

BLUŽOVSKÝ, Z. 2001. Předpokládané možnosti zhodnocení netradičních listnatých hospodářských dřevin (Assumed possibilities of non-traditional broadleaved commercial tree evaluation), Sborník z celostátní konference „Krajina, les a lesní hospodářství“, 1. díl, Kostelec n. Č. 1., 22 – 23. 1. 2001, ISBN 80-213-0703-X, p. 96 – 101.

BURDA, P. 2001. Nové konstrukční řešení stroje pro pěstování velkého sadebního materiálu a práci na nelesních půdách. *Promotion stem of new forest machine for big planting stock breeding and for works on the agriculture lands*. Sborník 2. ročníku Konference mladých vědeckých pracovníků, LF ČZU Praha, 23.5. 2001, ISBN 80-213-0777-3, p. 14 – 18.

Abstract:

This item is promotion of new forest machine. This planting machine is for large-sized plant and sapling replanting of forest trees. This is for establishment of christmas trees plantation and for forestation of agricultural land.

Key words: transplanter, tree planter, planting machine, sapling, large- sized plant, planting stock..

FUNDA, T. 2003. Inventarizace semenných sadů ušlechtilých listnatých dřevin v České republice. *Inventory of Noble Hardwood Seed Orchards in the Czech republic*. [Diplomová práce.] [Master thesis.] ČZU v Praze. 121 s.

Abstract:

This thesis aimed to cover all the seed orchards of Noble Hardwoods that had been established within the Czech Republic up to 2002. Inventory of these plantations including evaluation of flowering, damages caused by game, and health status of ramets was carried out in 2001 and 2002. Seed orchards with 11 Noble Hardwood tree species (European ash, European field elm, European white elm, wych elm, sycamore, black alder, small-leaved linden, large-leaved linden, mountain ash, service tree, and wild cherry tree) were included in the inventory.

Key words: Noble Hardwoods, seed orchards.

FUNDA, T. 2004. Semenné sady rodu *Ulmus* v České republice. *Seed Orchards of European Elms in the Czech Republic*. In: Sborník ze IV. ročníku konference mladých vědeckých pracovníků „COYOUS 2003“ konané ve dnech 4. - 5.12.2003 v Praze. Fakulta lesnická a environmentální ČZU. 32-37.

Abstract

*There are three Elm species with different biological and ecological features occurring naturally in the Czech Republic – European field elm (*Ulmus minor* Mill.), European white elm (*Ulmus laevis* Pall.), and Wych elm (*Ulmus glabra* Huds.), which make up a valuable component of forest stands. They tolerate dusty urban environments as well as exhaust fumes. In many cases high resistance to salination and drought was observed among them. All the three species are subject to gene conservation and gene resources reproduction since their composition in forest stands has been steadily decreasing during last decades. The decrease is due to the Dutch elm disease (DED), which ends in the gradual death of elm trees. Seed orchards belong to the most important and effective tools for gene conservation of European elms. So far 8 seed orchards of elms have been established in the Czech Republic.*

Key words: seed orchards, European elms, gene conservation, Dutch elm disease.

GROSS, J. 2001. Těžba a doprava vzácných lesních dřevin (Cutting and transport of noble forest tree species), Sborník z celostátní konference „Krajina, les a lesní hospodářství“, 1. díl, Kostelec n. Č. 1., 22 – 23. 1. 2001, ISBN 80-213-0703-X, p. 87 – 89.

HAJNALA, M. 2002. Testování potomstev a klonů třešně ptačí, lípy malolisté, hrušně obecné a jeřábu ptačího v pokusných výsadbách na ŠLP Kostelec n. Č.1. *Testing of progenies and clones of wild cherry, lime tree, wild pear and European mountain ash in experimental plantations at School Forest Enterprise Kostelec n. Č. 1*. Diplomová práce, LF ČZU v Praze, 61 s., 37 p.

Abstract:

*Results obtained in 2001 and 2002 from evaluations of damage of wild cherry (*Prunus avium* L.) by aphids (*Myzus cerasi*), flowering and fructification, growth parameters (height and diameter) and phenology of leaf-falling are shown in this paper. Clones of lime tree were tested on growth form and growth, clones of European mountain ash were tested on growth and progeny of wild pear was tested on total growth too. Evaluations were received from plantations at School Forest Enterprise Kostelec nad Černými lesy. There were evaluated 8 plantations together. Obtained data were divided into groups and compared. Individual clones and plants were also controlled for the mortality.*

Key words: Wild cherry, mountain ash, lime, pear tree, phenology, flowering.

HAJNALA, M. 2003. Hodnocení poškození šlechtitelského materiálu třešně ptačí mšicemi (*Myzus cerasi*). *Evaluation of damage of Wild Cherry breeding material by aphids (*Myzus cerasi*)*. In: Sborník z konference COYOUS 2003 – IV. ročník konference mladých vědeckých pracovníků, ČZU Praha, 4.-5.12. 2003, 14 – 19.

Abstract:

Results obtained in 2003 from evaluations of damage of Wild Cherry from evaluations of damage of wild cherry (*Prunus avium* L.) by aphids (*Myzus cerasi*) are shown in this paper. Evaluations were received from plantations at School Forest Enterprise Kostelec nad Černými lesy and Forest Districts of Forests of Czech Republic Pelhřimov, Český Krumlov and Kaplice. There were evaluated 11 plantations together. Obtained data were divided into two groups and compared. Individual clones and plants were also controlled for the mortality.

Key words: clonal test, clonal archive, seed orchard, progeny test, aphids, *Prunus avium* (L.)

CHALUPA, V. 1999. Somatic embryogenesis in linden /*Tilia* spp./. In: Jain, S.M., Gupta, P.K., Newton, J.R. /eds./ - Somatic embryogenesis in woody plants, Vol. 5. Kluwer Acad. Publ., Dordrecht, Boston, London, ISBN 0-7923-5553-9, s. 31 – 43.

