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Comparative analysis of peach and nectarine cultivars based on their ecological and biological indicators

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Summary: Natural conditions other than the ecological conditions of the Chinese gene center (as 34-38° latitude and 600 to 2400 m above sea level), mainly dry subtropical, i.e. Mediterranean effects, facilitated the development of new forms and varieties (Scorza & Okie, 1991; Faust & Timon, 1995). Probably the primary cause of nectarines, this could also be the primary cause of mutations (probably about 2000 years ago) (Roach, 1985; Surányi, 1985). During the long domestication of peaches, its natural occurrence increased, which was greatly enhanced by its ecological and mutational ability and the organoleptical values of its fruit (Hedrick, 1917; Roach, 1985; Scorza & Okie, 1991; Faust et al., 2011). Through the Ellenberg-Borhidi model and its refinement, the author has demonstrated the suitability of peaches in a broad climate zone based on the relative ecological and biological values of 700 varieties. Among the varieties, clone cultivars and hybrids were Hungarian selected and crossed form, because the diverse environmental conditions of the Carpathian Basin and the past and present size of cultivation were representative (Faust & Timon, 1995; Timon, 2000). It can be concluded from the present relative ecological data that the average standard deviation is below 12% for both peach and nectarine varieties, but the relative biological values were very different. Comparison of cultivars or classical (downy) peaches (n = 562) and nectarines (n = 138) in terms of environmental values confirmed the difference in heat demand and salt tolerance of the two groups of varieties. The pictures of the paper also demonstrated the rich diversity of this fruit species, and after analyzing the apricot and plum varieties (Surányi 2014, 2018), the peculiarities of the relative ecological and biological values of peaches were confirmed.

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Key words: peach, nectarine, ecological indicators, biological indicators

Introduction

The peach is native in the Northwest China between then Tarim Basin and the north of the Kunlun Shan mountains, where it was domesticated and cultivated (Surányi, 1985; Roach, 1985; Scorza & Okie, 1991; Faust & Timon, 1995). Fossil endocarps with characteristics indistinguishable from those of modern peaches have been recovered from late Pliocene deposits in Kunming, dating to 2.6 million years ago (Chen, 2015). Dissemination was relatively slow and diverse, geographically, ecologically, and in its changes, creating the potential for diversity. Cultivated peaches are divided into clingstones and freestones, depending on whether the flesh sicks to the stone or not; both can have either white, yellow or purple (Hedrick, 1917; Morettini & Baldini, 1962; Bordeianu et al., 1967; Soltész, 1998).

In the fruit market is the "traditional peach" (*Prunus persica*), so the characteristic fuzz on the skin, nectarines (*Prunus persica* var. *nucipersica*) are featured by the absence of fruit-skin trichomes (Rehder, 1954; Scorza & Okie 1991; Faust & Timon, 1995). The genetic studies provide nectarine are produced due to a recessive allele, whereas peaches are produced from a dominant allele for fuzzy skin (Scorza & Okie, 1991). It is also believed that the result of the mutation is the so-called flat peaches too (*Prunus persica* provar. *platycarpa*) (Terpó, 1974; Faust & Timon, 1995; Faust et al., 2011). The distribution and production areas of peaches also show the cultivation history itself, given the Linné's variety name circa 2000 BC refers to the region, then they will also begin to be intensively cultivated in China and will be part of the rich Chinese culture (Roach, 1985; Surányi, 1985; Faust & Timon, 1995). It then appeared in the Roman Empire, of course in Europe and conquered the overseas territories (Gyulai, 2001; Visy, 2003). The popularity of the species and its cultivation worldwide increases not only breeding activity but also the potential for mutations. Therefore, the start of molecular genetic testing for peaches is an important achievement.

In 2010, the International Peach Genome Initiative (IPGI) published the peach genome sequence and related analyses (Verde et al., 2013).

Peaches grow in quite limited conditions in dry, continental or temperate climates. The reason is that the trees requires chilling that tropical or subtropical areas generally can't satisfy except at high altitudes (Mohácsy et al., 1967; Scorza & Okie, 1991; Faust et al., 2011). We could not extend order analyzes to the characterization of vegetation, the morphology of the flower, the fruit and the leaf, and even the chemical properties of the fruit and the susceptibility to the individual pathogens, namely the analysis of the Hungarian wild species (Jávorka & Soó, 1951; Soó, 1964-1985; Zólyomi et al., 1967; Kárpáti & Terpó, 1971; Kárpáti, 1978; Précsényi, 1986; Zólyomi, 1987; Simon, 1988, 1991), and Raunkiaer forms (1905) and ecological figures of each species (Kovács, 1979; Borhidi, 1993, 1995).

But cultivars and new breeds are what they are. The study presents peaches with relative ecological and biological values, based on the cultivars known in the past, and the differences between the cultivars. The author has analyzed in several studies

the fruit species, more specifically apricots and plums (Surányi, 2000, 2002, 2006, 2009, 2014, 2015, 2018), considering Ellenberg et al. (1991), Kovács (1979), Simon (1988, 1991) and Borhidi (1993, 1995).

Materials and methods

There are 700 peach cultivars which have different taxonomic features in studies. These values were determined on the basis of the ecological information of peaches (Hedrick, 1917; Ellenberg, 1950; Rehder, 1954; Fideghelli, 1973; Scorza & Okie, 1991; Surányi, 1991-2015; Faust & Timon, 1995; Soltész, 1998, etc.). The definition of Borhidi's ecological figures is following (1993 and 1995). Of the total relative values, only the description of the represented ecological values is always given. The full description can be found in an earlier study (Surányi, 2014), but the abbreviated version was also used below (cf. Surányi 2015 and 2018).

TB: The relative *temperature figures* reflecting the heat supply of the habitats where the species occur (mainly based on the distribution according to the latitudinal vegetation zones and altitudinal belts). The temperature figures of Ellenberg's (1974) 9-grade scale (T) applied by Borhidi (B) (1995) to the Hungarian flora and by Surányi (2014) to the Hungarian culture's flora. The relative figures indicate the following heat-climate belts or the corresponding microclimate conditions:

5. montane mesophilous broad-leaved forest belt,
6. submontane broad leaved forest belt,
7. thermophilous forest or woodland belt.

WB: The relative *moisture figures* (occurrence in relation to soil moisture or water table) according to the 12-grade F-scale of Ellenberg (1963). The scale is very similar to the W-scale of Zólyomi (1964), but the water plants have a more detailed categorization, as follows:

4. plants of semidry habitats
5. plants of semi humid habitats, under intermediate conditions
6. plants of fresh soils

RB: *Reaction figures*, according to the nine-grade Ellenberg's scale (1952), reflect to the occurrence of the plants in relation of the soil reaction of the habitats (Tüxen & Ellenberg, 1937; Papp & Tamási, 1979). In the 5-grade Zólyomi's (1987) scale calciphilous and salt tolerant or even halophilous plants are equally treated as basiphilous plants (see Papp & Tamási, 1979). Here the two groups are differentiated by their positive or negative *salt figure* category. A comparison of the reaction value scales according to Ellenberg's (1952) versus Zólyomi's classification (1987) was carried out by Pichler & Karrer (1991). The correspondent degrees are follows:

4. plants of moderately acidic soils
5. plants of slightly acid soils
6. Mostly on neutral soils but also in acid and basic ones, generally widely tolerant, more or less indifferent plants
7. Basifrequent plants, mostly on basic soils.

NB: *Nitrogen figures* according to Ellenberg's 9-grade scale (1974), based on the occurrence in relation to the ammonia and nitrate supply of the habitats, which received Borhidi (1995) then Surányi (2014) too. These are degrees:

4. Plants of submesotrophic habitats
5. Plants of mesotrophic habitats
6. Plant of moderately nutrient rich habitats.

LB: *Light figures* according to Ellenberg's 9-grade scale (1974) based on the occurrence of plants in relation to relative light intensity during summer time. Degrees following:

5. Half shadow plants receiving more than 10% but less than 100% relative light intensity
6. Half shadow-half light plants; photosynthetic minimum between 10 and 40% relative light intensity
7. Half light plants, mostly living in full light but also shadow tolerant.

KB: *Continentality values* according to Ellenberg's nine-grade scale (1952) based on the main distribution of plants according to degree of continentality of the general climate (see Meusel & Schubert 1972) with emphasis on maximum and minimum temperature. Degrees are follows:

5. intermediate type with slight suboceanic-subcontinental character,
6. subcontinental, main area in eastern Central Europe,
7. continental-subcontinental species main area in East-Europe.

SB: *Salt figures* for indicating plant occurrence in relation to the salt concentration of the soils in a 9-grade scale, according to Scherfose (1990). Literary sources of ecological indicators are included in the Introduction, because breakdown by type of detail is not possible. The salt figures at least, developed to the SB. The toxic salt content is generally perceived afterwards, when the trees have been damaged:

0. halophob species not occurring in salty or alkalic soils
1. salt tolerant plants but living mainly on non-saline soils.

It was developing new added relative value numbers that have been introduced in the fruit-bearing species, based on wild species (Iversen, 1936, Tüxen & Ellenberg, 1937 etc.). We first presented in open pollination, the flower buds and bark frost sensitivity (Kobel, 1954; Porpáczy, 1964; Schwanitz, 1967; Gyuró, 1974 and 1990; Nyéki et al., 1980; Childers & Sherman, 1988; Nyéki & Soltész, 1996) and significance for peaches and nectarines main concern viruses Sharka sensitivity (V. Németh, 1986; Papp, 2003, 2004) to disease pathology (taphrina, clasterosporium, monilia) characterization among the peach cultivars (Hedrick, 1917; Tomcsányi, 1960; Knight, 1969; Fideghelli, 1973). The pathological data are new compared to the apricot and plum varieties. The description of the indicator values was the same as the definitions used in our previous studies; see Surányi 2015, 2018).

OP: Measuring of *open pollination* (Crane & Lawrence, 1956; McGregor, 1976; Brózik & Nyéki, 1975; Scorza & Okie, 1991; Kozma et al., 2003):

1. larger than 35% of open pollination
2. 20-35% of open pollination
3. 2-20% of open pollination
4. 0-2 % of open pollination.

FR: Degree of *frost resistance* (Kobel 1954; Porpáczy 1964; Larcher 1980; Kozma et al. 2003):

1. frost tolerant (over 5 % of flower bud and bark damage)
2. moderately frost sensitive (15-40% of damages)
3. frost sensitive (about 50% of frost damages).

DR: Measuring of *disease resistance* (namely *Taphrina deformans*, *Clasterosporium carpophyllum*, *Monilia fruictigena* and PPV) (Hedrick, 1917; Tomcsányi, 1979; Scorza & Okie, 1991; Faust et al., 2011):

1. resistant to disease (0=no symptoms on the trees)
2. moderately sensitive (cc. 30% of leaves or fruit symptoms)
3. sensitive (over 50% of leaf symptoms and fruit falling).

