# The Fruit Tree as an Integral Part of the Residential Greenery Stanislav Boček

#### Introduction

Fruit trees provide tasty fruit and, just like all other trees, they simultaneously fulfil many ecological and social functions, which are important for humanity. Currently, attention is focused mainly on planting fruit trees in the open landscape and their role in built-up areas is being neglected. Fruit trees, especially in their stem forms, lend the Central European landscape its typical appearance, whether fruit trees in public spaces or on private land. This concerns fruit trees in streets, on village greens, or in gardens, allotments and private plots in the form of linear, group and solitary plantings. In the last half-century, however, we have been witnesses to social changes which have lead to a major decline in standard trees in built-up areas. These changes concern the use of buildings and land plots. Today, a much smaller share of the population works in agriculture than in the past. Fruit production is concentrated around intensive large marketing plantations, and self-sufficiency is also losing the sympathy of the rural population due to the impact of globalisation. Fruit is available practically all-year-round in the commercial network, and interest in own production is therefore limited to gardeners who care for fruit trees as part of their leisure time activities. They mostly prefer growing modern varieties on more easily available lower forms. The objective of this paper is to recall the significance of traditional forms of fruit trees and old varieties and to show their current potential. From the social perspective, fruit trees represent cultural heritage and carry of traditions of specific regions.

## Impact on the Appearance of the Landscape

In Central Europe, fruit trees were grown mainly in gardens up to the 17<sup>th</sup> century. Extensive orchards of standards and half-standards are a relatively young peasant culture, which however, in the subsequent period, has significantly determined the cultural appearance of the rural landscape. After the Thirty Year's War (1618–1648), fruit growing developed across Europe with all regional peculiarities and in spite of different geographical and economic circumstances. The mosaic of scattered fruit growing influenced the typical picture of the open cultural landscapes in our latitudes (Bartha-Pichler et al., 2005).

Mareček (2006) mentions the significant and distinctive impact of fruit trees on the appearance of Bohemia's landscape. Land plots with larger fruit tree plantations were not fenced and orchard fields allowed for growing agricultural crops in parallel. Ecological and civic interconnection (throughput) of the landscape as a whole was established. The landscape's appearance was also determined by the territorially typical location of fruit orchards. For example, cherry trees were planted the slopes with characteristic landscape outlooks. The significant ubiquity of fruit trees stemmed from both traditional small-scale production and the substantial diversity of the complex of natural conditions. The substantial diversity of fruit growing forms and systems comprised rural gardens, various types of fruit orchards, a diversely formed avenue system and the occurrence of many wildly growing fruit species in the system of other landscape vegetation features. The author explains that the habitual conformity with the characteristic features of our landscape is mainly due to the rounded, noncontrasting shapes of fruit tree crowns, especially in the case of the traditionally most wide-spread species — apple and plum trees. Together with other deciduous trees, in terms of their dimensions, fruit trees were consistent with the height of single-storey residential and farming buildings.

When evaluating the appearance of the landscape, we should not only pay attention to fruit trees, but also to specific species and varieties which are typical for each specific region. Predominant fruit species have retroactively lent certain regions their specific appearance according to the dominant species. Pear trees are characteristic of North Bohemia, apple trees are abundant in East Bohemia and Tišnov, prunus in the Bohemian-Moravian Highlands, walnut and apricot trees in South Moravia, etc. Cherry plantations were traditionally concentrated near towns in order to ensure quick sales of the soft fruit. To this day, we can find cherry trees or their relics directly in some larger towns. As representatives of deciduous species, fruit trees undergo dynamic transformations throughout the

year. In spring, we can observe the varietal transitions through phenophases, diversity of the shades of flower buds and open flowers, varying durations of blossoming, the beginning of the growth of fruits, the duration of ripening and the related characteristic colouring of the fruits, and the autumn colour of the leaves and their decay.