CHALUPA, V. 2000. In vitro rozmnožování dubu letního (*Quercus robur* L.) a jeřábu břeku (*Sorbus torminalis* /L./ Cr.). In *in vitro* propagation of pedunculate oak and wild service tree. Sborník konference ČZU „Zachování a reprodukce genových zdrojů lesních stromů“, 1, ISSN/ISBN 80-213-0718-8, p. 18 – 20.

Abstract:

In vitro propagation of *Quercus robur* has been achieved by axillary bud culture and via somatic embryogenesis. Secondary somatic embryogenesis was efficient method for production of large number of adventive somatic embryos.

Key words: in vitro propagation, pedunculate oak, crane.

CHALUPA, V. BŘEZINOVÁ, A. 2001. Indukce somatických embryí u lípy malolisté (*Tilia cordata* Mill.) a jejich konverze v rostliny. Induction of *Tilia cordata* somatic embryos and their conversion in plants. In: Sborník konference ČZU "Reprodukce genových zdrojů lesních dřevin metodami in vitro", Česká zemědělská univerzita v Praze, 1, s. 2-3.

Abstract:

Induction of somatic embryos of small-leaved lime (*Tilia cordata* Mill.) and their conversion in plants. Induction of embryogenic tissue of *Tilia cordata* was induced in excised immature and mature zygotic embryos and in leaf segments cultured on modified MS medium supplemented with 2,4 D. Conversion of somatic embryos in plantlets was stimulated on MS medium containing low concentrations of IBA. The plantlets with growing shoots and roots were transferred to potting mixture where plants developed.

Key words: somatic embryos, induction, *Tilia cordata*.

CHALUPA, V. 2001. In vitro reprodukce jilmu horského (*Ulmus glabra* Huds.) a jilmu vazů (*Ulmus levis* Pall.). In *in vitro* reproduction of elms (*Ulmus glabra* Huds.) and *Ulmus levis*. In: Sborník z konference ČZU "Reprodukce genových zdrojů lesních dřevin metodami in vitro". Praha, ISSN/ISBN 80-213-0864-8, Česká zemědělská univerzita, s. 6-7.

Abstract:

In vitro propagation of elms (*Ulmus glabra*, *Ulmus levis*) was achieved using axillary and terminal buds, nodal and leaf segments as initial explants. Axillary or terminal buds cultured on modified MS medium formed new shoots and high multiplication rate was achieved. Microshoots excised from cultures were rooted in vitro or ex vitro.

Key words: *Ulmus glabra*, *Ulmus levis*, in vitro reproduction.

CHALUPA, V. 2001. In vitro rozmnožování jeřábu ptačího (*Sorbus aucuparia* L.) a jeřábu břeku (*Sorbus torminalis* /L./ Cr.). In *in vitro* propagation of european mountain ash and wild service tree. Sborník z celostátní konference „Krajina, les a lesní hospodářství“, 1. díl, Kostelec n. Č. l., 22 – 23. 1. 2001, ISBN 80-213-0703-X, p. 67 – 70.

Abstract:

In vitro propagation of *Sorbus aucuparia* and *Sorbus torminalis*. Rapid *in vitro* propagation of *Sorbus* was achieved by shoot tip and axillary bud culture. The high multiplication rates were obtained on MS medium, supplemented with cytokinin (BAP 0,2 - 0,6mg/l) and auxin IBA (0,1 - 0,2 mg/l). Low concentration of thidiazuron also promoted formation of new shoots. The rooting of microshoots was carried out on WPM containing auxin.

Key words: *Sorbus aucuparia*, *Sorbus torminalis*, in vitro propagation.

CHALUPA, V. 2001. Zachování genových zdrojů ušlechtilých listnáčů a jejich rozmnožování metodami in vitro (Conservation of gene resources of noble hardwoods and their propagation by methods in vitro), Lesnická práce, ISSN 0322-9254, 80, p. 555 – 557.

Abstract:

Fast micropropagation of noble hardwoods was achieved using axillary bud cultures. Rapid shoot proliferation was achieved. The rooting of microshoots was carried out on agar media or ex vitro in a potting mixture. Produced micropropagated trees were planted in the field and their performance was observed.

Key words: noble hardwoods, in vitro propagation, gene sources.

CHALUPA, V., 2002: In vitro propagation of mature trees of *Sorbus aucuparia* and field performance of micropropagated trees. *Journal of Forest Science, Praha*, 48, 12, s. 529-535.

Abst.orig: The influence of tree age, explant source and genotype on micropropagation of mature trees of Sorbus aucuparia has been investigated. Experiments demonstrated the feasibility to use juvenile parts of mature trees for in vitro propagation of selected genotypes of Sorbus aucuparia.

Key words: in vitro propagation, *Sorbus aucuparia* L., mature tree micropropagation, juvenile parts of trees, field growth of micropropagated trees.

CHALUPA, V. 2002. Rozmnožování vzácných lesních dřevin metodami in vitro. *In vitro clonal propagation of noble hardwoods*. In: Sborník - Krajina, les a lesní hospodářství II. - Využití vzácných dřevin v polyfunkčním lesním hospodářství a komplexu lesy - dřevo ČR, Česká zemědělská univerzita v Praze, 1., s. 12-15.

Abstract:

In vitro clonal propagation of noble hardwoods was achieved. Species of the genus Tilia, Carpinus, Fraxinus, Acer, Alnus, Betula, Ulmus, Juglans, Sorbus, Prunus were micropropagated using the method of axillary bud proliferation. Somatic embryogenesis has been induced in species of the genus Tilia, Prunus, Juglans, Betula, Ulmus. The initiation, development and conversion of somatic embryos to plants was studied. Produced micropropagated tree were planted in the field.

Key words: in vitro propagation, axillary bud proliferation, somatic embryogenesis, field growth of in vitro propagated trees.

CHALUPA, V., 2003: In vitro propagation of *Tilia platyphyllos* by axillary shoot proliferation and somatic embryogenesis, *Journal of Forest Science, Praha*, 49, 12, s. 537-543.