In this study, it was chosen, whether it is possible in an species, though several subtaxa botanical species and under species the representatives of the ecological and biological differences between cultivars characterization according to Ellenberg – Borhidi – Surányi's modified based on the relative figures (Surányi, 2015, 2018). The results are shown in summing of all cultivars of peaches in ***Table 1*** and comparison of peaches (n =512 and nectarines (n =138) in ***Table 2***. We assume that the cultivars will be easier of origin and economic-botanical view can be evaluated, increasing the effectiveness of peach and nectarine cultivation.

Criteria were for selecting varieties for analysis and at the same time introduce the most important figures to illustrate the diversity of peach cultivars (***Figure 1-12***).

1) Well-known variety of properties (Hedrick, 1917; Gardner et al., 1952; Morettini & Baldini, 1962; Brook & Olmo, 1972; Fideghelli, 1973; Ninkovski, 1989; Faust, 1989; Faust & Timon, 1995; Soltész, 1998);

2) varieties known from publications (see above);

3) as far as possible, Hungarian observations (Brózik, 1962 1963; Csöbönyei & Surányi, 1971-1985; Mándy, 1963; Tomcsányi, 1979; Timon, 1992; G. Tóth, 2001; Pernesz, 2013; Soltész, 2014).

Results and discussion

The peach is adapted to temperature and subtropical zones, their different forms are one of the very cultivated temperate fruit species. Most commercial production lies between latitudes 30° and 45° North and South (Hesse, 1975). Low mid-winter temperatures and spring frost limit peach production in the temperature zone, but the role of diseases and pests and edaphic factors is not insignificant. World production is about 22-24 million tons; the leading growers are China (14.2 Mt), Spain (1.79 Mt), Italy (1.25 Mt), Greece (902 Mt), USA (775 Mt), Turkey (771 Mt), Iran (422 Mt) and Chile 360 Mt). The proportion of downy peaches and nectarines varies from country to country, with the share of nectarines varying from 10 to 65% (Faust & Timon, 1995; Surányi, 2018, unpublished).

China as an area of certain species, remains the leading peach growing country; according to China Statistical Yearbook (2016), the top provinces are Shandung (2.94 Mt), Hebei (2.02 Mt), Henar (1.28 Mt) and Shanxi (1.03 Mt). The different peaches spread from China following the trade routes through Persia, along the path of distribution through Europe, adapted population of local peaches can be found, among these are „vineyard" peaches of France, Romania and Hungary (Parnia et al., 1988). These are land races selected for hundreds of years for their productivity and resistance to environmental stress.

Natural conditions other than the ecological conditions of the Chinese gene center (as 34-38° latitude and 600 to 2400 m above sea level), mainly dry subtropical, i.e. Mediterranean effects, facilitated the development of new forms and varieties (Scorza & Okie, 1991; Faust & Timon, 1995). Probably the primary cause of nectarines, this could also be the primary cause of mutations (probably about 2000 years ago) (Roach, 1985; Surányi, 1985). The surface of downy peaches provided greater protection against water drops and various infections, but nectarines were better able to adapt to semi-Mediterranean, Mediterranean conditions. In Hungary, the factors outlined above are less favorable to nectarines than those in Southern Europe, California or China. Examples include the evergreen types in Mexico adapted to very low „no-chill" areas (Acosta & Barrios, 1987), peaches grown by the Navajo Indians in remote areas of Arizona (Jett 1979), and colt-hardy types as 'Bailey' and 'Boone Country' cultivars (Hedrick, 1917).

Peach is closely related to almond and other members of the *Amygdalus* subgenus. *P. davidiana, P. ferganensis, P. kansuensis P. mira* and *P. persica* – five peach species recognized. Problems of genetic significance are:

a) Climatic adaptations is a function of cold hardiness, chilling requirement, and blossom period once chilling requirement is fulfilled.

b) Cold hardiness: The peach is one least cold tolerant of the commercially grown *Prunus* species (Quamme et al., 1982). Fully acclimatized peach flower buds can survive -30 °C and vegetative buds -35 °C (Layne, 1984). Yet, there are genotype that have been consistently shown to have hardy flower buds and/or xylem. Although these genotypes are significantly colder hardy than commercial peach cultivars, some bloom early and as such may be susceptible to spring frosts.

c) Fresh color: freestone cultivars generally have pale yellow flesh and the fruit are harvested when the ground color is green-yellow. A few cultivars develop a bright yellow ground while the fresh is quite firm. Golden yellow or orange flesh, characteristic of several canning clingstone cultivars, adds to the external and internal attractiveness (Scorza & Okie, 1991).

So there are numerous environmental, health and physiological-cultivation problems: little has been done to select for tolerance to drought and frost.

Table 1 shows the relative ecological and biological values that can be determined from the cultivar descriptions. The values of apricots, plums (Surányi, 2015, 2018) and previously presented with a few representative varieties (Surányi, 2006, 2014) are well connected with the Borhidi's papers (1993, 1995), using experience from other species (Faust & Surányi, 1997, 1999; Faust et al., 1998; Faust & Timon, 1995).

It can be concluded from the present relative ecological data that the average standard deviation is below 12% for both peach and nectarine varieties, but the relative biological values were very different. The Materials and Methods part is based on a large number of sources (***Table 1-2***). In this study, comparing the respective values of downy and nectarine peaches, we obtained a significant value and, what was striking, the evolution of relative ecological and biological values was harmonious in the comparison between the two groups (r = +0.8911).

Ecological reasons explain the slight differences in the values of the cultivars: the ecogeographical characteristics of the five peach parent (native) species can also be explained by the dislocation of their arable land (Surányi, 1985; Roach, 1985; Scorza & Okie, 1991; Faust & Timon, 1995). Attention has been paid to spontaneous form of Hungarian origin, resulting from selection and hybridization. Among the 700 varieties there were 4 cultivar of Hungarian hybrid origin and a further 21 varieties of peaches of Hungarian origin: mutant or result of epigenic stress memory (as Csöbönyei & Surányi, 1971-1985; Surányi, 1991-2015).

There is no nectarine among the selected cultivars, and among the downy peaches there are a large number of clingstone (on third-part). According to our observations, the frost tolerance of these cultivars was better than that of the seedling-tree Hungarian cultivars. Both in the world and in Hungary, diverse environmental factors have helped to increase the diversity of cultivars.

Hungarian cultivars and clone varieties were thus as follows, but that does not mean that seedling-trees found in further lands were not: 'Cegléd szépe C. 425', furthermore 'Csizmadia magonca C. 426', 'Homokgyöngye C. 427' and 'Szatymazi Ford' (the last three were not listed in ***Table 1***) (Nyujtó, 1963) However, these have been retained only in home gardens and mostly in traditional vineyards.

The distinction between the types is very difficult, they are referred to as 'Parasztbarack' (peasant peach) most of the time, they were also known on our genebank collection trips, although their value in use was very different (Surányi, 1990): it was suitable for fresh consumption, for drying, for making jam, or for late ripening, high in sugar – It was used as a raw material for wine or brandy. The following are the series of these types of landscapes as local varieties:

a) Hungarian hybrid cultivars (n=4)
'Aranycsillag': Pál Tóth was crossed from American cultivars, matured before Redhaven, freestone.
'Champion type': Hubbard got it from a cross, maturing in early September, freestone.
'Nektár H': a variant of an American variety, matured in front of Redhaven, freestone.
'Remény': It is produced by the crossing, matures in late July, freestone.

b) Spontaneous forms, selected types (n=21)
'Bársonypír': seedling of unknown peach variety, grown in county Csongrád, ripen in early September.
'Cegléd szépe': C. 425 seedling of Sunbeam, maturing in late July, freestone.
'Cserhalmi szépe': of unknown origin, slightly ahead of Champion, freestone.
'Elberta': several of its forms are known in Hungary, ripen in early September, freestone.
'Elvira': ripened in the middle of August, introduced by Sándor Brózik, freestone.
'Ford korai': of American origin, matured in mid-August, semi freestone, known in the Great Hungarian Plain.
'Gyümölcsöskertek királynője': of French origin cultivar, mid to late September ripening, freestone.
'Kecskeméti duránci': János Búzás won from seed, ripens in early September, clingstone
'Kései bronzos Elberta': Gyula Magyar won from Elberta sowing, clingstone, ripens end of September after Elberta.
'Laczy-féle duránci': derivative of an unknown local variety, maturing in the second half of August, clingstone.
'Magyar aranyduráncija': Gyula Magyar selected from Elberta's seedlings, ripens in mid-September, clingstone.
'Mariska': Formed in Buda region, ripening mid-July to early August ripening, freestone.
'Metelka díjazottja': Soma Bartholomoides wins from seed in the 1840s, ripens in late August to early September, freestone.
'Mezőkomáromi duránci': Ferenc Entz won the seed from Ferenc Mayerffy Xavér. They ripen at the end of September, clingstone.
'Paczelt magonca': Selected by János Paczelt from an unknown peach, maturing in early September, freestone.
'Piroska': Under the name C. 2629, its seed was propagated, ripening in mid-late June, and freestone.
'Proskaui': of an unknown cultivar on German region, semi native to Hungary, ripening in late August, freestone.
'Szatymazi Győztes': of unknown origin, ripening in July, more frost tolerant than the basic variety, freestone.
'Szöghi duráncija': József Szöghi is grown from seeds of an unknown cultivar in Szeged, ripens in the 2nd half of September, very bounded to seed, clingstone.
'Vezerle duráncija': It spreads around Balaton, a derivative of the 'Korai hegyi' variety, ripens in August, clingstone
'Vérbarack': Probably from an old Hungarian cultivar, ripened in the last third of September, freestone.

