Initial Stakeholder Meeting Report
Wood pasture in Hungary

Work-package group 2: High Natural and Cultural Value Agroforestry
Specific group: Wood pasture in Hungary
Date of meeting: 29-30 August 2014
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Location of meeting: Fajsz, Bogyiszló, Hungary
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1. Context

The AGFORWARD research project (January 2014-December 2017), funded by the European Commission, is promoting agroforestry practices in Europe that will advance sustainable rural development. The project has four objectives:

1) to understand the context and extent of agroforestry in Europe,
2) to identify, develop and field-test innovations (through participatory research) to improve the benefits and viability of agroforestry systems in Europe,
3) to evaluate innovative agroforestry designs and practices at a field-, farm- and landscape scale, and
4) to promote the wider adoption of appropriate agroforestry systems in Europe through policy development and dissemination.

This report describes one of about 40 initial stakeholder workshops to address objective 2. Further details of the project can be found on the AGFORWARD website: www.agforward.eu

2. Description of wood-pasture systems

The term agroforestry is not widely used in Hungary but there are traditional wood pasture and wood meadow systems. Although there is significant interest in the benefits of agroforestry, there is a lack of basic knowledge about agroforestry practice and little information about who has established systems or is engaged in agroforestry research. It is evident that there is a need for a national agroforestry network in Hungary to disseminate information and set the basis for cooperation between agroforestry stakeholders.

Wood pastures were once common in Hungary, but they are currently declining (Varga and Bölöni 2009). They can be found across Hungary (Figure 1) and they are thought to cover about 5500 ha (Bölöni et al. 2008, Bölöni et al. 2014). Traditional shepherding occurs in some of the remaining wood pastures, but this practice is threatened. Increasing formal recognition of the cultural and ecological value of wood-pastures has resulted in new types of managers and the emergence of new types of knowledge in the remaining wood pastures (Varga and Molnár, 2014).

3. Initial stakeholder meeting

The stakeholder meeting on 29-30 August 2014 took place near the wood pasture named Akasztó. This is located near the Bogyiszló community in Tolna County (46°23'44.34"N, 18°51'34.78"E) (Figure 2) in Southern Hungary. The wood pasture covers about 20 ha, is grazed by sheep, and is surrounded by open pasture. The system includes about 30 trees of oak (*Quercus robur*) (200-300 years-old), and 15 trees of wild pear (*Pyrus pyraster*) (about 100 year-old). Another local area of wood pasture is in Bum-island (Bum-sziget: 46°36'45.14"N, 18°52'1.49"E) near Dunaszentbenedek.

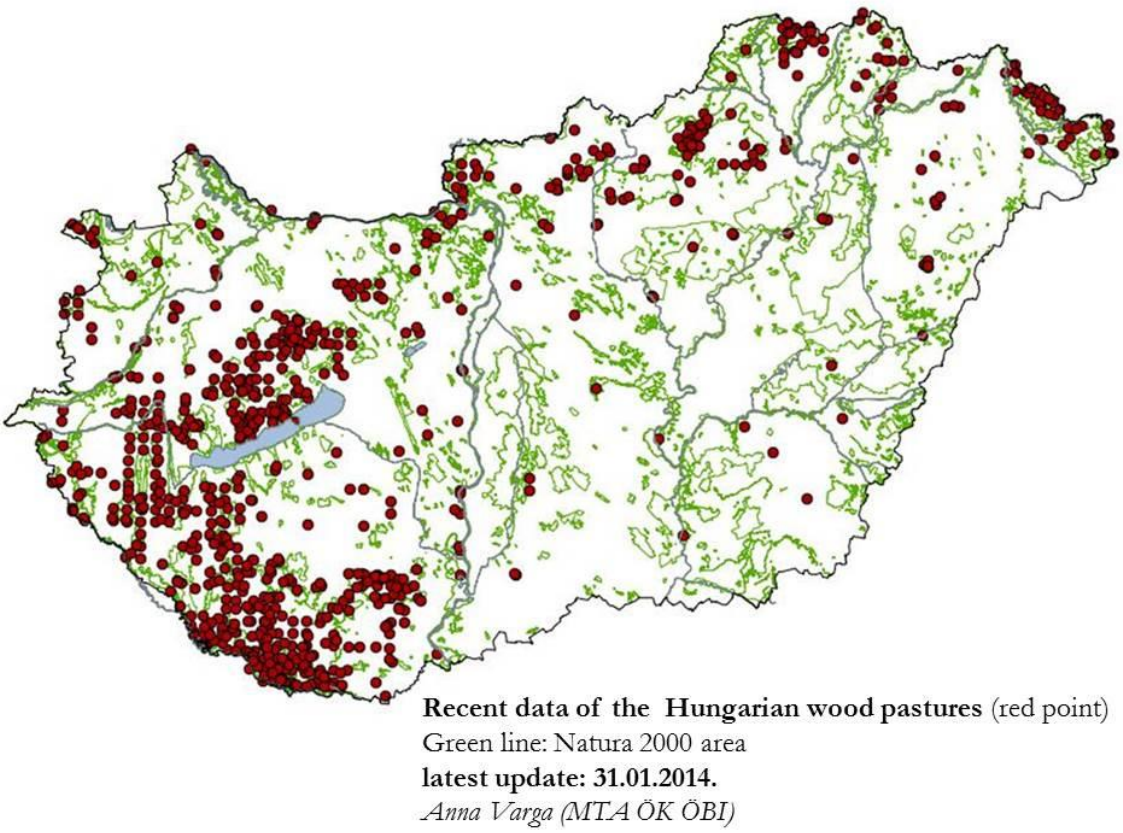

Figure 1. Presence of wood pastures in Hungary (Varga et al, 2014)