Abstract:

In vitro propagation of Tilia platyphyllos Scop. has been achieved by axillary shoot proliferation and somatic embryogenesis. The influence of tree age, explant source, genotype, and phytohormones on micropropagation of juvenile and mature trees of Tilia platyphyllos has been investigated. Nodal segments and shoot tips were used as initial explants for axillary shoot proliferation. Low concentration of cytokinin (BA, BPA, TDZ) plus auxin (IBA) stimulated fast shoot multiplication. Microshoots excised from proliferating cultures were rooted on low salt medium and produced trees were planted in the field. Embryogenic tissues were initiated from zygotic embryos cultured on MS medium supplemented with 2,4-D. After transfer of embryogenic tissues with developing embryoids on media lacking 2,4-D and supplemented with low concentration of IBA, the development of somatic embryos was enhanced. Secondary somatic embryogenesis led to the formation of new adventive somatic embryos. Trees produced from somatic embryos were planted in the field and exhibited normal growth and morphology.

Abstr. angl: In vitro propagation of Tilia platyphyllos Scop. has been achieved by axillary shoot proliferation and somatic embryogenesis. The influence of tree age, explant source, genotype, and phytohormones on micropropagation of juvenile and mature trees of Tilia platyphyllos has been investigated. Nodal segments and shoot tips were used as initial explants for axillary shoot proliferation. Low concentration of cytokinin (BA, BPA, TDZ) plus auxin (IBA) stimulated fast shoot multiplication. Microshoots excised from proliferating cultures were rooted on low salt medium and produced trees were planted in the field. Embryogenic tissues were initiated from zygotic embryos cultured on MS medium supplemented with 2,4-D. After transfer of embryogenic tissues with developing embryoids on media lacking 2,4-D and supplemented with low concentration of IBA, the development of somatic embryos was enhanced. Secondary somatic embryogenesis led to the formation of new adventive somatic embryos. Trees produced from somatic embryos were planted in the field and exhibited normal growth and morphology.

Key words: in vitro propagation; somatic embryogenesis; micropropagation; *Tilia platyphyllos*; field growth of micropropagated trees; organogenesis; somatic embryo; cytokinin; auxin; axillary shoot proliferation; embryogenic tissue; thidiazuron; phytohormone.

KOBLIHA, J. 2000. Explantátové kultury – historický předěl pro rozvoj klonového hospodářství lesních dřevin. *Explantat cultures - a historical turning-point for development of the clonal management of forest trees*. *Lesnická práce*, 79, 6: 272 – 273.

Abstract is not in English

KOBLIHA, J. 2001. Použití osiva ze semenných sadů lesních dřevin. *Utilization of seed from forest tree seed orchards*. Lesu zdar, zvláštní vydání – Genetika 2001 – červen: 7 – 8.

Abstract:

Article solves necessities for establishment and utilization of forest tree seed orchards and preconditions of its seed utilization in forestry practice.

Key words: seed orchards, forest tree species, utilization of seed.

KOBLIHA, J., JANEČEK, V. 2001. Selekcce stromů třešně ptačí. *Selection of wild cherry trees*. In: Sborník z konference „Krajina, les a lesní hospodářství“, I. díl. Kostelec nad Č. lesy, 22. – 23. 1. 2001: 58 – 66.

Abstract:

Plus trees of wild cherry were selected, certified and valuated in phenotype in morfological traits in Forest Districts of Forest of the Czech Republic Křivoklát and Nižbor and in Military Forests Velichov for purposes of seed orchards establishment.

Key words: wild cherry, selection, plus trees.

KOBLIHA, J., JANEČEK, V. 2001. Šlechtění třešně ptačí v ČR. *Wild cherry breeding in the Czech Republic*. Lesnická práce, 80, 9: 391 – 392.

Abstract:

Article informs about wild cherry breeding program realized for purposes of the Czech forestry. This program is based on establishment and utilization of reproductive and testing plantation.

Key words: wild cherry, tree breeding, tree breeding program, Czech Republic.

KOBLIHA, J., JANEČEK, V. 2001. Šlechtění třešně ptačí v Evropě. *Wild cherry breeding in Europe*. Lesnická práce, 80, 6: 255 – 257.

Abstract:

Article is directed to give review of tree breeding activities and their results in many european countries, especially in countries of EU.

Key words: wild cherry, tree breeding, Europe.

KOBLIHA, J. 2001. Utilization of noble forest tree species in polyfunctional forestry and complex forests – wood of the Czech Republic. In: International Congress 2001: „Sustain life – Secure survival, Challenges, analyses and solutions. Wien, 18. – 21. November 2001. 160.

Abstract:

Attention is done to breeding, propagation in vitro, silviculture, protection, cutting, technical wood quality, economy and ecology of noble tree species.

Key words: noble forest tree species, breeding, propagation, silviculture, protection, cutting, technical wood quality, economy, ecology.

KOBLIHA, J. 2002. Research project MSM 414100007: Utilization of noble forest tree species in polyfunctional forestry and complex forests-wood of the Czech Republic. In: Proceedings from IUFRO conference „Management of Valuable Broadleaved Forests in Europe“, 5.-9. May 2002, Freiburg: 31.

Abstract:

Basic aims of this project are increase of biodiversity in forest ecosystems and great production of valuable wood which is connected with effort for limit of wood import from tropical parts of the world. Individual activities of the project are directed to breeding, vegetative propagation by methods in vitro, silviculture, protection, cutting, technical wood quality, effectiveness of silviculture and ecological evaluation of noble tree species utilization.

Key words: noble hardwoods, biodiversity increasing.

KOBLIHA, J., JANEČEK, V., HAJNALA, M. 2002. Wild cherry breeding for utilization in forestry. In: Sborník z konference lesnické fakulty k 50. výročí založení ČZU v Praze, sekce: Využití vzácných lesních dřevin v polyfunkčním lesním hospodářství a komplexu lesy-dřevo ČR. Kostelec n. Č. l., 25. 9. 2002: 16 – 38.

