

12. Second flowering (optional)

1 = none

3 = few

5 = rather much

7 = much

9 = very much

13. Precocity of bearing (optional)

1 = very early

3 = early

5 = intermediate

7 = late

9 = very late

14. Preharvest fruit drop

The amount of preharvest fruit drop is determined annually at the picking date. Fruit drop caused by (too) late picking or damage from outside (birds for instance) is not considered as preharvest fruit drop.

1 = very weak

3 = weak

5 = intermediate

7 = heavy

9 = very heavy

15. Average fruit weight

The average fruit weight is based upon counting and weighing of the total yield. Only the average fruit weight of the main picking date (mostly the first one) is mentioned. Annual observation.

16. Fruit size

Grading is based upon the mentioned quantity. Figures are percentages of weight. Judging the figures one has to realize that, if necessary, fruit thinning by hand was timely carried out. Grading is done in the 4th and 5th growing season at any time after picking.

17. Bruising susceptibility

1 = no bruising

3 = low; neither external nor internal symptoms

5 = medium; slight browning on the skin or under the skin in the fruit flesh

7 = high; large external browning; deep symptoms (7-10 mm) under the skin in the fruit flesh

9 = extremely high; almost brown, deep symptoms (7-10 mm)

Annual observation.

18. Thickness/toughness of the skin (optional)

1 = thin/soft

3 = rather thin/soft

5 = intermediate = normal

7 = rather thick/tough

9 = thick/tough

19. Fruit colour

Observations are made on a random sample of, if possible, at least 12 kg of mature fruits. In case of (long) keeping varieties judgement is done after storage. The sample is taken on the (main) picking date of the variety concerned.

19.1 testing date(s)

19.2 Ground colour

1 = orange

2 = cream-white

3 = yellow

4 = green-yellow

5 = green

19.3 Over colour

1 = none

2 = orange

3 = pink

4 = (bright) red

5 = dark red

6 = purple

7 = brown (red)

19.4 Type of over colour

1 = striped

2 = splashed

3 = slightly blushed

4 = complete over colour

5 = striped + slightly blushed

6 = striped + completely blushed

19.5 Amount of blush

- 1 = 0 - 10 % blush
- 2 = 11 - 20 % blush
- 3 = 21 - 30 % blush
- 4 = 31 - 40 % blush
- 5 = 41 - 50 % blush
- 6 = 51 - 60 % blush
- 7 = 61 - 70 % blush
- 8 = 71 - 80 % blush
- 9 = 81 - 100 % blush

This observation is at least carried out in the growing seasons 1, 2 and 3 and in years in which no colour grading as mentioned in 19.6 is done.

19.6 Colour grading

Grading of the mentioned quantity is done on the mentioned date. In case of (long) keeping varieties grading is done after storage. Grading is done in the 4th and 5th growing season.

20. Russetting/bronze

20.1 Amount

- 1 = 0 - 10 %
- 2 = 11 - 20 %
- 3 = 21 - 30 %
- 4 = 31 - 40 %
- 5 = 41 - 50 %
- 6 = 51 - 60 %
- 7 = 61 - 70 %
- 8 = 71 - 80 %
- 9 = 81 - 100 %

20.2 Type

- 1 = extremely fine
- 2 = very fine
- 3 = fine
- 4 = rather fine
- 5 = rather fine to coarse
- 6 = coarse
- 7 = coarse to scaly
- 8 = scaly
- 9 = cracked

20.3 Position

- 1 = only in/around stalk cavity
- 2 = only in/around calyx cavity
- 3 = in/around stalk+calyx cavity
- 4 = spread
- 5 = 1 + 4
- 6 = 2 + 4
- 7 = 3 + 4
- 8 = around lenticells only

21. Fruit shape

See annex

22. Homogeneity fruit shape

1 = homogeneous

3 = rather homogeneous

5 = intermediate

7 = rather heterogeneous

9 = heterogeneous

23. Fruit stalk (optional)

1 = short

2 = long

3 = thick

4 = thin

5 = 1 + 3

6 = 2 + 3

7 = 1 + 4

8 = 1 + 4

24. Fruit flesh

The first observations are done on the mentioned testing date, which is after storage in case of (long) keeping the varieties. A sample of 10 fruits is used for the first determination of firmness, sugar and acidity content. First determination of colour, texture, juiciness and taste is done on other fruits.

The second determination of as well firmness, sugar and acidity, as juiciness and taste is done on a sample of 10 fruits stored during 14 days at 18 °C. In case of summer varieties the second testing is done after 8 days at 18 °C.