## **Economic Significance**

Fruit trees provide tasty fruit and this fact need not be discussed further. It is worth mentioning other traditional utility properties related to stem stocks. Firstly, there is the possibility to use wood from felled trees either for heating or, better still, as sawn timber. The greatest use is made of cherry and walnut wood. Cherry wood is hard, strong, easy to polish and has a distinctive colour. It is used in woodcarving, furniture making, wheelwrighting, joinery and haberdashery. It is used to make musical instruments and ornamental furniture. English walnut wood is one of the most valuable European woods, and is used to make furniture. It is used to make rifle butts, knife handles, parquet blocks, pianos and other artistic and ornamental items. The wood is highly durable and excellent for polishing and staining. We must not forget the highly durable pear-tree wood, which shrinks little and does not warp. Steaming lends it a nice uniform reddish colour similar to mahogany. If it is blackened, it is a good substitute for ebony. Thanks to its good polishing characteristics, it is sought after in furniture making, wheelwrighting and for building of sports boats. It is often used for woodcarving, to make work gear and small tools.

Fruit trees have great importance for bee-keepers. They provide pollen and nectar in early spring, at a time when other plants are not yet flowering. The current intensively cultivated agricultural landscape is poor in biotopes of flowering nectariferous (dicotyledonous) plants in the second half of the vegetation period. After rape and linden trees have finished flowering, bees become increasingly reliant on honeydew. Conventional agriculture moreover abundantly uses chemical preparations to protect plants, which may harm bees directly or indirectly (by contaminating their biotopes). The extensively mowed herbaceous plants found underneath fruit trees, with an adequate quantity of flowering dicotyledonous plants, are a source of food for bees, especially in the second half of the vegetation period. If adequate plant care management is practised, especially mosaic mowing, the environment of a fruit orchard (or a garden with fruit trees) provides bees with pollen and nectar practically all-year-round.

Fruit trees near buildings once had a special function, where they served as protection against fire. Tall trees such as pear and walnut trees, just like linden trees or maples, served as lightning conductors and, at the time of complete foliage in the summer months, reduced the risk of fire spreading from farm buildings (wooden barns, haylofts) to the residential parts. The English walnut and black elder demonstrate repellent effects to bothersome insects.

# **Ecological Significance**

The biodiversity of flora and fauna in built-up areas is often higher than in the intensively cultivated agricultural landscape, as has already been mentioned in the preceding chapter in connection with bee-keeping. Fruit trees and bushes in gardens have a rich structure in terms of height and age, thanks to their diverse species composition and the regular planting of saplings. By combining various standard fruit trees and thanks to the varying intensity of sunlight, diverse micro-climatic conditions are created (Häseli et al., 2003).

Smaller buildings (for example, tool sheds), heaps of material, stones, building debris, stacked wood, etc.) are positive elements in gardens. These elements provide a suitable environment for insects (bumblebees, solitary bees and other insects of the hymenoptera and neuroptera orders), some birds and small mammals. Fruit gardens are a major part of the transition to the open landscape. In the direction of built-up areas, they form an interactive element for birds, which nest in the ornamental trees. Market gardens and private land plots traditionally provide huge diversity of grown subcultures, not only vegetables, but also flowers and medicinal herbs, which are important for many species of insects and other invertebrates which use pollen and nectar for nutrition in certain development stages. Flowering plants combine utility and ornamental functions and, at the same

time, significantly, though unintentionally, share in the functional biodiversity which plays a significant role in the regulation of fruit tree pests. Useful insect species are mainly attracted by grown species from the *Asteraceae* family, including a large number of ornamental and medicinal plants, and the *Apiaceae* family, such as dill, fennel or lovage. Cultivation of sunflower and maize supports the presence of predatory bugs which regulate harmful Psylloidea on fruit trees.

## **Social Importance**

In old fruit growing parts, frequent reference is made to fruit farming as highly sensible, enterprising and moral work. The fruit grower has no thought of a lazy life full of socially undesirable phenomena such as alcoholism. According to Pixy (1848) "Growing and care for fruit trees eliminates the opportunity for idleness and the ensuing iniquities: drunkardness, lust and theft". Svec (1924) also states that fruit growing "liberates from alcoholic life and leads to pure nutrition, cleaner air and water, to a new, healthy lifestyle". A certainly interesting factor is the confrontation with the modern approach of amateur growing, where the planting of fruit trees in rural areas is reduced to prunus suitable for fermentation. A great fighter against alcoholism was village teacher Josef Koněrza (1858–1948) in Slavkovice u Nového města na Moravě, who was, among other things, also a national revivalist, writer and translator from Slavic languages. He founded a society against alcohol drinking and wrote, among others, books entitled "Pryč s kořalkou" (Down with Spirits) and "Zahrada – náhrada" (A Garden as a Substitute). When he established an orchard in Slavkovice in around 1900, the local people laughed at him, saying that fruit would never grow there. Many strong trees are still growing there today.