Abstract:

In the first part of the article there are concentrated european experiences with breeding of wild cherry. The second part is based on breeding activities in the Czech Republic, which means selection of plus trees of wild cherry, establishment of plantations with Czech and foreign material of wild cherry and, of course, measurement and valuation of this material.

Key words: *Prunus avium* L., breeding program.

KOBLIHA, J. 2002. Wild cherry (*Prunus avium* L.) breeding program aimed at the use of this tree in the Czech forestry. *Journal of Forest Science*, 48, 5: 202-218.

Abstract:

The paper widely introduced european experiences in wild cherry breeding because it is the first one from prepared series of articles with direction to wild cherry breeding in Czechia. Beginning of wild cherry breeding program for the Czech forestry is described. Plus trees were certified, seed orchards, clone archives, progeny and clonal tests were established. Clones were tested on flowering of graftings in reproductive plantations. Progenies and clones were tested on growth parameters in progeny and clonal tests. Progenies and clones in every breeding plantation were tested on damage by aphids

Key words: seed orchard, clone archive, half-sib progeny test, clonal test, flowering, growth, damage by aphids, *Prunus avium* L.

KOBLIHA, J., JANEČEK, V. 2002. Wild Cherry Breeding Program in the Czech Republic. In: Proceedings from IUFRO conference „Management of Valuable Broadleaved Forests in Europe“, 5.-9. May 2002, Freiburg: 15.

Abstract:

This article is focused to work with wild cherry in Czech Republic, especially in Czech University of Agriculture in Prague, Faculty of Forestry. Wild cherry trees were identified and evaluated in forests and they are propagated to clone archives, progeny tests and seed orchards. Some characteristics of this material are measured and observed.

Key words: Plus tree, seed orchard, half-sib progeny test, clonal test, wild cherry.

KOBLIHA, J., JANEČEK, V., HAJNALA, M. 2003. Conservation and Utilization of Wild Cherry Gene Resources in the Czech Republic. In: Expert Colloquium „Two Decades of Research on Gene Resources in Rhineland – Palatinate (Germany): Realization of the Concept on the Conservation and Sustainable Utilization of Forest Gene Resources as Exemplified by the German Federal State of Rhineland – Palatinate“. The Hambach Castle near Neustadt, October 2003, 28 – 29.

Abstract:

Research of occurrence of wild cherry was realized in the Czech Republic. Parental trees were selected in forest stands. These trees were used for establishment of seed orchards, progeny tests and clonal tests., Abstr.angl: Research of occurrence of wild cherry was realized in the Czech Republic. Parental trees were selected in forest stands. These trees were used for establishment of seed orchards, progeny tests and clonal tests.

Key words: gene resources wild cherry; seed orchards; clonal tests.

KOBLIHA, J., HAJNALA, M., JANEČEK, V. 2003. Testing of lime tree (*Tilia cordata* Miller) clones. *Journal of Forest Science*, 49, 12: 567-582.

Abstract:

In this paper previous experiences with breeding lime tree (Tilia cordata Miller) in the European countries are shown. In the Czech Republic the first results were obtained from evaluation of juvenile planting of lime tree (Tilia cordata Miller) founded in the School Forest Enterprise Kostelec nad Černými lesy. Lime tree clones, cultivated in vitro were evaluated in growth parameters and also according to growth form of the different single clones. Also the mortality of individual clones was controlled., Abstr.angl: In this paper previous experiences with breeding lime tree (Tilia cordata Miller) in the European countries are shown. In the Czech Republic the first results were obtained from evaluation of juvenile planting of lime tree (Tilia cordata Miller) founded in the School Forest Enterprise Kostelec nad Černými lesy. Lime tree clones, cultivated in vitro were evaluated in growth parameters and also according to growth form of the different single clones. Also the mortality of individual clones was controlled.

Key words: clonal test, plant growth, growth form, *Tilia cordata* Miller.

KOBLIHA, J., JANEČEK, J., HAJNALA, M. 2004. Breeding of Wild Cherry in the Czech Republic. In: IUFRO Joint Conference of Division 2 - Forest Genetics and Tree Breeding in The Age of Genomics: Progress and Future. November 1-5, 2004, Charleston, South Carolina, USA.

KOBLIHA, J., HAJNALA, M., JANEČEK, V. 2004. Vývoj klonů lípy malolisté (*Tilia cordata* Miller). In: Sborník z mezinárodního semináře univerzitních lesnických pracovišť „Bezkontaktní výuka v biologických předmětech“, konaného 25. – 28.9. 2003 v Kostelci n. Č. I.: 21 – 22.

Abstract:

This work covers recent knowledge of small-leaved linden breeding in Europe.

Key words: Clonal test, growth, growth form, *Tilia cordata* Miller.

KUPKA I. 2001. Influence of Different Treatment on Wild Cherry Seedling Performance, Journal of Forest Science, V47, N11, p.486-491, ISSN 1212-4834.

Abstract:

*In the framework of research project the trial plantation of two years old seedlings of Wild Cherry (*Prunus avium*, L.) was established. Three different treatments with three replicates were randomly lay out. The treatments were: mycorrhiza inoculum added to seedling roots, hydrocolloid covering the seedling roots and combination of both previous.*

Key words: noble hardwood, artificial regeneration, plantation treatment, mycorrhiza, hydrocolloid, above-ground biomass, ground biomass.

KUPKA, I. 2001. Vývoj výsadeb třešně ptačí na ŠLP Kostelec n.Č.l. *Development of Wild Cherry plantations at area of Kostelec n.Č.l. faculty forest.* In: Krajina, les a lesní hospodářství – výzkumné záměry LF ČZU v Praze, sborník konference 205 s., p. 75-81, ISBN 80-213-0703-X.

Abstract:

The article gives preliminary results of wild chery plantations in mixture with others species in the area of Faculty forests in Kostelec n.Č.l. A total number of research plots are twelve. The seedlings were treated before plantation by mycorrhiza inoculation, hydrocolloid, combination of both and not treated (control plots).

Key words: wild cherry, *Prunus avium* (L.), establishment of forest plantations, seedling quality, weed pressure, mycorrhiza, hydrocolloid.