Firmness is always determined by using a penetrometer with a 8 mm probe. Recording is done on two opposite spots of each of the 10 fruits after peeling. If the measurement exceeds scale score 9, the real penetrometer figure is additionally mentioned under 24.4. Texture and juiciness are determined by tasting the fruits.

24.1 Testing date(s)

24.2 Colour

1 = white

3 = cream-white

5 = yellow-white

7 = orange-white

9 = green-white

24.3 Texture

1 = extremely coarse

3 = coarse

5 = intermediate

7 = fine

9 = extremely fine

24.4 Firmness

- 1 = 2 kg = very soft
- 2 = 3 kg
- 3 = 4 kg = soft
- 4 = 5 kg
- 5 = 6 kg = intermediate
- 6 = 7 kg
- 7 = 8 kg = firm
- 8 = 9 kg
- 9 = 10 kg = very firm

24.5 Juiciness

- 1 = very dry
- 3 = dry
- 5 = rather dry
- 7 = juicy
- 9 = very juicy

24.6 Taste

- 1 = extremely poor
- 3 = poor
- 5 = intermediate
- 7 = good
- 9 = excellent

24.7 Sugar

Sugar is determined by using a refractometer; figures are ° Brix.

24.8 Acidity

Is given in equivalents g of malic acid per liter juice. Eventually pH is given.

25 Grit cells

25.1 Amount

- 1 = none
- 3 = few
- 5 = rather much
- 7 = much
- 9 = very much

25.2 Position

- 1 = around core
- 2 = spread
- 3 = both

26. Parthenocarpy (optional)

- 1 = none
- 3 = few
- 5 = rather many
- 7 = many
- 9 = all fruits

27. Storage life

A storable variety is kept at 1 °C in a cool storage room in which also many other varieties in a quantity of about 12 kg each are stored.

Picking date and amount of fruits per tree can considerably affect the storability of a variety. The mentioned storage life period, determined also by investigating storage problems and physiological disorders, can therefore only be considered as a rough indication of the storage life. When meeting the specific storage conditions of the variety involved, storage life could be prolonged.

28. Shelf life

Shelf life is determined by examining storage problems, physiological problems and characteristics as mentioned under 24.4 till 24.8 of 10 fruits stored at 18 °C during 8 or 14 days. Because shelf life can strongly be affected by the amount of fruits on the tree, picking date, storage system and storage period the mentioned period can only be considered as a rough indication of the shelf life.

29. Storage diseases

Storage diseases can among other things be affected by the storage period; (too) long storage can increase storage problems.

- 1 = very low sensitivity/susceptibility
- 3 = low sensitivity/susceptibility
- 5 = moderate sensitivity/susceptibility
- 7 = high sensitivity/susceptibility
- 9 = very high sensitivity/susceptibility

30. Physiological disorders

This kind of problems can among other things be affected by the storage period; (too) long storage can increase these problems.

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|--|----------------------|
| 1 = very low sensitivity/susceptibility | Scald |
| 3 = low sensitivity/susceptibility | Brown core |
| 5 = moderate sensitivity/susceptibility | Break down |
| 7 = high sensitivity/susceptibility | Fruit flesh browning |
| 9 = very high sensitivity/susceptibility | Browning + cavities |

31. Pests and diseases

- 1 = very low sensitivity/susceptibility
- 3 = low sensitivity/susceptibility
- 5 = moderate sensitivity/susceptibility
- 7 = high sensitivity/susceptibility
- 9 = very high sensitivity/susceptibility

The Latin names for the pests and diseases mentioned under 29 and 31 are:

Pear scab	<i>Venturia pirina</i>
Collar rot/root rot	<i>Phytophthora cactorum</i>
Gloeosporium rot	<i>Pezicula m. and a.</i>
Monilia	<i>Monilia fructigena</i>
Nectria canker	<i>Nectria galligena</i>
Powdery mildew	<i>Podosphaera leucotricha</i>
Fire blight	<i>Erwinia amylovora</i>
Codling moth	<i>Cydia pomonella</i>

Green apple aphid	<i>Aphis pomi</i>
Leopard moth	<i>Zeuzera pyrina</i>
Pear blossom blast	<i>Pseudomonas syr. pv. syr.</i>
Pear sucker	<i>Psylla pyri</i>
Pear sucker	<i>Psylla pyricola</i>
Root rot	<i>Roesleria pallida</i>
Pear decline	
Pear bud weevil	<i>Anthonomus piri</i>
Leaf galls	<i>Phytoptus piri</i>
Red mite	<i>Panonychus ulmi</i>
Rosy pear aphid	<i>Dysaphis pyri</i>
Spider mite	<i>Tetranychus urticae</i>
Silver leaf	<i>Chondrostereum purpureum</i>

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