In times when agriculture was a full part of rural life, it was natural to hand-down fruit-growing skills from one generation to another. Intergenerational growing of fruit trees is distinctive precisely for extensive fruit growing. The stem forms on the generative rootstock have a long development period and planting at an advanced age no longer had such importance for fruit growers as for their progeny and grandchildren. In Germany, town inhabitants purchase or rent small parts of extensive orchards where they engage in amateur fruit growing (Weller, 1994) because success comes in the wake of less effort as compared with intensive growing systems. Parents make an effort to foster a relationship with nature in their children and teach them how to grow healthy foods for their own consumption. Care for fruit trees therefore has **ethical importance** in the sense of the working efforts of farmers for the benefit of future generations, not only for their own families, but for entire society.

Fruit orchards have **recreational** value, contribute to regional identities and bear significance for visitors to the landscapes that they help create. Flowering fruit trees symbolise spring in many regions. In recent times, agrotourism has been developing successfully and offers the urban population an opportunity to get acquainted with rural life. The useful and ornamental functions of fruit trees are used to make the stays of holiday-makers more attractive. Fruits can be used to make local products, preferably in organic quality. Fruit growing therefore also has **social significance** in the sense of support for employment opportunities in rural areas.

The **socio-cultural** importance of fruit trees may sometimes also overlap with their economic significance. For example, in the Swiss Basel-Land Region, which is founded on industry, trade and services, only 2% of the population work in agriculture and the economic share of agriculture on the performance of the region is only 1%. In spite of this, when the region presents itself outwardly, extensive fruit orchards and a red apple symbol can be found in official information leaflets or on welcome signs. The real reason is the need to identify with one's birthplace (Herzog, 1998). In the Czech Republic too, we find symbols of fruit trees in the coat of arms of some municipalities, on their websites and in tourist guides, etc. The fruit tree has penetrated deep into human culture, a fact which, among other things, is reflected in the names of many municipalities to express the tradition of growing a certain variety, for example, Jabloňany, Jablůnkov, Hrušovany, Hrušky, Višňové, Ořechov, Ořešín, Lískovec, Slivotín, etc. (All of these place names are derived from Czech words for kinds of fruit or nuts).

In built-up areas, fruit plantations are characterised by a high diversity of varieties. Local identity is perfectly highlighted by local and regional varieties. From a social perspective, fruit trees represent cultural heritage and carry the traditions of specific regions. A typical example is the East Bohemian apple variety 'Malinové holovouské', initially from Holovous na Hořicku, and the North Bohemian pear tree 'Solanka' (Most Region) and 'Koporečka' (Lovosice Region). However, the spread of many local varieties was limited by smaller territories, and to date some of them are even waiting to be discovered, described and published. Summer pear varieties especially deserve study; they often carry similar folk names of the type Ovesničky, Ovesnice, Jačménky, Krvavky, Medule, Kačenky, etc. We can also find them in built-up areas in the form of aged trees. Very old fruit species are shrouded in legends, fables and myths, and have been written into the history of a particular country with indelible ink. Many fruit themes appear in folk songs, sayings, fairy tales, weather lore or poems. The very popular and valued 'Míšeňské' (Meissen) apple tree has become the core theme of the song titled "Chovejte mě má matičko, jako míšeňské jablíčko" (Mother, hold me like a Meissen apple). However, by far, this need not be restricted only to folk oral tradition. A piece of poetic prose by František Hrubín is entitled "Zlatá reneta", which is the folk name of the 'Parména zlatá zimní' variety. When studying regional and local varieties, the folk names of varieties derived from certain characteristics and properties attract the attention (Tetera, 2003). Naming varieties according to ripening time that corresponds to summer agricultural work is very common, as is naming after the taste, colour and shape of the fruits. For this reason, we have many apple trees termed Citronek or pear trees termed Ovesnic and Ovesniček. The folk names of the fruits are an integral part of the dialectal wealth of the Czech language.