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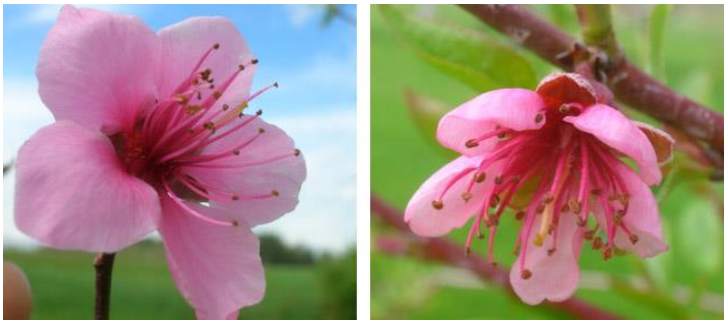

Figure 1. Rose and bell flower of peach

Figure 2. Downy fruits

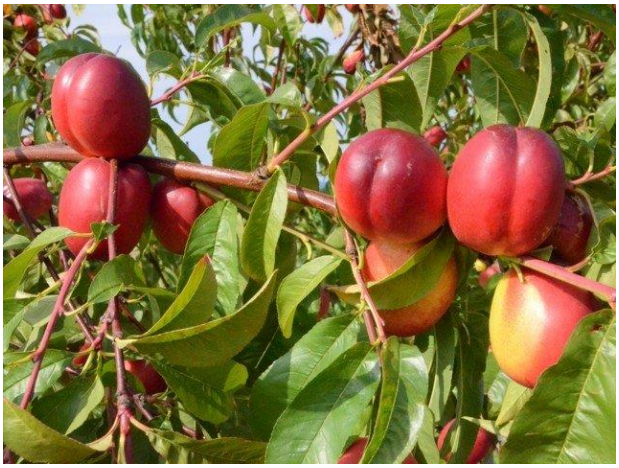

Figure 3. Nectarine fruits

Figure 4. Snow white peach

Figure 5. Of white flesh fruit

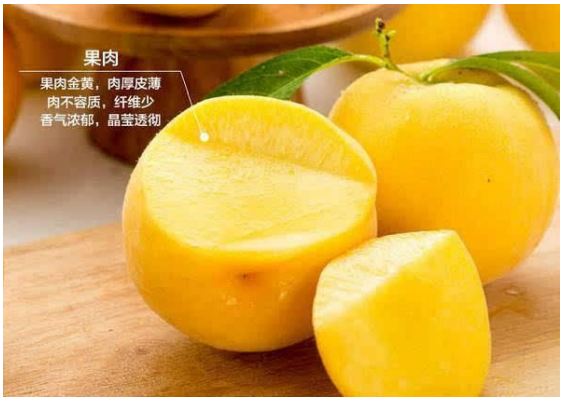

Figure 6. Of yellow flesh fruit

Figure 7. Of blood fruit peach

Figure 8. Flat peach

Figure 9. Peach chimera (bare flowers)

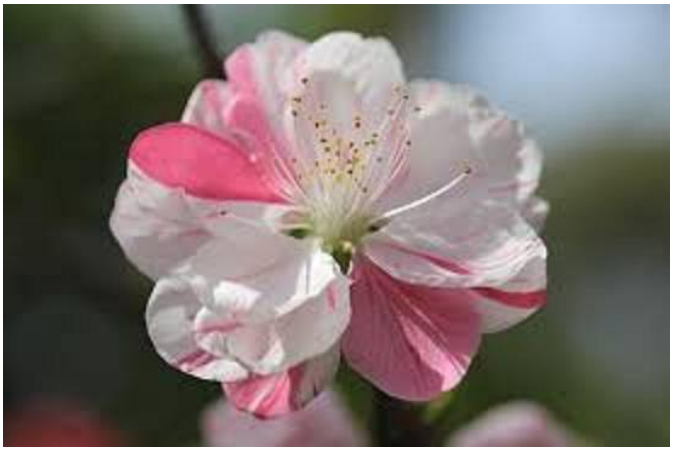

Figure 10. With colored petals

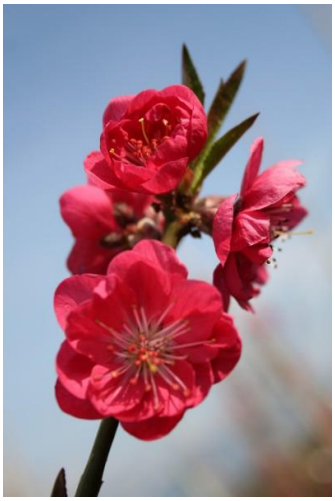

Figure 11. Ornamental peach twig

Figure 12. Of purple leaf peach

Table 1. Relative ecological and biological indicator values of each cultivars (n=700).

CULTIVARS	TB	WB	RB	NB	LB	KB	SB	OP	FR	DR
Abricotée de Gien	5	5	6	4-5	5-6	6	0	2	1-2	1
Admirable	5-6	5	5	5	5-6	5-6	0	1-2	1-2	2
Admirable Jaune	5	4-5	6-7	4-5	5	6-7	0	3	2	2
Admiral Dewey	6	5	6	5	5	5-6	0	2	1-2	1
Adriana	5	5	6	5	5-6	6-7	0	2	2	2
Advence	5-6	5	6	5	5-6	6	0	2-3	2	1-2
Alberge	5	5	5-6	5	6	5-6	0	2-3	2	2
Alexander	5-6	4-5	6-7	5	5	6	0	2-3	1-2	2
Alton	5-6	4-5	6-7	4-5	5-6	6	0	2-3	1-2	2
Amador	6	5	6-7	4-5	5	6-7	0	1-2	2	2
Amelia	5-6	5	5-6	5	5-6	5-6	0	1-2	1-2	2
Ameliaberta	6-7	5	6	4-5	6	6	0	2	2	2
Amsden	5-6	4-5	6	4-5	5-6	6	0	1-2	2	2
Andosa	6	5	6	5	6	6	0	1-2	2	2
Annbella	6-7	5	6-7	5	6	6-7	0	2-3	2	2
Anza	6	5	6	5	5	6	0	2	2-3	2
Apolka	5-6	5	6	5	5-6	6	0	2	1-2	1-2
Arany csillag	6	4	6-7	5	5-6	6-7	0-1	2	1	1-2
Armking	5-6	5	6	5	5	6	0	2-3	2	2-3
Armred	5-6	4-5	6	5	5	6	0	2	2-3	2
Arp Beauty	6	5	6	5	5-6	6-7	0	3	2	2
Babygold 5	6	4-5	6-7	4-5	5-6	6	0	2	2	1-2

Babygold 6	6	4-5	6-7	4-5	5-6	6	0	2	2	1-2
Babygold 7	6	4-5	7	4-5	5-6	6	0	2	2-3	2
Babygold 8	5-6	4-5	6-7	4-5	5-6	6	0	2	1-2	1-2
Babygold 9	5-6	4-5	6	4-5	6	5	0	2	2	1-2
Baden Schöne	6	5	6	6	6	5	0	2-3	2	2
Baladin	5-6	4-5	6	5	5	6	0	1-2	2	3
Balkonella	5	4	6	4-5	5	6	0-1	3	2	2
Banner	5	4-5	6	4-5	5	6	0	2-3	2-3	1
Barber	5-6	4-5	5-6	4-5	5-6	5-6	0-1	2	2	2
Barrington	5-6	5	6	5	5-6	6	0	2-3	1-2	1-2
Bársonypír	6	4	6-7	5	5-6	6-7	0	2	1-2	1-2
Bartet	5-6	4-5	6	4-5	5-6	6	0	3-4	2	2
Belle	5	4-5	6	4-5	5	5-6	0	1-2	2	1-2
Belle de Cap	5-6	5	6	5	5-6	6	0	1-2	1-2	2
Belle de Toulouse	6-7	5	6	5	6	6	0-1	1	1-2	2
Berenice	5-6	5	6-7	5	5-6	5-6	0	2	1-2	1-2
Biancona de Verona	5	4-5	6	5	5	6	0	3	2	1-2
Big Top	5	5	6	5	5-6	5-6	0	2-3	2	2-3
Blazing Gold	5-6	4-5	6-7	4-5	5-6	6	0	2-3	2	2
Blood Cling	6	5	6	5	5	5-6	0	3	2	2
Blood Leaf	5-6	4-5	5	4-5	5	5-6	0	2-3	2	1-2
Bokhara	7	5	6	5	5-6	6	0	1-2	2-3	1
Bonanza	5	4	6	4-5	5-6	5-6	0-1	2-3	2-3	2
Bordeaux	6-7	5	6	5	6	6	0	2	2	2
Bourdin	6	4-5	6	5	5	6-7	0	3	1-2	2
Brackett	5-6	5	6-7	4-5	5-6	6	0	2-3	2	2
Briggs	5-6	4-5	5-6	4-5	5-6	6	0	1-2	2	2
Brilliant	5	5	5-6	5	5	5-6	0	2	2	1-2
Brunson	5	4-5	5	4-5	5	6	0	3	1-2	2
Buquette Free	6	5	6	5	5-6	6	0	2-3	2	2
Buttercup	5	4-5	5	4-5	5	5	0-1	1-2	2	1-2
Caffey	6	5	6-7	5	5-6	6	0	1	2	1-2
Canada	5-6	5	6	5	5-6	6	0	1-2	1-2	1-2
Cancellar	5-6	5	6	6	5-6	6	0	2-3	2	2
Capps	5-6	5	5-6	5	5-6	5	0-1	2	2	2-3
Captain Ede	5-6	4-5	6	4-5	5-6	5	0	3	1-2	2
Capuzzi No. 1	6	5	6	5	5	6-7	0	1-2	2	1
Cardinal	6	4	6	5	5-6	6	0	2-3	1-2	2
Carman	7	5	6-7	4-5	6	6-7	0	1-2	1	1
Catharine	5-6	4-5	5	4-5	5-6	5-6	0	2	1-2	2
Cavaller	6-7	5	6	5	5-6	6	0	2	2	2
Cegléd szépe	5-6	5	6-7	5	5-6	6	0	1-2	3	2
Champion	5-6	4-5	7	4-5	5-6	6	0	1-2	1-2	2
Chazotte	6-7	5	6	6	5-6	6-7	0	2	3	2
Cherryred	5-6	4-5	5-6	5	5	6	0	1-2	2	2
Chinese Cling	6	5	6-7	4-5	5-6	6	0	1-2	1	1-2
Clarissa	6-7	5	6-7	5	5-6	6	0	2-3	3	2
Climax	6	5	6	5	5-6	5-6	0-1	1	1-2	2
Collins	5-6	4-5	6	4-5	5	6	0	2	1-2	1
Comanche	6	5	6	5	5-6	5	0	2	1	2
Compact Redhaven	6-7	5	6	5	5-6	6	0-1	2-3	2	2-3
Condor	5-6	5	6	5	5	6	0	1-22	1-2	2
Coronado	6	4-5	6-7	4-5	5-6	6-7	0	2-3	2	1-2
Coronet	6-7	5	6	5	5-6	6	0	2	2	2
Cote d'Azur	7	5	6-7	5	6	6	0-1	3-4	3	2
Cresthaven	5-6	4-5	6	4-5	5-6	6	0	2	1-2	2-3
Crosby	5-6	5	6	5-6	5	6	0	2-3	1-2	2
Crown Princess	6	4-5	6	5	5-6	5	0	2	1-2	1-2
Cuirlew	5-6	5	5	5	5	6	0	2	2-3	2
Culemborg	5	4-5	5-6	5	5	5-6	0	1-2	1-2	1