KUPKA, I. 2002. Preliminary results of Wild Cherry plantation under weed competition. In Proceedings „Management of Valuable Broadleaved Forests in Europe“, May 2002 in Freiburg, pp 13-14.

Abstract:

Preliminary results after three years of observation of Wild Cherry plantation with three different treatment were described. Ground biomass (root system) was significantly stronger for treated seedlings than for control

Key words: artificial regeneration, hydrocolloid, mycorrhiza, noble hardwood, silviculture.

KUPKA, I. 2002. Vliv možných klimatických změn na zastoupení dřevin v našich lesích. *Influence of possible climat changes on species composition of our forests.* Lesnická práce, V81, N1, p.18-19, ISSN 0322-9254.

Abstract:

The increasing volume of CO₂ does not necesserilly mean climatic changes. The interference between climate and species composition is described.

Key words: climatic changes, species composition, temperate zone forests, Tit.čes: Vliv možných klimatických změn na zastoupení dřevin v našich lesích

KUPKA, I. 2002. Vývoj koruny juvenilní třešně ptačí. In: Krajina, les a lesní hospodářství, sborník konference k 50. výročí ČZU, ISBN 80-213-0943-1, pp. 38-46

Abstract:

**Prunus avium* is a valuable broadleaves and it is very often pruned. However there are not many studies on crown development of that as a basis for right timing of pruning. This study investigates the crown development of young Wild Cherry trees.*

Key words: Wild Cherry, tree crown, pruning, crown.

KUPKA, I. 2003. Reakce poloodrostků třešně ptačí (*Prunus avium* (L.)) na hnojivo Silvamix při výsadbě. *Reaction of Wild Cherry Trees to Fertilizer Silvamix after planting.* In: Využití chemické meliorace v LH ČR, sborník ČZU LF v Praze ke konferenci 18.2.2003 v Kostelci n.Č.l., ISBN 80-213-1008-1, vyd. Lesnická práce s.r.o., 101pp., 53-59.

Abstract:

*Wild Cherry (*Prunus avium* L.) is a species which increases biodiversity in our forests. The purpose of the contribution is to asses the plant reaction on fertilization added to plant root in the time of planting. The trials plots were measured for 5 years period, which should be enough time spans to judge plant reaction on height increment. Fertilizer Silvamic proved to be a good fertilizer to start good height increment which could be a crucial point for survival of plants in the field. On the other hand fertilizer did not significantly diminished mortality and it had no influence on trunk form.*

Key words: silviculture; Wild Cherry; fertilization.

KUPKA, I. 2003. Reintroduction of Noble Hardwood in Central European Forests, Poster in XII World Forestry Congress, Quebec, Canada.

LSTIBŮREK, M. 2001. Teoretické analýzy možného užitku vegetativního množení jakostní břízy. *Theoretical analyses of the possible benefit of vegetative propagation for quality birch*. Sborník 2. ročníku Konference mladých vědeckých pracovníků, LF ČZU Praha, 23.5. 2001, ISBN 80-213-0777-3, p. 104 – 110.

Abstract:

Much effort goes into the development of vegetative propagation using micropropagation and other methods. This work analyses the profitability of vegetative propagation in forest tree breeding exemplified by birch. Such analysis was done by comparisons built on published formulas, compiled in an excel worksheet. The worksheet enables calculations in major breeding alternatives. Inputs are genetic variance components, cost components as well as number of parents, number and size of families, size of clones, number of selected families and genotypes within a family. Outputs are gain, status number and total cost. Clonal test (for backward selection of the founders) is better compared to half-sib progeny test in a wide range of conditions provided an efficient propagation technique is available. Micropropagation is mentioned as a possibility to establish birch clonal tests.

Key words: vegetative propagation, clonal testing, gain prediction, *Betula pendula*.

MAULEOVÁ, M. 2004. Reprodukce jeřábu ptačího (*Sorbus aucuparia*.L.) metodami in vitro. In vitro propagation of European mountain ash (*Sorbus aucuparia*.L.). Sborník z konference COYOUS 2003. IV. Ročník konference mladých vědeckých pracovníků 4-5.12.2003. Editor: Aleš Vorel, Petr Zasadil. ČZU, FLE. ISBN 80-213-1124-X. Str: 28-31.

Abstract:

In vitro propagation of Sorbus aucuparia has been achieved by using organogenesis. The winter buds were used as initial explants. Modified MS medium supplemented with cytokinin (BAP) and auxin (IBA), hormones stimulating shoot multiplication rate, was tested as nutrient medium. For rooting was used a different photoperiod, pulse stimulation and low mineral medium (WPM) supplemented with low concentration of auxin (IBA and NAA).

Key words: in vitro propagation, *Sorbus aucuparia*, phytohormons, auxin, cytokinin, multiplication rate, rooting.

MAULEOVÁ, M., VÍTÁMVÁS, J. 2004. Techniky eliminace patogenních činitelů v orgánových kulturách jeřábu ptačího (*Sorbus aucuparia* L.). *Techniques of eliminacion of pathogenic factors in organ cultures of European mountain ash (Sorbus aucuparia L.)*. In: Mezinárodní seminář univerzitních lesnických pracovišť- „Bezkontaktní výuka v biologických předmětech“. Editor: Jan Douša. ČZU, KDŠLD. ISBN 80-213-1168-1. Str: 29-30.

Abstract:

In vitro propagation of Sorbus aucuparia has been achieved by using organogenesis. Furthermore we were engaged in bacteriosis elimination from impure in vitro culture. In cultures contaminated by bacillary bacterium we designated a number of techniques to eliminate bacteriosis with Savo, HgCl₂ and PPM (Plant Preservative Mixture™). The evaluation of results was assigned via multi-factorial analysis.