#### **Modern Crisis**

In previous essays, some of the functions of fruit trees have been briefly described. However, times have changed. In built-up areas, traditional standard fruit trees are being destroyed. What was once an inherent natural part of rural life is currently often perceived negatively. Due to modern housing trends and the rural situation in general, where people only sleep over and no longer live there, fruit trees and other deciduous trees are dwindling. Although some garden and allotment owners still grow fruit trees, they prefer lower forms for the reason of easier treatment and harvesting. The grown trees overshadow and block the view, and apart from the fruits, leaves also fall from them. So instead of positive perception of the fruit tree as a source of beauty, use and joy of work, this once intimate relationship is changing into contempt.

The reason for the change in the relationship with fruit trees is the current rural lifestyle, including the decline of social life. The neighbours no longer meet as often on benches under the crowns of trees, regardless of whether on village greens, streets in front of houses, or in courtyards. There are few children in rural areas and for many of them, climbing trees is no longer fun but rather a physical problem. The current rural population comprises old residents, immigrants and weekend cottagers. The relationship to fruit trees is usually highly diverse. Old residents usually perceive them mainly as a component of useful greenery. However, agriculture is no longer a source of livelihood for them and even self-subsistence has lost importance. People can obtain fresh fruit from commercial networks practically all-year-round. Of course, the situation substantially differs not only in relation to a specific region, but also among practically neighbouring villages. It can be simply stated that more fruit trees are found in socially poorer areas because they fulfil the self-subsistence function. Traditionally, the presence of fruit tree stem stocks can also be expected more often in areas with less favourable natural conditions, which do not allow for intensive agriculture, such as the foothill border areas or the Bohemian-Moravian Highlands. On the other hand, in such areas there is a far higher occurrence of recreational dwellings, where ornamental wood species dominate.

Fruit trees are more and more frequently being replaced by ungainly ornamental foliage. Aesthetic value is perhaps only attributed to fruit trees in their short flowering period. While, apart from flowers, the previously quoted Professor Mareček also positively evaluates the "quantity and diversity of fruits and autumn colours, which create an impression of warmth in our landscape", the existence of fruits and leaves is paradoxically a typical cause of the current decline in fruit tree

growing, not only in public spaces, but also in private spaces. For this reason, we rarely encounter fruit trees on village greens and in village streets today. The approach to public greenery has also changed. Greens were earlier taken care of by the inhabitants themselves, but this is now done either by municipal employees, or by companies that maintain public areas. From their point of view, fruit trees constitute undesirable vegetation because the fruit and leaves contaminate the roads and y areas, making maintenance more demanding than with other trees. Fruits often also cause problems with regard to the presence of insects (wasps and bees), especially where summer pear tree varieties are concerned. And it was precisely pears which once gave typical colour to our villages. In South Moravia, village greens were usually planted with the varieties 'Šídlenka' (regional) or 'Solnohradka' (originally from Austria), which are characterised by their long life. If the owner or administrator has no interest in taking care of a tree, in the best case, it is placed at the mercy of the impersonal approach of a professional gardener or arborist, who mostly adopts a purely biotechnical point of view towards the tree as an element of the vegetation, while in a worse case, the tree becomes subordinate to the requirements of the investor, which are not always to the benefit of fruit trees. In the worst case, the tree is mercilessly removed or mutilated.

The disappearance of the cultivation of standard fruit trees and their replacement with ornamental varieties is leading to uniformity, reducing the differences between urban and rural greenery. The picturesque character, natural atmosphere of the domesticity and hospitality of rural areas and the traditional appearance of villages is fading away. From a landscaping perspective, there is a very significant change in the height ratios of buildings and greenery (buildings are higher and the greenery is lower), while the colour of the vegetation is changing, partly related to the limitation of variability during the alternation of the seasons. Just as in the case of the decrease in extensive orchards in the open landscape, the demise of traditional useful gardens also threatens biodiversity. Ornamental gardens themselves could be ecologically highly valuable biotopes, if the cultivated trees include a diverse spectrum of trees and flowering herbs. The problem consists in the unsuitable variety structure and care. Instead of fruit trees and deciduous trees, coniferous trees are used, and the diverse herb layer has been replaced by intensively mowed or mulched monocultural lawns in which no plants are left to grow until the flowering stage.