Cserhalmi szépe	6	4-5	6	5	5-6	6	0	2-3	1-2	1-2
Demeure	6	5	6	5	5-6	6-7	0	3	3	1
Demuilles	5-6	4-5	5-6	4-5	5	5	0	2-3	2	2
Dixigem	6	4-5	6-7	4-5	5	6	0	2-3	1-2	3
Dixired	6	4	7	4-5	5	6	0	2	2	2
Dr. Burton	5	5	5-6	4-5	5-6	5	0	1-2	2	2
Dulce	5-6	5	6	5	6	6	0	2	1	1-2
EarliGlo	5-6	4-5	6	5	5-6	6	0	2	1-2	2
Earlired	5-6	4-5	6-7	5	5-6	6-7	0	2	1.2	1-2
Early China	5-6	4-5	5-6	4-5	5	5-6	0	2-3	1-2	2
Early Crawford	5-6	4-5	6	5	5	6	0	2	2	2
Early East	6	5	6	5	5-6	6	6	1	2	2
Early Elberta	5-6	4	6-7	4-5	5	6	0	1	2	2
Early Michigan	6	5	6	5	5	6	0	1	1-2	2
Early Mignon	5-6	5	6	5	5-6	6	0	2	2	2
Early Red Free	6	4	6	4-5	5	6-7	0	1	1-2	2
Early Redhaven	5-6	4-5	6-7	5	5-6	6	0	2	2	1-2
Early Victoria	5	4-5	5	4-5	5-6	6	0	2	2	1
Early White Giant	5	4	6	5	5	6-7	0	1	2	2
Earlycrest	5	4-5	6	5	5-6	6	0	1-2	1-2	1-2
Earlyvee	5-6	5	6	5	5-6	6	0	2	1-2	1
Eclispe	5	4	6	5	5-6	6	0-1	1-2	2	2
Elberta	5-6	4-5	7	4	5	5-6	0-1	1-2	2-3	1-2
Elegant Lady	5	5	6	5	5-6	5	0	2-3	2	2
Elvira	5-6	4-5	6-7	4-5	5	5	0	2	1-2	2
Eve	5	4-5	5-6	5	5	5-6	2	2	2	2
Evelyn Gem	5	5	6	5	6	5-6	0	2-3	2	2
Everts	5-6	5	6	5	5-6	5-6	0	2-3	2	2
Excellencs	6	5	6	5	6	5-6	0	1	2	2
Fairhaven	6	4-5	6	5	6	5-6	0	1	1-2	3
Fairlane	7	5	6	5	6	6	0	2	2	1
Fantasia	6-7	4-5	7	5	6	5	0	2	2	2
Fayette	6	5	6	4-5	6	6	0	1-2	1-2	3
Fehér korai	5-6	5	6-7	5	5-6	5-6	0	3	2	2
Fireball	5	5	6	5	5	6	0	2-3	2-3	3-3
Flamingo	6	5	6	5	5-6	5-6	0	2	2	2
Flamkist	6-7	5	6-7	4-5	6	6	0	2	2	2
Flavortop	6-7	4-5	7	5	6	6	0	2	2	2
Flordaglo	6	5	5	5	5-6	6	0	1-2	1-2	1-2
Florence	5	5	6-7	5	6	6	0	2-3	2	2
Flory Dwarf	5-6	5	6	4-5	5	5-6	0	2	1-2	1
Fodor-féle névtelen	5	5	6-7	5	5-6	5	0-1	2	1	1-2
Ford korai	6	4-5	7	4-5	5	6	0	1-2	1-2	1-2
Foster	6	5	6	5	5	5-6	0	2	2	2
Francesco	6-7	5	6	5	5-6	6	0	1-2	2	1-2
Frederica	5-6	4-5	6-7	5	6	5-6	0	2	2	2
Fritzgerald	6-7	5	6	5	5-6	6	0	2-3	2	2
Frühe Mignonne	5	4-5	5	5	5-6	5-6	0	2	2	1-2
Gain de Montreuil	5-6	5	5-6	5	6	5	0	1-2	1	1-2
Garden Lady	6	5	6-7	5	5-6	5-6	0-1	3	3	2
Genadix 4	6	5	6	4-5	5-6	5	0	2	2	2
General Lee	5-6	4-5	5	5	5	5	0	2	2	2-3
George IV	5	5	5	5	5-6	5	0	2	2	2
Georgia	5-6	4-5	6	5	5-6	5-6	0	3	2	2
Gialla di Firenze	6	5	6-7	5	6	6	0	1	1-2	1-2
Gladys	5	4-5	6	5	5-6	6	0	3	2-3	2
Globe	5	4-5	6	4-5	5-6	5-6	0	2	2	1-2
Glohaven	5-6	5	6-7	5	6	6	0	2	2	2
Gloria Red	5-6	5	6	5	6	5-6	0	2	1-2	1.2
Gold Drop	5-6	5	5-6	5	5-6	5-6	0	1	1-2	2

Gold Medal	5	5	5	5	5-6	5-6	0	1	2	2
Golden Cling	5	4-5	5-6	4-5	5	6	0	2	2	2
Golden Eagle	5	4-5	5-6	4-5	5	6	0	2	2	2
Golden Elberta	5-6	4-5	5	5	5	5-6	0-1	3	2-3	3
Golden Flame	5-6	4	5	5	5	5	0	1-2	2	2
Goldeneast	5	5	5-6	5	5-6	5-6	0	3	2	2
Goldhaven	5	5	5	5	5-6	4	0	1-2	2	3
Goldray	5-6	5	5-6	5	6	6	0	2	2	2
Gorges	5	5	5	4-5	5-6	6	0-1	2-3	1-2	2
Governor Hogg	5	4-5	5	5	5	6	0	2-3	1-2	2
Grand Admirable	5-6	5	6	5	6	6	0	2	2	0
Greensboro	5-6	5	5-6	5	5-6	5-6	0	1-2	2	2-3
Groc Anis	6	5	6	5	5-6	6	0	1	1-2	1-2
Guinn	5-6	4-5	5	4-5	6	6	0	3	2	3
Gustave Thuret	5	4-5	5	4-5	5	5	0	3	2	2
Gypsy	5	5	5	4-5	5	4	0	1-2	1-2	1-2
Győztes	5-6	4-5	6-7	5	5-6	5-6	0	2	2	2
Gyümölcsöskertek királynője	5	4-5	5	5	5	6	0-1	2-3	2	2
Hale Early	5-6	5	5-6	5	5-6	6	0	3-4	2	2
Halegold	5	5	5-6	4-5	6	5-6	0	3	2	2
Halehaven	5	5	5-6	4-5	5	5-6	0	2	1	3
Harbinger	5	4	5	4-5	5	5-6	0	2	1-2	2
Harko	6-7	4-5	7	5	5	5	0-1	1-2	2	1-2
Harris Elberta	5-6	5	5-6	5	5-6	5-6	0	1-2	1-2	2
Hativê Bobo	6-7	5	5-6	5	5-6	6	0	2-3	2	2
Hawkins	6-7	5	6	5	6	6	0	2	2	1-2
Hayes Late	5	4-5	5	5	5-6	5-6	0	2-3	2	2
Heath Free	5-6	4-5	5-6	4-5	5	5-6	0	2	2	2
Heath Cling	5-6	5	6	5	5-6	5	0	1	2	1
Hegyi korai	7	5	6-7	5	5-6	5-6	0	2-3	2	2-3
Heidelberg	5	5	6	4-5	5	6	0	2	1	2
Hiland	5	5-5	5-6	5	5	5-6	0	2	2	2
Hiley	5-6	5	6	5	5-6	6	0	2	1-2	1-2
Hoffman	5	5	6	4-5	5	5	0-1	1	1-2	1-2
Holderbaum	5	4-5	5	4-5	5	5	0	2-3	1	2
Holt	5	4-5	5-6	5	5-6	5-6	0	2-3	2	2
Honey	5	4-5	5	4-5	5-6	5-6	0	2	2	2
Honey Dew Hale	5-6	4-5	5-6	4-5	6	5-6	0	1	1-2	1-2
Honey Nectarine	5	5	5	5	5-6	5-6	0	2	2	2
Honey Peach	5-6	5	6-7	5	5-6	6	0	2	2-3	2
Honeyberta	5-6	4	5	4-5	5-6	5	0	2	2	2
Howard	5	4-5	5-6	5	5	5-6	0	1-2	1-2	1-2
Howard Fisher	5-6	4-5	5	5	5-6	5	0-1	1-2	2	2
Hynes	6	4-5	5	5	6	5-6	0	2	1-2	2
Ideal	5	4-5	6	4-5	5-6	5-6	0	2	2	2
Illinois	6-7	5	5-6	5	5	5	0-1	1	1-2	1-2
Imperial	5	4-5	5	4-5	5-6	5-6	0	2	2	2
Improved Elberta	5-6	5	5	6	6	6	0	2	2	1-2
Incrocio Pieri	6	5	6-7	5	5-6	5-6	0	2-3	2	2
Independence	7	5	6	6	6	6	0	1-2	3	3
Indian Free	5	4	6-7	5	5	5-6	0	2	2-3	2-3
Infanta Isabel	6	4-5	6	5	6	6	0	2-3	2	2
Iron Mountain	5	5	5	5	6	5	0	3	2	2
Isaure Kelemen	5-6	4-5	6	4	5	5-6	0	3-4	1-2	2
J. H. Hale	6-7	4-5	6-7	5	5	5-6	0-1	1-2	2	1-2
J. L. Ames	6-7	5	6	4-5	6	6	0	2	1-2	2
Jacques	5-6	5	5-6	5	5-6	5	0	2-3	1-2	1-2
Japanese Dwarf	6	5	6-7	4-5	6	5-6	0	2	2-3	2
Jeanne Chatain	5-6	4	5	4	5-6	5	0	1	1-2	1
Jennie Worthen	5-6	5	5-6	5	5-6	5	0	1-2	2	2