Key words: *Sorbus aucuparia*, bacteriosis, SAVO, ethanol, PPM, HgCl₂

MÖLLEROVÁ, J., ULBRICHOVÁ, I. 2002. Růst sazenic olše v různých podmínkách. *The growth of Alnus – seedlings in the different conditions*. – In: Karas J., Podrázský V. (eds.): *Současné trendy v pěstování lesů*. Sborník příspěvků mezinárodní konference konané ve dnech 16. – 17.9.2002 v Kostelci n. Č.L., ČZU v Praze, str. 90 – 93. ISBN 80-213-0938-5, v rámci grantu MSM 414100009 Restoration of functioning forest ecosystems of the Krušné hory (Ore Mts.)

Abstract:

Alders were pot planted in the nursery in the three different types of soil: sand, nursery substrate, soil from bulldozer degraded plots in th Ore Mts. The height growth was best in the nursery soil, but worse in th Ore mts. soil than in the sand.

Key words: *Alnus*, *Frankia*, height growth.

PODRÁZSKÝ, V., LIAO, C.Y. 2001. Půdotvorná funkce třešně ptačí (*Prunus avium*). *Soil forming potential of cherry (Prunus avium)*. In: Krajina, les a lesní hospodářství. I. /Sborník z konference 22. a 23.1.2001/. Praha, Česká zemědělská univerzita v Praze 2001. s.82 – 86.

Abstract:

Results confirmed ameliorative effect of cherry on the soil state, even better then that of the basswood. In the part dominated by cherry (and generally by broadleaves) was registered lower accumulation of surface humus, its more rapid mineralisation, higher content of bases and more favorable state of the soil chemistry.

Key words: Cherry, soil forming potential, humus form, amelioration, site improvement, nutrient cycles.

PODRÁZSKÝ, V. 2002. Economical and soil forming potential of the wild cherry. /Paper abstract/. In: Management of valuable broadleaved forests in Europe. Freiburg, IUFRO 2002. s. 5.

PODRÁZSKÝ, V., REMEŠ, J., KARNET, P. 2002. Hodnotová produkce a půdotvorná funkce třešně ptačí. *Production and soil forming potential of the wild cherry (Prunus avium)*. Lesnická práce, 81, 2002, č. 6, s. 255 – 257.

Abstract:

Wild cherry used as a production wood in the forestry and its influence to the soils of the stands.

Key words: *Prunus avium*, wild cherry, forestry production, Tit.čes: Hodnotová produkce a půdotvorná funkce třešně ptačí.

PODRÁZSKÝ, V., KOBLIHA, J., REMEŠ, J., KUPKA, I., RŮŽOVÁ, R., KARNET, P. 2002. Porostotvorná funkce třešně ptačí. *Stand forming function of the wild cherry (Prunus avium)*. Lesnická práce, 81, 5: 213 – 215.

Abstract:

Wild cherry influence to the stand structure and possibility to use this tree for the forest production.

Key words: *Prunus avium*, wild cherry.

PODRÁZSKÝ, V., REMEŠ, J. 2002. Stand forming potential of the wild cherry. /Poster/. In. Management of valuable broadleaved forests in Europe. Freiburg, IUFRO 2002. s. 33.

PODRÁZSKÝ, V. 2003. Pěstování cenných listnatých dřevin. *Silviculture of hardwood broadleaves*. Lesnická práce, 82, 2003, č. 1, s. 18 – 19.

Abstract:

Silviculture and use of noble broadleaves (or hardwood broadleaves) in czech silviculture.

Key words: hardwood broadleaves.

REMEŠ, J., PODRÁZSKÝ, V. 2002. Vyhodnocení experimentálních výsadeb třešně ptačí (*Prunus avium* L.) na školním lesním podniku v Kostelci nad Černými lesy. *Evaluation of the experimental wild cherry (Prunus avium L.) plantations on the School forest enterprise in Kostelec nad Černými lesy*. In: Krajina, les a lesní hospodářství. Sekce II. Využití vzácných lesních dřevin v polyfunkčním lesním hospodářství a komplexu lesy - dřevo ČR. Praha, ČZU v Praze 2002. s. 47 - 52.

Abstract:

The paper presents the preliminary results of the wild cherry growth process and impact of the different fertiliser application. The fastest growth in first tree years was.

Key words: wild cherry, plantations, height growth, fertilisation.

ŠEVČÍK, J. 2001. Vegetativní rozmnožování některých významných druhů lesních dřevin pomocí řízků. *Vegetative propagation of some important tree species by cuttings*. Sborník z celostátní konference „Krajina, les a lesní hospodářství“, 1. díl, Kostelec n. Č. l., 22 – 23. 1. 2001, ISBN 80-213-0703-X, p. 71 – 74.

Abstract:

The article deals with vegetative propagation of wild cherry (Prunus avium L.) by means of cuttings. The observing of mortality during the first winter period from the point of view of clonal pertinence is another topic of the paper.

Key words: cuttiing, substrate, perlite, stimulators, clon, *Prunus avium* (L.).

ŠIŠÁK, L. 1999. Ekonomické hodnocení mimoprodukčních funkcí lesa jako veřejného zájmu (Economic valuation of non-wood-producing roles of the forest like public interest). Sborník referátů z celostátního semináře „Zajištění cílů veřejného zájmu rozvojem mimoprodukčních funkcí lesů“ Česká akademie zemědělských věd, Lesy ČR, s. p., Národní lesnický komitét, Česká lesnická společnost. Hradec Králové, p. 56 – 61.

Abstract:

Monetary valuation of forest services' importance by different socio-economic nature of the services is presented. Non-market forest services are of twofold socio-economic importance for the society - tangible and intangible, which means that they should be valued accordingly in the appropriate ways. Non-market forest services of tangible essence for the society should be valued on the basis of economic effectiveness they bring. The non-market forest services of intangible nature (recreational, nature protective) can be valued in various ways of which the so called expert comparing method is more promising than methods stemming from the willingness-to-pay approach under present conditions in the Czech Republic.

Keywords: forest services, market services, non-market services, valuation, Czech Republic.

ŠIŠÁK, L. 1999. Theoretical and practical problems with valuation of non-market forest functions in the Czech Republic. International Symposium „From theory to practice – gaps and solutions in managerial economics and accounting in forestry“, p. 146 – 160. Provisional Proceedings, Prague – Czech Republic, p. 189.