### **Future Hope**

New methods of application are being sought for fruit trees, but their most valuable and unique aspect, that they provide us with edible fruits, should not be forgotten. If a change does not occur in the attitude to life in rural areas, i.e. recourse to self-subsistence, it will be necessary to find a new function for fruit trees in the sense of emphasising their ornamental value. The aesthetic perception of each period, however, is different and everyone has the right to choose their own style of home improvement. People are often susceptible to general pressure from the surroundings and are not aware of any alternatives. Fruit trees should be newly presented as useful multi-purpose vegetative elements. In the summer, they provide desirable shade, and the space under standard trees can be used to grow other plants or for leisure-time activities. A longing for originality may be a great opportunity for the return of fruit trees to built-up areas, regardless of whether this is done by municipalities (public spaces), or by private individuals. Originality consists in the exclusivity of specific fruit varieties, which differ in terms of habitat (one species comprises varieties with an upright to columnar or, on the contrary, a funereal, overhanging crown), the colour of the flowers and duration of blossoming, the colour of the leaves in autumn and, naturally, the diverse spectrum of shapes, sizes and fruit colours. However, in our good efforts, we encounter two major problems. The first consists in the highly limited possibilities for planting trees on streets. This is related not only to higher demands for maintenance, but mainly to the existence of utility networks (water supply, gas, sewerage, and telecommunications networks, power lines, etc.). There is a chance for

areas on the edge of a village or on a larger village green, where it is possible to establish a municipal orchard, or to plant interesting solitary trees.

The second problem consists in the perseverance of the population. Their opinion on fruit trees may

The second problem consists in the perseverance of the population. Their opinion on fruit trees may differ completely from the viewpoint of qualified people, and from the logic of things, they

personally may not want fruit trees on their land plots. Paradoxically, a certain advantage lies in the fact that an increasing number of people have their gardens designed for them, and it is therefore within the competency of a certified garden architect to support the planting of fruit trees with suitable arguments. Many private gardens, however, are maintained on a self-help basis and the owners do not want advice from others, and certainly not from the local people. Only educational activities and especially specific good examples of implementation can encourage change for the better.

The preference of old or regional, i.e. traditional, varieties is substantiated by many years of experience with growing on stem stocks, their originality and exclusivity. Who can boast of a regional variety, which was once grown in the municipality and is currently on the list of endangered species? However, we should not hide the fact that fruit trees bring fruit. On the contrary, we want to turn this incorrectly perceived handicap into an advantage. At present, quality is preferred to quantity as people are prey to advertising and fashion waves. Increasing interest in health and a healthy lifestyle in today's fast-moving technological society may give old varieties a second chance. Many scientific studies provide proof of the high nutrition value of old or regional varieties. Research into the content of antioxidants in more than 250 apple varieties conducted in New Zealand and France over the last 10 years has proven a higher content of antioxidants in old varieties as compared with modern varieties. Testing of many varieties ascertained the highest antioxidant content in the 'Hetlina' and 'Monty's Surprise' apple varieties, which are promoted in foreign countries as "pharmacological" varieties, which act against cancer (anticancer apple), and reduce the risk of heart diseases and infarction (McGhie et al., 2004). Yet, 'Hetlina is probably a Czech regional variety from the Domažlice region, which is already very rare in our country. Interesting results were also obtained from a study of varieties with leather fruits (typical old varieties of the type "Malus prasomela"), which exhibit a tolerance in diabetes patients thanks to the high content of phloridzin, which has a positive impact on sugar metabolism. We are also familiar with the recommended 'Hammerstein' or 'Ontario' variety for diabetes patients. A natural aspect is also emphasis on the aesthetic functions of fruit trees, from habitats and flowers to attractive fruits.

In the current global world, there is a promising effort to offer something from local specifics, specialities of any branch of human endeavour, or natural wealth. As an example, we can refer to the activities of non-government associations and entrepreneurs in the White Carpathians region, where some interesting old and, particularly, regional varieties are being distributed successfully. The 'Jačménka' pear tree has already become a legend among connoisseurs of quality distilled spirits, with its outstanding flavour and aroma. The pear tree 'Praskula' is very popular in Pitín and Bojkovice, as well as in Moravské Kopanice, where they call it 'Dule'. It is excellent for drying and distillation. The flavour of the 'Medůvka' variety is captured by the name given to this small pear with its unmistakable flavour. A member of the prunus species which certainly has a bright future, is the very widespread 'Durancie' variety, which is tolerant to plum pox and is used mainly for distillation. One of the most popular members of the prunus species in Moravian Kopanice is the 'Špendlík žlutý' variety, which ripens in late July. It has a sweet taste and distinct aroma, suited for direct consumption, processing and freezing. A phenomenon is the 'Jadernička moravská' regional apple variety, which is widespread in East Moravia, where they still consider it the best variety ever (Boček and Tetera, 2008).