Jerseyland	6-7	4-5	6-7	5	5	5-6	0-1	1	2	2
Jewel	6	5	5-6	5	5	6	0	1-2	2-3	2-3
Jubilant	5-6	4-5	5-6	5	5	6	0	1-2	2	2
Jubilejnij	5-6	4-5	5	5	5-6	5	0	1-2	2	1-2
Julian	6-7	4-5	6-7	4-5	5	5	0	1-2	1-2	1-2
July Elberta	6	5	5-6	5	5-6	5-6	0	3	2	2-3
July Hale	5-6	4-5	5	5	5	5-6	0-1	2	2	2
July Heath	6	4	5	4-5	6	5-6	0	2	2	2
July Lady	6	4-5	5-6	5	5	6	0	2	2	2-3
July Queen	5-6	5	5-6	4-5	5-6	5-6	0	2-3	2-3	2
Jun-berta	6	5	6-7	4-5	6	5-6	0	2-3	2	2-3
Junegold	5	4-5	6	5	5-6	3	0	2-3	2	2
Jungermanm	5	4-5	6	4-5	5	5-6	0	1-2	1-2	1-2
Kalamazoo	6	5	6	5	6	5	0-1	1	1-2	1-2
Kamdesa	6-7	5	5-6	5	5-6	6	0	2-3	2-3	2
Karmen Rozova	6	5	5-6	4-5	6	5-6	0-1	2	2	2-3
Kathryn	5-6	4-5	6	4-5	5-6	6	0	2	2	2
Kecskeméti duránci	5-6	4-5	5-6	4-5	5	5-6	0	1	1-2	1
Keimess	5	4-5	5	4	5-6	5-6	0	2	2	2
Kelvin Cling	5-6	5	5-6	5	6	5-6	0	2	2	2-3
Kentucky	5	5	5	4-5	5-6	5-6	0	1-2	2	2
Kései bronzos Elberta	6	5	6	5	5-6	5	0-1	2-3	1-2	2
Kestrel	5	4-5	5	5	5	5-6	0	2	2	1-2
Kette	5-6	4-5	5-6	4-5	5-6	6	0	2	2-3	2
Keystone	5-6	4	5-5	4-5	6	5-6	0	2-3	2	2
Kia Ora	6	5	5	5	6	6	0	2	2	2-3
Kievski pozdnij	6	4-5	5-6	4-5	5	5	0	2	1	1
Kievski rannijj	6	5	5-6	4	5	5	0-1	1-2	2	1
Kievskij	5-6	4-5	5	4	5	5	0	2	1	1
Kim Earling	5-6	5	6-7	4-5	6	5-6	0	2-3	2	2
Kimbo	5-6	5	6-7	5	5-6	6	0	2	2	2-3
Kirkman Gem	5-6	4-5	6	4-5	65	5-6	0	2-3	2	2
Klamt	6-7	4-5	6-7	5	5	5	0	2	1-2	1-2
Kraprim	7	5	6	5	5-6	5	0	2	2	1
Krasnovostočnij	5-6	4	5	4	5	5	0	1-2	2	2
Kremlevskij	5-6	4	5-6	4	5	5-6	0	2	2	2
Krupna Badenska	5-6	5	6	5	6	5-6	0	2	2-3	2
Krümcsanyin	5-6	4-5	5-6	4-5	5	5	0	1-2	1-2	2
Kyrmyzy-Jarma	5	5	5	4	6	5	0-1	2	2	1-2
La Gem	6-7	5	6	5	5-6	6	0	2	2-3	2
La Premiere	7	5	5	5	5-6	5-6	0	1-2	2-3	2
Laczy-féle duránci	6	4-5	6	4-5	5	5	0	2	1-2	1-2
Lady Palmerston	6-7	5	6	4-5	5	5-6	0	2	2	2
Lambertin No. 1	5-6	4-5	5-6	4-5	6	5	0	1	1-2	1
Lamont	5	4-5	5	4-5	5-6	5	0	2	1-2	2
Late Alamar	6	5	6	4-5	6	5	0	1-2	2	2
Late Crawford	5	4-5	5-6	5	5-6	5-6	0	3	2-3	2
Late Elberta	5-6	4-5	6-7	4	5	5-6	0-1	2	2-3	1-2
Late J. H. Hale	6	5	5	5	6	5	0	2	2	2
Late Kirkman	5-6	5	5-6	4-5	5-6	6	0	2-3	2	2
Late Rarekile	5	4-5	5	5	6	5	0	2	2	2
Late Rio Oso	6	5	7	5	6-7	6	0	2	1-2	1-2
Late Rose	6	4-5	5-6	4-5	5-6	5-6	0	2	1-2	2
Late Yellow Alberge	5	4-5	5-6	5	5-6	6	0	2	2-3	2
Latvian	5	5	6	4	5-6	5	0-1	1-2	1-2	1-2
Leeton	5	4-5	5-6	5	5	5-6	0	1-2	1-2	2
Le Grand	5-6	4-5	5	4-5	5-6	7	0-1	2	2	2
Lemon Cling	6	5	6-7	5	5-6	6	0	2-3	2	2
Lemon Dolorosa	6	5	6	5	5-6	6	0	2-3	2	2-3
Lemon Free	6-7	5	6	5	6	6	0	2-3	2	2

Lena	5-6	5	5	4-5	5	5-6	0	1-2	1-2	2
Levis Cling	6	4-5	5-6	4-5	5	5	0	2	2	1-2
Lewy	5-6	4-5	6	5	5-6	5-6	0	2	2	2
Lexington	5	5	5	4	5	5	0	2	1-2	2
Licking	5	5	5-6	4-5	6	5-6	0	2	1-2	1
Linden	5-6	4-5	5	5	6	5	0	1-2	1	1-2
Linworth	5	5	5	4	6	6	0-1	1-2	2	2
Lippiat	5	5	5-6	4-5	5	5-6	0	2	1	2
Lisbeth	5	4-5	6	5	5-6	5-6	0	2	2-3	2-3
Lizzie	6	5	5-6	4-5	5	5-6	0	1-2	2	1-2
Loadel	6	4-5	6-7	4-5	5	5	0	2	2	2
Lodge	5-6	5	5-6	4	6	5-6	0-1	2-3	2	2-3
Lola	6	4-5	6	5	5-6	5-6	0	2-3	2	2-3
Londyke Early Elberta	6-7	5	6-7	4-5	6	6	0	2	2	2
Lord Napier	6	5	5-6	5	5-6	5-6	0	1-2	1-2	1-2
Lord Palmerston	6-7	5	6	4-5	5	5-6	0	2	1-2	1-2
Loring	6	4-5	6	5	5-6	5	0	2	2	2
Lovell	5	5	5-6	5	5	5	0	2	1-2	1-2
Lovettl	6	4-5	7	4-5	5	5	0	3	2	1-2
Lucas	6	4-5	5-6	4-5	5-6	5-6	0	2	2	2-3
Luckens	5-6	4-5	6	5	5	6	0	1-2	1-2	2
Lulu	5	5	5	4-5	6	5-6	0	2-3	2	2-3
Luna	6-7	5	6	5	5-6	5	0	2	2	2
Mabel	7	5	6-7	5	6	6	0	3	2	2
Madame Bay	5	4-5	5	4	6	5	0	2	1-2	2
Madame Pouyett	6-7	5	6	5	5-6	5-6	0	2	2	2
Madame Venet	6	5	6	4	5	5-6	0	3	2-3	2
Madeleine Payuenne	6	4-5	5-6	5	6	6	00	2	2	1
Madeleine Pouyet	6-7	4-5	6-7	5	5	5	0	3	2-3	2
Maffey	5-6	5	5-5	4-5	5-6	5-6	0	2-3	2	2-3
Maglia Rosa	5-6	5	6	4-5	5	6	0	1-2	1-2	1-2
Magyar aranyduráncija	5	4	5	4-5	5-6	5	0-1	1-2	1-2	2
Maluti	6	5	5-6	5	6	6	0	1	2	1-2
Mamie Ross	5-6	4-5	6	4	5	5-6	0	2	2	2
Manon	5	4-5	6	5	6	6	0	2-3	2	1-2
Maria Bianca	5-6	4	6-7	5	5-6	5	0	2-3	2	2
Maria Carla	5	5	5-6	4-5	6	5-6	0	2	1-2	1-2
Maria Delizia	6	4-5	5-6	5	6	5-6	0	2	1-2	2
Marigold	6	5	6	5	5-6	5	0-1	2	1-2	1-2
Marilyn	5-6	5	6	4-5	5-6	5-6	0	1-2	2	2
Mariska	6	4	7	4	5	5-6	0	1-2	2	3
Marquette	6-7	5	5-6	5	5-6	6	0	2	1-2	2
Maxime	6	5	6	5	5	5-6	0	2-3	2	2
Maybelle	6-7	5	5-6	5	5	5	0	3	2	1-2
Maycrest	5	4-5	6-7	5	5-6	5	0	2	2	2
Mayfair	6	4-5	5-6	4-5	5	5-6	0	2	1-2	2
Mayflower	5-6	4-5	6-7	4-5	5-6	5-6	0	2	2	2
Maygold	5	5	6	5	6	5-6	0	1-2	1-2	2
Maystar	7	4-5	6	4	5-6	6	0	2-3	2	1-2
Maytime	6	4	5-6	5	6	6	0-1	3	2-3	2
Maywel	6-7	5	6	5	5-6	5-6	0	2	2	2
McAllister	5	4-5	5-6	5	6	5	0	2-3	2	2-3
McCune	5-6	5	6	5	5-6	5	0	2	2	2
McKay	6	4-5	5	4-5	5	5-6	0	1-2	2	1
McKune	5-6	5	5	5	6	5-6	0	3	2-3	2-3
Meadow	5	4-5	4	4-5	5-6	5	0	2	2	2
Medovij	5	5	5	4-5	5	5	0	2	2	1-2
Meigue Panteo	5-6	4-5	6	4-5	5-6	6-7	0	3	1	2-3
Melba	6	5	5-6	5	6	6	0-1	2	2	2
Melvin	5	5	5	4	5-6	5-6	0	2-3	2	1-2