Abstract:

The aim of the paper is to show problems in valuing non-market forest functions in the Czech Republic (CR). Theoretical and practical problems in use of so called willingness-to-pay approach cause mistrust of state authorities and make them employ other methods (so called "expert methods") for valuing non-market forest functions. Theoretical and practical analysis of present system of non-market forest functions valuation, applied in present legislative norms, is incorporated. Different blocks of non-market forest functions should not be valued by one uniform method but in different ways accordingly to their socio-economic nature.

Keywords: Non-market forest functions, Valuation, Czech Republic

VÍTÁMVÁS, J., MAULEOVÁ, M., CHALUPA, V. 2004. In vitro rozmnožování lesních dřevin. *In vitro propagation of forest trees*. Sborník- Perspektivy lesnické dendrologie a šlechtění lesních dřevin. Editor: Ing. Jaroslav Karas, Doc. Ing. Jaroslav Koblíha, CSc. ČZU, FLE. ISBN 80-213-1164-9. Str: 31-32.

Abstract:

Using in vitro propagation we accomplished fast production of forest trees, more productive and resistant genotype of forest trees, forest trees with superior genotypes and preservation of genetic resources etc.

In our experiments, fast in vitro propagation of many forest tree species was achieved using organogenesis and somatic embryogenesis.

We studied the main stages of axillary bud proliferation (organogenesis) - culture establishment, shoot multiplication, rooting of microshoots and transfer of rooted plantlets into soil. Factors studied included the effects of phytohormones, multiplication rate, different nutrient medium, photo-and termoperiodism etc. The method of organogenesis is applicable to most European deciduous forest tree species.

Embryogenic cultures were usually initiated from young tissue, most frequently from embryonic tissue (zygotic embryos). We studied the basic stages of somatic embryogenesis - initiation, development and conversion of somatic embryo to plants, rooting and transfer of plantlets into soil. Factors studied included the effects of phytohormones, osmotica, duration of embryo drying and photo-and termoperiodism.

Produced micropropagated trees were planted in the field and their field performance was observed. The height and diameter dimensions of micropropagated trees were comparable to those of trees produced from seeds. Obtained results indicate that in vitro regenerated trees were genetically uniform in comparison with the original genotypes.

*In our experiments we succeeded in micropropagation through organogenesis of many tree deciduous species: *Quercus robur* and *Q. petraea*, *Fagus sylvatica*, *Carpinus betulus*, *Fraxinus excelsior*, *Acer pseudoplatanus*, *Alnus glutinosa*, *Betula pendula*, *Ulmus minor* and *U. glabra*, *Prunus avium*, *Sorbus aucuparia* and *S. torminalis*, *Tilia cordata* and *T. platyphyllos*, *Populus tremula*.*

*Somatic embryogenesis has been induced in *Quercus robur* and *Q. petraea*, *Tilia cordata* and *T. platyphyllos*, and also in conifers, *Picea abies*, *Abies alba* and *Larix decidua*.*

Key words: in vitro propagation, organogenesis, somatic embryogenesis, deciduous forest tree, conifers.

ZASADIL, P. 2001. Analýza ptačího společenstva olšového porostu v CHKO Třeboňsko. *The Analysis of Bird Community on Common Alder Stand in Protected Landscape area Třeboňsko*. In: Krajina, les a lesní hospodářství - sborník referátů z celostátní konference – díl I. LF ČZU v Praze: 102 – 106

Abstract:

For the analysis of bird community structure and diversity was counted birds in old Common Alder stand along New River Dam in Protected Landscape area Třeboňsko (South Bohemia). The tract of counted area is about 12.8 ha. Birds was counted by standard belt method during nesting season 2000. On the whole transect together was founded 470 individuals of 24 species. As the most abundant species was evaluated Chaffinch, followed by Blackcap, Starling, Chiffchaff, Great Tit, Collared Flycatcher, Short-toed Treecreeper and Blue Tit.

Key words: Bird communities, line counting method, biological diversity, Třeboň area, South Bohemia

ZASADIL, P. 2001. Využití ptáků jako bioindikátorů ekologické kvality lesních ekosystémů v připravované CHKO Novohradské hory. *Bird Communities as Bioindicators of Forest Ecosystems ecological quality in Prepared Landscape Area Novohradské hory mts*. In: Krajina, les a lesní hospodářství, sborník referátů z celostátní konference - díl I. LF ČZU v Praze, Praha, x, s. 30-35, ISSN/ISBN80-213-0703.

Abstract:

For characterization of ecological quality of forest ecosystems in Novohradské hory Mts. (South Bohemia) was counted birds by standard point transects method in the years 1997 - 2000. On the 612 counted points (24 transects) was founded together 60 bird species (15 706 ex.). The most abundant was Chaffinch, followed by Robin, Chiffchaff, Coal tit, Wren, Blackcap and Gold crest. Community Topic structure includes hole nesting species as well as tree-top species (a dominant group), shrub species and species nesting in the herb layer on the clearings.

Key words: Bird communities, point counting method, forest ecosystems, biological diversity, Novohradské hory mts. South Bohemia.

ZASADIL, P. 2002. Srovnání ptačích společenstev dvou typů porostů olše lepkavé (*Alnus glutinosa*). *The Comparison of the Bird Communities of Common Alder Stands Two different Types*. In: Janeček V. & Koblíha J. (eds.): Krajina, les a lesní hospodářství, Sborník fakultní konference k 50. výročí ČZU. Část II. Využití vzácných lesních dřevin v polyfunkčním lesním hospodářství a komplexu lesy – dřevo ČR: 65-71.

Abstract:

There were compared results of nesting bird community counting of two different Common Alder stands in the paper. On both localities together were found 31 bird species, the richer one (locality Nová řeka, South Bohemia) has 29 species and the poorer (locality Peklo, North Bohemia) one only 19 species. The density and diversity of bird community depends first of all on trees age, age diversity, coverage of shrub layer and partially on character of neighbouring habitats, which interacting narrow belts of common alder stands.