For inspiration, among major fruit varieties we can look at examples of some of the more popular domestic regional varieties.

Apple trees: 'Anýzové české', 'Kutscherovo', 'Punčové', 'Granát třiblický' (Lower Polabí), 'Hetlina', 'Chodské' (Domažlice region), 'Granátka', 'Kamýcké' (Klatov region), 'Košíkové' (Vysoké Mýto and Litomyšl regions), 'Kouřimský kropenáč' (Central Bohemia), 'Malinové holovouské', 'Míšeň jaroměřská', 'Podzvičínské', 'Syreček úhřetický', 'Studničné', 'Zapovězené' (East Bohemia), 'Vtelenské' (Mladá Boleslav region), 'Jadernička moravská' (East Moravia and Moravian Wallachia), 'Králické' (North Moravia, Jeseník), 'Lašské', 'Libinské' (Lachia), 'Pasecké vinné' (Uničov and Rýmařov regions), 'Šarlatka boračská' (Tišnov region), 'Vlkovo' (Boskovice region), and 'Žďárské úrodné' (Žďár Hills).

Pear trees: 'Koporečka', 'Solanka' (North Bohemia), 'Šídlenka' (South Moravia), 'Muškatelka šedá', and 'Zelinka chlumecká' (East Bohemia)

Cherry trees: 'Jánovka mšenská', 'Klecanská černá', 'Srdcovka přeúrodná, 'Vítovka molitorovská', 'Žalanka' (Central Bohemia), 'Chlumecká raná', 'Medovka', 'Karešova', 'Kordia, 'Chlumecká černá', 'Choltická, 'Kostelnice', 'Plotišťská', 'Velichova chrupka' (East Bohemia), 'Libějovická raná' (South Bohemia), 'Litoměřická', 'Doupovská černá' (North-West Bohemia) 'Granát', 'Skalka', 'Vlkova obrovská', 'and Uherská měkká' (South Bohemia)

Sour cherry trees: 'Vítova', 'Nedošínská' (East Bohemia), 'Kiškovická (North Bohemia) and 'Šakvická' (South Moravia).

Plum trees: 'Brněnská' (South Moravia), 'Durancie' (Slovácko), many local varieties in the White Carpathians, for example, 'Bílá trnka', 'Švestička', 'Pavlůvka', 'Gulovačka', and 'Sračky'.

Apricot trees: 'Bohutická', 'Bořetická', 'Kloboucká raná', 'Sabinovská', 'Velkopavlovická', 'Znojemská' and 'Želešická' (South Moravia)

Future projects focused on the preservation of old varieties as highly valuable genetic resources may give a new chance to the re-establishment of fruit plantations. It is possible to build exclusive gene pool areas on municipal land with predominantly local varieties, which would increase the recreational potential of the municipality. Creating a fruit tree gene pool in specific regions would be a meritorious act in terms of genetic, landscaping, ecological, and cultural and historical aspects. An exemplarily managed orchard with rich meadow flora would ideally be representative of all functions which have been briefly presented in this paper.

## **Bibliography**

Bartha-Pichler, B., Brunner, F., Gersbach, K., Zuber, M. *Rosenapfel und Goldparmäne*. 1. vyd. Baden und München: AT Verlag, 2005. 248 s. ISBN 3-03800-209-7.

Boček, S. Možnosti využití starých odrůd ovocných dřevin. In KEJHA, L. (ed.) *Strom pro život – život pro strom.* 1. vyd. Praha, 2013, s. 20–29. ISBN 978-80-86950-14-3.

Boček, S. Extenzivní ovocnictví. Brno: Mendelova univerzita v Brně, 2015. 334 s. ISBN 978-80-7509-275-5.

Boček, S. a Tetera, V. Ovocné dřeviny Bílých Karpat. Zahradnictví. 2008, 1,10–12. ISSN 1213-7596.