Merill Gem	5-6	5	4	4-5	5	6-7	0	3	2-3	2
Merrill Schooldays	5-6	4-5	5	5	5	5	0	2	2	2
Merry Gold	6	4-5	5	4-5	5	6	0-1	1-2	2	1-2
Metelka díjazottja	6	4	6	4-5	5-6	5	0	1-2	1-2	1-2
Meteor	5	5	5-6	5	5-6	5-6	0	2	2	2
Mezőkomáromi duránci	6-7	4	6	4-5	5	5	0	2	1-2	1
Michelini	7	5	6	5	5-6	6	0	1-2	2	2
Michelson	5-6	5	5	4-5	5-6	5-6	0	2	1-2	1-2
Michigan Late	5	4	4	4-5	5	5-6	0	2	1	1
Michigold	5-6	5	5-6	4	6	5	0	1-2	2	3
Midway	5	4	5-6	4-5	5	6	0-1	1	1-2	1-2
Miiss Lolo	6-7	4-5	6	5	5-6	5-6	0	2-3	2	2
Millhiser	5	4-5	6	5	5-6	6	0	2	1-2	3
Minjon	5	5	5-6	5	6	5-6	0	3	2	2
Moore Favourite	5	4-5	5-6	4-5	5	6	0	2	1-2	1-2
Morettini 1	6	5	6	4-5	5-6	6-7	0	1-2	2	1-2
Morris White	5-6	5	5-6	5	5-6	5-6	0	1-2	1-2	1-2
Morton	6	5	5-6	5	6	5-6	0	1-2	2	2
Mountain Rose	6-7	5	6	4-5	5	6	0-1	1-2	1-2	1-2
Muir	6	5	5-6	4	6	5-6	0	2	2	2
Muza	5	4-5	5	4-5	5	5-6	0-1	2	2-3	2
Nagy Mignon	6-7	4	6	5	5	6	0	3	2	2
Narindzij	5	4	5-6	5	5-6	5	0	1-2	1-2	1-2
Nectacrest	6	5	6	5	6	6	0	2	2	2
Nectalate	5-6	5	5-6	5	6	6	0	2	1	1-2
Nectared 2	6	5	6	4-5	6	5-6	0	3	2	2-3
Nectared 3	6	5	6	5	6	5-6	0	2-3	2	2
Nectared 4	6-7	5	7	4-5	5-6	6	0	2	1	1-2
Nectared 5	6-7	4-5	7	5	6	5	0	2-3	1	2
Nectared 6	6-7	5	6-7	4-5	5	5-6	0	2	2-2	2
Nectared 7	6	4-5	6-7	5	6	6	0	2-3	2-3	2
Nectared 8	6-7	5	6-7	4-5	5	5-6	0	2	2	1-2
Nectared 9	6-7	5	6	5	6	6	0	3	2	2
Nectared 10	6	5	6	5	5-6	5-6	0	4	2-3	2-3
Nectarine Early Flame	6	5	6	4-5	5	5-6	0	2	2	2
Nectarine Philip	6	4-5	5-6	5	5-6	5	0	1	2	2
Nectaross	6-7	5	6	5	6	5-6	0	1-2	1-2	1-2
Nektár H.	6	5	6-7	4-5	5	6	0	1-2	1	1-2
Nemagourd	5-6	4-5	6	5	5	5	0	2	2	1-2
Nestor	5	4-5	5-6	5	6	5-6	0-1	1-2	1-2	2
New Boy	5	5	5-6	5	5-6	5	0	2	2	2
New White	6	5	6	5	5	5	0	1-2	1-2	2-3
Newton	5-6	4-5	5-6	5	6	6	0	2	2	2
Niagara	5	5	5-6	4-5	5-6	5	0	2	2	1-2
Nivette	5-6	4-5	5-6	5	6	5	0	2-3	2	2-3
Nonpareil	5	5	5	4-5	5	5	0	1-2	1-2	1-2
Norwalk Free	5	4-5	5	4-5	5-6	5	0	2	2	2
Novelred	5-6	5	6	4-5	5	5-6	0	2-3	2	2
Nyikitai laposbarack	6	5	5	5	5-6	6	0	2	2	1
O'Henry	5	4-5	5-6	4	5	5	0	2	2	2
Obil'nij	5	4-5	5	4	5	5	0-1	1-2	1-2	2
Oclaberta	5-6	5	5-6	5	6	5-6	0	2	2	2
October Elberta	5-6	5	5-6	5	6	5-6	0	3	2	2
Okinawa	6-7	5	6-7	4-5	5	5-6	0	2-3	2-3	2-3
Oldmixon Cling	5-6	4-5	5	5	5-6	5	0	1-2	2	1-2
Oldmixon Free	6	5	5-6	4-5	5-6	5-6	0	2	2	2
Olga királynő	5-6	5	6	5	5-6	6	0	3	2-3	2
Olinda	5	5	5-6	5	6	6	0	2	2	2
Ontario	5	4-5	5-6	4-5	6	5-6	0	1-2	1-2	1-2
Orange Cling	6	5	6	5	5-6	5	0	2	2	2-3

Orchard Queen	5	5	5-6	5	5-6	5-6	0-1	1	1-2	1-2
Óriási duránci	5	5	5	5	5	5	0	2-3	2-3	2
Oriole	5	4-5	5-6	4-5	5	5	0	2	2	2-3
Othello	6	5	6	5	6	5-6	0-1	2-3	2	2-3
Ozark	6-7	5	6	5	6	6	0	2	2-3	3
Paczelt magonca	5	4	5	4-5	5-6	6	0	1-2	2	2
Padana	5-6	4-5	5	5	5	6	0	2	2	2
Palazzina	6-7	5	6	5	6	6	0	2-3	2-3	2-3
Pallas	5-6	5	5	5	5	5-6	0-1	2	1-2	2
Palomar	5	4-5	5-6	5	5-6	5	0	1-2	2	1-2
Paloro	6-7	5	5-6	4-5	5-6	5	0	1-2	2	1-2
Paragon	5-6	4-5	5	4	5	5-6	0	2	2	2
Paramint	5-6	5	5	5	6	6	0	2	2	1-2
Parasise	6-7	5	6	4-5	5-6	5-6	0	2	2	2
Pauni	5	4	5	4	5	5-6	0	1-2	2	2
Pavie Coronado	6	5	6	5	5-6	5-6	0	2	2	1-2
Pavie Cortez	5	5	5-6	5	5-6	5-6	0	2	2	2
Pavie de Pamiers	5-6	4-5	6	4-5	5	6	0	2	2	2
Pavie de Pompone	5-6	4-5	5-6	4-5	5-6	6	0	2	1	2-3
Pavie Fontana	6	5	5-6	5	5-6	5-6	0	1	2	2
Pavie Tuscan	5	4-5	6	4-5	6	6	0	2-3	2	3
Pavie Vivian	6	5	5-6	5	5-6	5-6	0	2-3	2	2
Peak	5	4	5	4-5	5	5	0-1	1	1-2	1-2
Pearson	6	5	5-6	4-5	5	5-6	0	2-3	2	1-2
Pederson	5	4	5-6	4-5	5-6	5-6	0	1-2	2	1
Peento	6	5	6	5	6	6	0	3	2	3
Pegaso	5	4-5	5	4-5	5	5	0	2	1-2	2
Penelope	6	5	5	5	6	6	0	2-3	2	2
Perfect Hale	5-6	5	6	5	6	6	0	1-2	1-2	1-2
Perkins	6	4	5	5	5-6	5-6	0-1	2	2	2
Perla	6	5	5	5	6	6	0	2	2	2-3
Persique	6	5	6	5	6	5-6	0	1-2	2	2
Pervaja	5	4	5	5	5	5	0	1-2	1	1-2
Petite Mignone	6-7	5	6	5	6	5-6	0	2	2-3	2
Picquet Late	5-6	5	6	4-5	5	5-6	0	2	2	2
Piros Magdolna	6	4-5	5-6	5	5-6	6	0	2-3	2	2
Piroska	6	4	6	4	5	5-6	0-1	1	1-2	1-2
Plant	5-6	4-5	5	4-5	5-6	5	0	3	2	2
Pocahantos	6-7	5	6-7	5	5-6	5	0	2-3	2-3	2
Poenta	6	4	5	4-5	5-6	5-6	0	2	2	2
Polessk	5	5	6	4	5	5	0-1	2	1-2	2
Polnij	5	4	5	4	5	5	0	1-2	1	1
Poppy	5-6	5	6	5	5	6	0	2-3	2	2
Posrednik	5	4-5	5-6	4-5	5	5	0-1	1-2	2	2
Pourple de Saint-Genis-Laval	6	5	6-7	5	5-6	5-6	0	2	2	1
Prairie Dawon	5	4-5	5-6	5	6	6	0	2	2	2
Prenda	5-8	4	6	5	6	6	0	1-2	2	2
President Griepenkerl	6	5	5-6	5	5	6	0	2	1-2	1-2
Presnell	5-6	5	6	4-5	5	5-6	0	2	1	1-2
Prince of Wales	6-7	5	5-6	5	5-6	5-6	0	3	2-3	2
Princess of Wales	6-7	5	5	5	5-6	5-6	0	3	2-3	1-2
Prolific	5	4-5	6	5	5-6	6	0	1	1-2	1
Proskaui	5	4-5	5-6	4	5	5	0	1-2	1-2	1
Pulchra	5-6	5	6-7	5	5	6	0	3	2	2
Pusisstij Rannij	5	4	5	4	5-6	5	0-1	2	2	1-2
Pussistij Rozovij	5	4	5	4	5-6	5	0-1	2	3	1-2
Quette	6	5	5-6	4-5	6	6	0	2	2	2-3
Ramos	6-7	4-5	6	5	5	5-6	0	2-3	2-3	2
Rariton Rose	5-6	4-5	5-6	5	5-6	5-6	0	2	2	2
Ray	5-6	5	5-6	5	6	6	0	2	2	1-2