Key words: Bird communities, Common Alder, line counting method, forest ecosystems, species diversity, Northern Bohemia, Southern Bohemia, Třeboň region.

ZASADIL, P., KLOUBEC, B. 2003. Změny ve složení hnízdního společenstva ptáků Žofínského pralesa. *The changes of breeding bird community of Žofín primaeval forest*. In: Bryja J. & Zukal J. (Eds.): Zoologické dny Brno 2003. Sborník abstraktů z konference 13. – 14. února 2003: 163 – 164.

Abstract:

There was realised the estimation of bird community of Žofín primaeval forest (Novohradské hory Mts., South Bohemia). The data was compared with ones obtained in the years 1989 AND 1990.

Key words: Bird community, forest ecosystem, Novohradské hory Mts., Žofín primaeval forest.

ZEIDLER, A. 2001. Technické vlastnosti dřeva vzácných lesních dřevin – jeřáb břek (*Sorbus torminalis* /L./ Crantz.). *Technical Wood Quality of Noble Tree Species – Wild Service Tree (Sorbus torminalis (L.) Crantz.)*. Sborník z celostátní konference „Krajina, les a lesní hospodářství“, 1. díl, Kostelec n. Č. 1., 22 – 23. 1. 2001, ISBN 80-213-0703-X, p. 90 – 95.

Abstract:

The rare broadleaved tree species often yield valuable wood. The knowledge of wood properties is the basic prerequisite for an adequate processing. The article deals with the technical wood properties of Wild service tree (Sorbus torminalis (L.) Crantz.) from the territory of the Czech Republic. From mechanical properties the compressive strength, the bending strength, the impact strength, the shear strength along grains and the hardness (Brinell) were tested. From physical properties the density, the absorptive capacity, the hygroscopicity, the shrinkage and the swelling were tested. The article also compares the results with data in literature. Comparing Wild service tree (Sorbus torminalis (L.) Crantz.) with the wood properties of other broadleaved tree species facilitates to get idea about quality of its wood.

Key words: Wild Service Tree (*Sorbus torminalis* (L.) Crantz.), wood, properties.

ZEIDLER, A. 2002. Vybrané vlastnosti dřeva našich domácích dřevin – třešeň ptačí (*Cerasus avium* (L.) Moench.). *Selected Wood Properties of our Indigenous Tree Species – Wild Cherry (Cerasus avium (L.) Moench.)*. Zprávy lesnického výzkumu, 2002, č. 4, s. 204-207.

Abstract:

Wild cherry (Cerasus avium (L.) Moench.) ranks among our indigenous tree species, which yield valuable wood. Its wood is very decorative and widely used for furniture making. The knowledge of basic wood properties is a prime prerequisite for a proper wood processing. This article focuses on the selected mechanical and physical properties of the cherry wood from the Czech Republic sites. Five sample trees of Wild cherry from two different growing districts were tested in the following properties. From the mechanical properties the compressive strength, the bending strength, the impact strength, the shear strength parallel to the grain and the hardness (Brinell) were tested. From the physical properties the density, the absorptive capacity, the hygroscopicity, the shrinkage and the swelling were tested. Comparing the results with data in literature provides the information on the quality of the cherry wood from our sites. The article also presents a comparison of the cherry wood properties with the properties of our important native tree species.

Key words: Wild Cherry (*Cerasus avium* (L.) Moench.), wood, physical and mechanical properties.

ZEIDLER, A. 2003. Zhodnocení vlastností dřeva břeku z našeho území. *Wood Properties of Wild Service Tree from the Czech Republic Territory*. COYOUS 2003. Praha: FLE ČZU, 2003, s. 241 – 246.

Abstract:

The article focuses on basic mechanical and physical properties of the Wild Service Tree wood from the Czech Republic sites. Namely the compression strength, shear strength, hardness, bending strength, toughness and tensile strength were tested. From the physical properties the density, absorptive capacity, hygroscopicity, swelling and shrinkage were tested. The results are also compared with the wood properties of our common native tree species.
Key words: Wild Service Tree (*Sorbus torminalis* (L.) Crantz.), wood, mechanical and physical properties.

ZEIDLER, A. 2004. Do We Really Know Wood of our Indigenous Tree Species – Bird Cherry? In *Sustain Life – Secure Survival II*. ČZU Praha, 2004. s. 203.

Abstract:

*Utilisation of wood of less known tree species is one of the possibilities how to enhance profit from forest estates and how to broaden an offer of the wood processing industry on the market. Bird cherry (*Padus racemosa* (L.) Gillib.) belongs among common native species in the Czech Republic. Knowledge of bird cherry wood is insufficient and that is the reason the wood is used for second-rate purposes. Information about wood properties is a crucial factor for better wood utilisation of such tree species. Mechanical and physical properties of bird cherry wood are surprisingly missing in the available literature. The article presents data about the basic properties of bird cherry wood. The tensile strength, the compressive strength, the shear strength, the bending strength, the impact strength and the hardness were tested from the mechanical properties. The density, the shrinkage and the swelling were tested from the physical properties. The discussion about quality of investigated bird cherry wood is based on a comparison with related tree species and common commercial species.*

Key words: bird cherry (*Padus racemosa* (L.) Gillib.), wood, properties.

ZEIDLER, A. In print. Srovnání vlastností dřeva střemchy hroznovité a střemchy pozdní. *Comparison of Wood Properties of Bird Cherry and Black Cherry*. COYOUS 2004. Praha: FLE ČZU.

Abstract:

*This article discusses differences between wood properties of two species of *Padus* genus. The wood of native Bird Cherry (*Padus racemosa* (L.) Gillib.) and the wood of introduced American species – Black Cherry (*Padus serotina* (Ehrh.) Borkh.) were compared. The comparison is based on standard mechanical and physical properties. The results are also compared with our common commercial species.*

Key words: Bird Cherry, Black Cherry, wood, mechanical and physical properties