Häseli, Andi, Weibel, Franco, Brunner, Hans, Müller, Werner. *Biologischer Obstbau auf Hochstämmen*. Frick: FiBL, 2003, 20 s.

Herzog, F. Streuobst: a traditional agroforestry system as a model for agroforestry development in temperate Europe. *Agroforestry systems*. 1998, 42 (1), 61–80. ISSN 0167-4366.

Mareček, J. *Krajinářská architektura venkovských sídel*. Praha: Česká zemědělská univerzita v Praze, 2005. 404 s. ISBN 80-213-1324-2.

Mareček, J. Ovocný strom jako významná součást krajinného rázu. In: Skleničková, N. *Ochrana krajinného rázu: třináct let zkušeností, úspěchů i omylů*. Praha, 2006, 189 s. ISBN 80–903206–7–8

McGhie, T., Hunt, M., Barnett, L. Polyphenolic Content of New Zealand-grown Heritage Apples. Report to the New Zealand Tree Crops Association. 2004, 13.

Pixa, F. Klíč štěpařský čili nawedení k štěpowán owocních stromů a popis nejznamenitějších druhů owocních w Ćechách. Praha: W komissíí u Kronbergra a Řiwnáče, Spisů musejních č. XXX, 1848.

Weller F (1994) Obstwiesen–Herkunft, Bedeutung, Möglichkeiten der Erhaltung von Streuobstweisen. Der Bürger im Staat 44(1): 43–49

Švec, F. Ovocnictví, jeho význam, dějiny a vztahy. Praha, 1924, 80 s.

Tetera, V. *Záchrana starých a krajových odrůd ovocných dřevin*. 2<sup>nd</sup> Edition Veselí nad Moravou: ČSOP Bílé Karpaty, 2003, 76 s. ISBN 80-903444-0-2.

# **Summary of Content:**

## Fruit trees in residential greenery

In Europe, fruit trees were mainly grown in gardens up until the 17<sup>th</sup> century. Extensive orchards of standard and half-standard trees are a relatively young peasant culture, which in the subsequent period, however, significantly determined the cultural appearance of the rural landscape. In built-up areas, fruit plantations are characterised by a high diversity of varieties. Local identity is perfectly highlighted by local and regional varieties. From a social perspective, fruit trees represent cultural heritage and carry traditions of specific regions. The objective of this paper is to summarise the history and ecological significance of trees in the landscape, their economic and social significance, the impact of fruit plantations or individual trees on the appearance of the landscape, a current point of view on the situation and the future outlook, and also includes an assortment of regional and local varieties with diverse names and synonyms.



View of the Drahan Upland from the Bohemian-Moravian Highlands



Private plots form the mosaic structure of the landscape



Standard apricots in South Moravia



Current uniformity of "rural" greenery



A solitary 'Košíkové' apple tree, the regional variety of the Vysoké Mýto and Litomyšl regions



An unsuitable combination of pears and junipers



The 'Koza ka štuttgartská' pear tree at the B evnov Monastery in Prague



The 'Charlamowski' species is a jewel among the apples



The 'Hetlina' apple is not only beautiful, but also very healthy



The older generation has no problem with physical labour

About the author of the article:

Ing. Stanislav Bo ek, Ph.D.

He became acquainted with pomology in 1999 during his studies at the Faculty of Horticulture. He devoted his diploma thesis to the mapping of old fruit varieties. The dissertation focused on the evaluation of apple genotypes bred for resistance to scab. Up until 2015, he worked as an assistant at the Faculty of Horticulture of the Mendel University in Brno. Among other things, he created and taught the subjects Extensive Fruit Growing and Ecological Fruit Growing. The broad scope of research activities is documented by projects focussing on the ecological cultivation of an apple tree, surmounting the resistance of the apple tree to *Venturia inaequalis*, alternative organic fertilisers in market gardening, the local identity of the greenery in rural settlements or the study of the diversity of old and local fruit tree varieties in the White Carpathians and Banat in Romania. Today, he works in fruit tree nursery activities. He has established a fruit tree nursery that closely specialises in historical varieties in response to the decrease of extensive orchards and traditional varieties grown in them. He lives in seclusion in a village, and occasionally devotes time to educational activities in the form of courses and lectures.



Ing. Stanislav Bo ek Ph. D. on the left