Raymaekers	5	4	5	4-5	5	5-6	0	2-3	2	2-3
Raymond Gaujard	5-6	5	5	5	5-6	5-6	0	2-3	2	2
Red Bud	6	5	5-6	4-5	5-6	6	0	3	2-3	2
Red Cheek Melocoton	6	5	6	5	5-6	5-6	0	1-2	2	2
Red Gold	5-6	4-5	5-6	5	6	6	0	2	2	1-2
Red June	5-6	4-5	6	4-5	5	5-6	0	2	1	2-3
Red Magdalene	5-6	4-5	5-6	5	6	6	0	1-2	1-2	1-2
Red River	6-7	4	5	4-5	5-6	5	0	2	2	2
Red Rose	6-7	5	6	4-5	5-6	5-6	0	2	2	2
Red Shedow	5-6	5	6-7	4-5	5-6	5-6	0	2	2	2
Redcal	5	5	5-6	5	6	6	0	2-3	2	2-3
Redcap	5-6	4-5	5	5	5-6	5-6	0	2	2	2
Redcrest	5-6	5	6	4-5	6	6	0	2	2	2
Redelberta	5	5	5	4-5	5-6	5-6	0	1-2	2	2-2
Redglobe	5-6	5-	6	5	5	6	0-1	1	1	2
Redhaven	5-6	4-5	6-7	4-5	5	6	0	2	1-2	1-2
Redleaf	5-6	4-5	5-6	4-5	6	5-6	0	2	2	1
Redskin	6	4	6	4-5	5-6	5-6	0	2-3	2	2-3
Redtop	5-6	4-5	6	5	5-6	5-6	0	2	2	2
Redwing	6-7	4-5	5-6	4	6	6	0	2	2	2
Reeves	5-6	5	5-6	5	5-6	5-6	0	1-2	1-2	1-2
Regal Grand	6	5	6	5	5-6	6	0	1-2	2	2
Regina	5-6	4-5	6-7	5	5-6	5-6	0	2	2	1-2
Remény	5-6	4	6-7	5	5	5-6	0	2-3	2	2
Ribet	5	4	5	4	5	5	0	2-3	2	1
Rich Lady	6-7	4-5	6	5	6	6	0	2	2-3	2
Richhaven	5	4-5	5-6	4-5	5-6	5-6	0	3	2	2
Rita Star	6	5	6	5	6	6	0	2-3	2	2
Riverdale	5-6	4	5	4-5	5-6	5-6	0-1	2	2	2
Rivers	5	4-5	6	4-5	6	5-6	0	2	2	1-2
Rivers Early	5	4-5	5-6	5	5-6	6	0	3	2	2
Rives Plate	6	5	5-6	5	5-6	5	0	1-2	1-2	2
Roberta	6	5	6	4-5	5	5-6	0	2	2	2-3
Robin	5	4	5	4-5	5-6	5	0	1	2	2
Rochester	6	4-5	6	4-5	5-6	5-6	0	1-2	1-2	2-3
Rogue Rio	6-7	5	6-7	5	6	6	0	2-3	2	2
Romance	5	5	6	5	6	5-6	0	2	2	1-2
Roquata Galet 152	6-7	5	6-7	5	6	6	0	2-3	2	2
Rosebud	5-6	4-5	6	4-5	5-6	5-6	0	2	2	1-2
Roslyn	5	4	5-6	4	5	5	0	1-2	1-2	1
Rossanna	6-7	5	6	4-5	5-6	6	0-1	1-2	2	2
Rosy	6-7	5	5-6	5	6	6	0	2	2	2
Roter Kaiser	5	4-5	6	4-5	5	5	0-1	2-3	1-2	1
Rouge Julien	6	5	5-6	5	6	5-6	0	1	2	1-2
Roussanne No. 1	5-6	5	6-7	4-5	5-6	6	0	1	2	2
Royal Ellberta	5-6	4-5	6	4-5	5-6	5-6	0	1-2	1-2	2-3
Royal Flame	5-6	5	5-6	5	5	6	0	2	2	2
Royal Gem	5-6	5	6	4-5	5	5	0	2	1-2	2
Royal George	5	4-5	5-6	5	6	6	0	2	2	1
Royal Glory	5-6	5	6	4-5	6	5	0	1-2	2	2
Royal Grand	6-7	4-5	6-7	5	6-7	6	0	3	2-3	2
Royalvee	6	5	6	5	6	5	0	2	1-2	2
Rubidoux	5-6	5	5-6	4	5-6	5	0	2-3	2	2
Rubinovüj-9	5	5	5-6	5	5	5-6	0-1	2	1	1-2
Russkij Kasavec	5	4	5	5	5	5	0-1	2	1-2	1-2
Rutgers Green Leaf	6	4-5	5-6	5	5-6	5	0	1-2	2	2
Rutgers Red Leaf	5-6	4-5	5-6	5	5-6	5-6	0	1-2	1	1
Saint-Martory	6	5	6	5	6	6	0	2	2	1
Salberta	5	4-5	5	4-5	5-6	5-6	0	2	2	2
Salwey	5-6	4-5	5-6	4-5	6	6	0	1-2	2	2

Sam Houston	5-6	5	5-6	5	6	6	0	2-3	2-3	3
San Grand	6	5	6	5	5	5-6	0	2	2	2
Sanders	5-6	4-5	5	4	5	5-6	0	2	2-3	1
Sanghaj	6	5	6-7	5	6	6	0	2-3	2	2-3
Sanguine	6	5	6	5	6-7	5-6	0	2	2	2
Saturn	6	5	5-6	5	6	5-6	0	2	2-3	2-3
Schumaker	5	4-5	5	4-5	5	5	0	2	2	1-2
Schwetzer	5	4	5	5	5	6	0	1-2	2	2
September Grand	5-6	5	6	4-5	5	5-6	0	2	2-3	2-3
Sequoia	5-6	5	5-6	5	6	5-6	0	2	2	2
Shamel	6	4-5	5-6	4-5	5-6	5-6	0-1	2	2	2
Sharbati	5	4-5	6-7	5	6	5	0	2	1-2	1-2
Sharon	5-6	5	6	5	6-7	6	0	2	1-2	2
Shasta	6-7	5	6	5	5-6	5	0-1	2-3	2	2
Shinn	5	4-5	5	4-5	5	5-6	0	1-2	2	2
Shipley	6	4-5	7	4-5	5	5-6	0-1	1-2	1-2	1-2
Shippers Late Red	6	5	5-6	5	5-6	6	0	2-3	2	2
Shogyku	6-7	5	6	5	6	5-6	0	2-3	2-3	2
Short	5-6	4	5	4	5	5-6	0	2	1-2	1-2
Siberian	5	5	5	4-5	5-6	5	0	3	1	1-2
Sierra	6	4-5	6	4-5	6	5-6	0	2	2	2
Silver Lode	6	5	6-7	4-5	5-6	6	0	2-3	2-3	2
Silver of Rome	6-7	4-5	6	5	6-7	6	0	2	2	2
Silver Prolific	5-6	4-5	5-6	5	5-6	6	0	2	1-2	2
Simferopolskij Rannij	6	5	5	4	5	5	0	1-2	2	1-2
Sims	5	4	5	4-5	5-6	5-6	0	2	2	2
Sixty-Six	6	4-5	5-6	5	5-6	6	0	2	2-3	2
Sleeper Dwarf	6-7	5	6	5	6	6	0	1-2	1-2	1-2
Smith	5	4	5	4-5	5	5-6	0	2	2	2
Smock	6	5	6	5	5-6	5	0	1	1-2	1
Sneed	5-6	5	6	4-5	5	6	0	2	2	2
Snow Queen	6-7	4	6	5	5-6	6	0	2-3	2	2
Socala	6-7	5	5-6	5	6	6	0	2	2-3	2
Sočnij	5	4	5	4-5	5	5	0	1-2	3	3
Solo	5-6	5	5-6	4-5	6	6	0	1	1-2	2
Somervee	5-6	5	5	4-5	5	5-6	0	1-2	2	2
Southland	5-6	4-5	6	5	5	6	0-1	2	1-2	2
Spotlight	6	5	5	5	5-6	6	0	2	2	2
Spring Red	6	4-5	5-6	5	5-6	5	0	1-2	3	1-2
Springcrest	6-7	5	6-7	4-5	5-6	5-6	0	3	2	2
Springgold	6-7	5	6	4-5	5	6	0	2	2	1
Springlady	6-7	5-6	6-7	5	5-6	5	0	2	1-2	2
Springtime	5-6	5	6	5	5	5-6	0	2-3	2	2
St. John	5	4-5	5	5	5	5	0-1	3	2-3	2
Stanford	5	5	5-6	5	5	5-6	0	2	2	2
Starcrest	5-6	5	5	4-5	6	5	0	1-2	1-2	1-2
Stark Delicious	5	4-5	5	5	5-6	5	0	2	2-3	2
Stark EarliGko	6	5	5-6	5	5	5-6	0	3	2	2-3
Stark Late Gold	5-6	4-5	5-6	4-5	5-6	5	0	2	2	2
Stark Redgold	5-6	5	5-6	5	6	5-6	0	2	1-2	3
Stark SunGlo	5	5	6	5	6	5	0	2	2	2
Stark Sure Crop	5	5	5	5	5-6	5-6	0-1	1-2	1-2	2
Starking Delicous	5-6	5	5-6	5	5-6	6	0	2	2	2
Steadley	5	4-5	5	4-5	5-6	5	0	2-3	2	1-2
Stephenson	5-6	4	5	4	5	5	0	2	2	2
Stevens	5-6	5	5-6	4-5	5-6	6	0	2	1-2	1-2
Stevens Late	5	4-5	5	4-5	5	5	0	2	1-2	1-2
Stolovyj	5	5	5	4-5	5-6	6	0	1-2	2	2
Stonewell Jackson	5-6	5	6	5	5-6	5-6	0-1	2	2	3
Stuart	5-6	-5	5-6	4-5	5	6	0	1-2	2	2

Stump	5	5	5-6	5	5	5-6	0-1	2	2	2
Sudanell	5-6	5	6	5	5-6	5-6	0	2-3	2	2
Suka Suhék	5	5	6	4	5	5-6	0	2	2-3	2
Sullivan	6	4-5	5-6	4-5	5-6	6	0	1-2	1-2	1-2
Sullivan Elberta	5	4-5	5-6	5	6	6	0	2	2	1-2
Summer Heath	5	5	6	4-5	5	5-6	0	2	2	2
Summer Snow	5	4-5	5-6	5	5-6	5	0	2	1-2	1-2
Summerbrite	5-6	5	6	4-5	5-6	6	0	2	2	2
Summercrest	6-7	4-5	5-6	4-5	5-6	5-6	0	1-2	2	2
Summerland	6	5	6	5	5-6	6	0	3	2	3
Summerlong	5-6	5	5-6	5	5-6	5-6	0	1-2	2	2
Summertime	5	4-5	6-7	5	5	6-7	0-1	1	1-2	3
Sun Cling	5-6	5	6	5	6	6	0	2	2	2
Sun Grand	6-7	5	6	4-5	6-7	7	0	2-3	2-3	2
Sunbeam	5-6	4-5	6-7	4-5	5-6	6	0	1-2	3	2
Sunbright	5	4-5	-6	5	6	5-6	0	1	2	2-3
Suncrest	7	5	6	4-5	5	5-6	0	2	2	2
Suncrest 1	5	5	5-6	5	6	6	0	1-2	1	2-3
Sunday	5-6	5	6	4-5	5-6	6	0	2-3	2	3
Sunglow	6	4	5-6	4-5	6	5-6	0	2	2	2
Sungold	7	4-5	5	55	5-6	6	0-1	1-2	1	2
Sungrand	6	4-5	5	4-5	6	5-6	0	1	2	2
Sunhaven	5-6	4-5	6-7	4-5	5	6	0	1-2	1-2	2
Sunhigh	6	5	6	4-5	5	5-6	0	2	2	1
Sunrise	5	4	6	5	5-6	5	0	2	2	2-3
Sunshine	6	5	5	4-5	6	6	0	2	2	2
Super Precoce	7	4-5	6-7	5	6	6-7	0	1-2	2	2
Supercrimson	5-6	4-5	6	5	6	6	0	1-2	1	2
Suppan Duránci	5	4	5-6	4-5	5-6	5-6	0	2-3	1-2	2-3
Surabian	6	5	5-6	4-5	6	5-6	0	2	2	2
Sure Crop	5	5	5-6	4-5	5-6	5-6	0	3	2	2-3
Surpasse	5-6	4-5	6	5	5-6	6	0	2-3	2	2
Surprise	6	5	6-7	5	6	5-6	0	1-2	1-2	2
Suzanne Darnon	5-6	4-5	6	4	5-6	5-6	0	2-3	2	1-2
Sweet Lady	6	5	5	5	6	5-6	0	2	2	2
Szatymazi Ford	5	4	5-6	4-5	5-6	5	0-1	1-2	2	1-2
Szatymazi Győztes	5	4	5	4	5-6	5	0-1	1-2	1-2	1-2
Szegedi arany	5-6	4-5	6	5	5-6	5-6	0	2	1-2	2
Szép Őrnő	5-6	5	5-6	5	6	5	0	2-3	2-3	2
Szöghi duráncija	5-6	5	6	5	5-6	5	0	1-2	1-2	1-2
Takakura	6	5	6	4-5	5	6	0	2-3	2	2
Tardiv Valla	6	4-5	6-7	5	6	5-6	0	2	2	2-3
Tatura Down	6-7	5	7	5	5-6	5-6	0	2-3	2	2
Tena	5-6	4-5	5-6	4-5	5-6	5-6	0	2	2	2
Terry	5	4	5-6	4	5-6	6	0	2	1-2	1-2
Téton de Venus	6	5	7	5	6	5-6	0	3	2	2
Thomas Rivers	5-6	4-5	5-6	4	5	5-6	0	1-2	1-2	1-2
Thurber	5	4-5	6	4-5	5-6	5-6	0-1	2	1-2	2
Tokane	6	5	6	4-5	5-6	6	0	2	2	2
Toledo	6-7	5	6-7	5	6	6	0-1	2	1-2	2
Toreador	6-7	5	5-6	4-5	6	5-6	0	2	2	2
Transvaal	5-6	4	5	4	5-6	5-6	0	1-2	1-2	2
Tremmel	5	4-5	5-6	5	5	5	0	1	1	1-2
Triana	6	5	5-6	5	6	5	0	2	2	1-2
Triestina	6	4-5	6	4-5	7	6	0	2-3	2	2-3
Triogem	6-7	5	6	5	5	6	0	1	1-2	2-3
Trionfo Liscio	5-6	5	6-7	5	7	6	0	3	2-3	2
Triumph	5	4-5	6	5	5-6	5	0	1	1-2	1-2
Tropico	6-7	5	7	5	6	5-6	0	3	2-3	2
Troth	5	4-5	5-6	4	5-6	5	0-1	2	2	2

Troubador	5-6	4-5	6	5	5	6	0	1-2	2	2-3
Tudor	5	4	5-6	4-5	5-6	5-6	0	2-3	2	2
Tuirbull Cling	5-6	4-5	5-6	4-5	5	5	0	2	1-2	1
Tulip	7	5	6-7	5	5-6	5-6	0	2	2	2
Tuscan	6-7	5	6	5		6	0	3	2-3	1-2
Unique	5	4-5	5	4-5	5-6	5-6	0	2-3	2	2
Valdero	6	5	6	5	5	6	0	2-3	2	2
Valerij Tčkalov	5-6	5	5	4-5	5	6	0-1	1-2	2	2
Van Riebeeck	6	4-5	5-6	4-5	5	5-6	0	2	1-2	1-2
Vanderpoole	5-6	4-5	5	5	5-6	6	0	2	2	1-2
Vanguard	6	4-5	5-6	4-5	5-6	6	0	2	2-3	2
Vaughan	5-6	4-5	6	5	6	5-6	0-1	2-3	2	2
Vedette Abricotée	6-7	5	6-7	5	6	6	0	3	2	1-2
Vedoka	5	5	6	5	5	5-6	0	1-2	1	1-2
Veefreese	5	5	5-6	5	6	5	0-1	2	2	1-2
Vega	6	4-5	6	5	6	6	0	2-3	2	2
Ventura	5-6	5	6-7	5	5-5	6	0	2	2-3	2
Venus	6	4-5	6	4-5	5-6	5-6	0	2-3	2	1-2
Vérbarack	7	5	6	5	5	5	0	2-3	2-3	3
Vesuvio	6	5	6	5	5	6	0	1-2	2-3	1-2
Veteran	5-6	4-5	5	5	6	5-6	0	2	1	2
Vezerle duráncija	5	4-5	5-6	4-5	5	6	0-1	1-2	1-2	1-2
Vimy	5-6	4-5	6	5	5-6	5	0	2	2	2
Vineland	5	4-5	5-6	4-5	5	5-6	0	2	1-2	2-3
Violet	6-7	5	6-7	5	6	6	0	2	2	2-3
Vivian	6-7	5	6	5	5-6	5-6	0	2	1-2	2
Vivid Globe	5-6	4-5	5-6	5	5	6	0	2	2	1-2
Vladimir	5	4-5	5-6	4-5	6	6	0	1-2	1-2	2
Vystavočnij	5	4-5	6	4-5	5	5	0-1	2	1	1
Waddell	5-6	5	5-6	5	6	5-6	0	2	2	2
Wager	5	5	6	5	5-6	6	0	1-2	2	2
Waldon	5-6	4-5	5-6	5	6	5	0	2-3	2	2
Walgant	5-6	5	6	4-5	5-6	5-6	0	2	2	3
Walter	5-6	4-5	5-6	5	6	5	0	2	1-2	2-3
Wandell	5-6	4-5	6	4-5	6	5	0	2	2	2
Ward Late	5	4-5	5	4-5	5	5-6	0	2	1-2	1-2
Warden	5-6	5	6-6	5	6	6	0	2	2	2
Washington	7	5	6	5	5-6	5-6	0	3	2-3	2
Waterloo	5-6	4-5	7	4-5	5-6	6	0	2-3	2	2
Weinberger	7	5	7	5	6	6	0	2-3	2	2
Welberta	5-6	5	5-6	5	5-6	6	0	2	2	2
Welcome	5	4-5	6	5	5-6	5-6	0	2	2	1-2
Weldon	5	4-5	5-6	4-5	6	5-6	0-1	2	2-3	2
Western Pride	5	5	6	4-5	6	6	0	1-2	2	2-3
Wheatland	5	5	5-6	5	5-6	5-6	0	3	2	2
Wheeler	5-6	4-5	6	4-5	6	5-6	0	2	2	2
White Hale	5	4-5	5-6	5	6	6	0	2-3	2-3	2
White Imperial	6-7	5	6	5	5-6	6	0	2-3	2	2-3
White Lady	5-6	5	5-6	5	6	5-6	0	2	2	2
White Magdalene	5	4-5	6-7	4-5	6	6	0	2	1-2	1-2
White Rose	6-7	4-5	5-6	5	5-6	6	0	2	2	2
Wickersham	5	5	5	5	6	6	0	1-2	1	2
Wiggins	5	4-5	5-6	5	6	5-6	0	2	2-3	2
Wilder	5-6	4	6	4-5	5-6	5-6	0	1-2	2	2-3
Wildrose	5	5	6	5	5-6	6	0-1	1	2-3	2
Willett	5-6	4-5	5-6	4-5	6	5-6	0	2	2	2
Williams Gem	5	5	6-7	5	5-6	5-6	0	2-3	2-3	2
Wilma	5	4-5	6	4-5	6	5-6	0	1-2	1	1-2
Wilmer	5	4-5	5-6	5	6	66	0	2	2	2
Wiser	6-7	4-5	6	5	5-6	5-6	0	2-3	1-2	2

Wooster	5	5	5-6	4-5	6	6	0	2	2	2
Württenberg király	5	4	5	5	5-6	5-6	0	1	1-2	1-2
Yakima Hale	5-6	4-5	5-6	4-5	6	5-6	0-1	2	2	2
Yellow Admirable	6	5	6-7	5	6	6	0	2	2	2
Yellow Free	5-6	5	6	5	6	6	0	2	2	2
Yellow Globe	5	5	5-6	5	5-6	6	0	2	1-2	2
Yellow Hobson	5	5	6-7	4-5	5-6	5-6	0	1-2	1-2	1-2
Yelo	6-7	5	5	5	6	5-6	0	2	1-2	2
Yelow Rarekipe	5-6	5	6-7	5	6	5	0	3	2-3	1-2
Young's Cling	6	4-5	6	4-5	5-6	6	0	2	2	2
Yunnan	6-7	4-5	5	4-5	6	6	0-1	1-2	1	2
Zafrani Pozdnij	5	5	5	4-5	5	5	0	2	1-2	2
Zafrani Srednij	5	4-5	5	4-5	5	5	0	2	2	2
Zaidulab	7	5	6-7	5	6	5-6	0	2	1-2	1-2
Žemčužina	5	4-5	5	4-5	5-6	5	0-1	1	2	2
Zlatan Jubilif	5-6	4-5	5	4-5	5	5	0	1-2	2	2
Zoletij	5	4-5	5	4-5	5	5	0	1-2	2	2
Zuni	5-6	4-5	5	4-5	5	6	0	2	2	1-2

Table 2. Relative ecological and biological indicator values of peach cultivars.

Relative indicator values	**Interval**	**Mean**	**CV. ,**
TOGETHER (n=700)			
Temperature figures (TB)	5→7	5.69±0.67	11.8
Moisture figures (WB)	4→6	4.65±0.48	9.7
Reaction figures (RB)	4→7	5.78±0.64	11.1
Nitrogen figures (NB)	4→6	4.69±0.47	9.9
Light figures (LB)	5→7	5.51±0.54	9.8
Continentality values (KB)	5→7	5.65±0.58	10.3
Salt figures (SB)	0→1	0.05±0.13	260
Open pollination (OP)	1→4	1.94±0.82	42.3
Frost resistance (FR)	1→3	1.86±0.54	29.0
Disease resistance (DR)	1→3	1.87±0.55	29.4
PEACH (n=562)			
Temperature figures (TB)	5→6	5.49±0.47	8.6
Moisture figures (WB)	4→6	5.56±0.43	7.7
Reaction figures (RB)	4→6	5.48±0.38	6.9
Nitrogen figures (NB)	4→6	5.17±0.42	8.1
Light figures (LB)	5→7	5.57±0.43	7.7
Continentality values (KB)	5→7	5.65±0.57	9.6
Salt figures (SB)	0→1	0.04±0.13	325
Open pollination (OP)	1→4	2.62±0.74	28.2
Frost resistance (FR)	1→3	1.84±0.55	29.9
Disease resistance (DR)	1→3	1.78±0.49	27.5
NECTARINE (138)			
Temperature figures (TB)	5→7	6.01±0.73	12.1
Moisture figures (WB)	4→5	4.86±0.47	9.7
Reaction figures (RB)	5→7	4.95±0.68	13.7
Nitrogen figures (NB)	4→5	4.79±0.44	9.2
Light figures (LB)	5→7	5.79±0.54	9.3
Continentality values (KB)	5→7	5.96±0.52	8.7
Salt figures (SB)	0→1	0.07±0.31	442.8
Open pollination (OP)	1→3	2.05±0.61	29.8
Frost resistance (FR)	1→3	1.96±0.49	25.0
Disease resistance (DR)	1→3	2.02±0.57	28.2