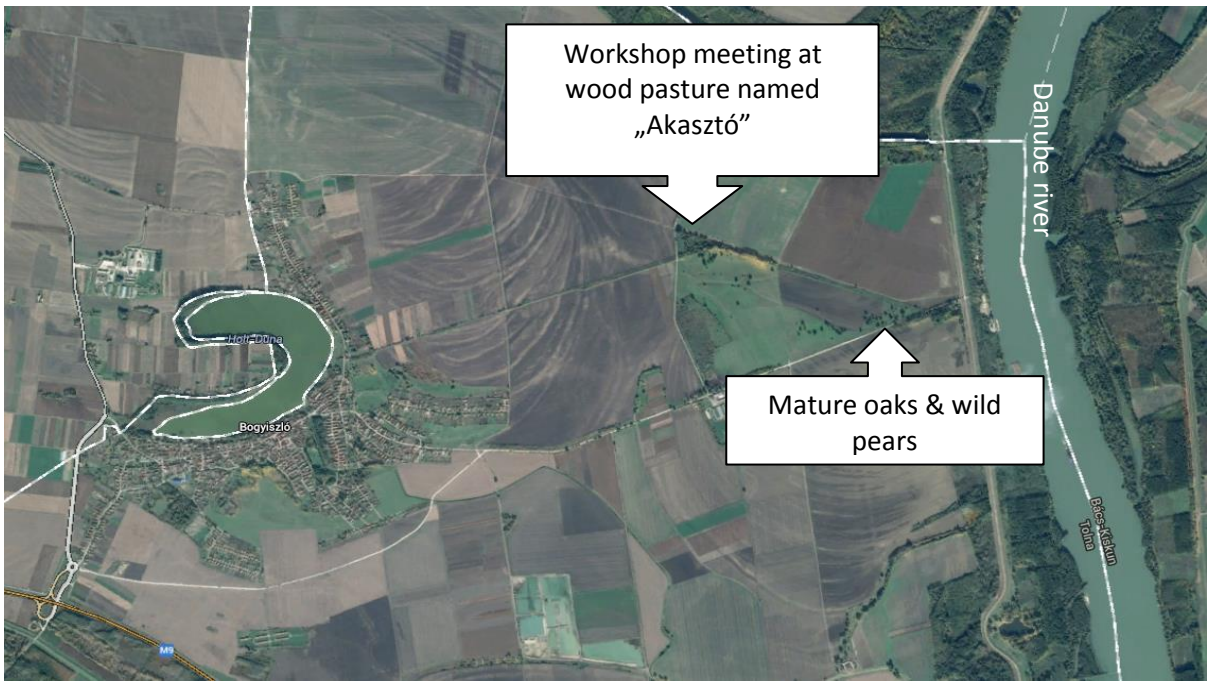

Figure 2. Location of the traditional wood pasture system “Akasztó” on a map of Bogyiszló

The initial workshop organised by the Hungarian AGFORWARD group was also the first national agroforestry forum of Hungary. The workshop provided an introduction to the concept of agroforestry and its state and potential in Hungary and across Europe. This was followed by discussions on a wide range of agroforestry issues, which will be taken forward, together with on-site demonstrations of agroforestry systems that reflect the ideas and experiences of stakeholders. The positive feedback from participants and fruitful discussions at the workshop suggest it was a successful start of cooperation on agroforestry at the national level.

Figure 3. Wood pasture system with 300-year-old oaks at Akasztó

The meeting was attended by 17 stakeholders and four presenters. Sixteen stakeholders completed a survey form. Seven were involved in pasture management and six said that they were already managing an agroforestry system. The area of the pastures represented ranged from 1 to 200 ha with an average size of about 20-40 ha integrated with sheep, horse, and cattle grazing. Some of the participants were managing other types of agroforestry systems including alley cropping, shelterbelts, wooded meadows, and multipurpose orchards. There was a broad age range with six people aged 20-35 years, eight aged 35 and 50, and two aged 50-65 years. The gender mix was three women and thirteen men. The stakeholders represented almost all the regions of the country (Figure 4).

Figure 4. Photo of the HNCV agroforestry systems workshop meeting under the trees of the wood pasture system “Akasztó”

4. Introduction session

The meeting took place over two days. The introductory session was hosted by Kek Duna from the Agricultural Cooperative at Fajsz, located in the Great Hungarian Plain. The field visit and on-site discussions around wood pasture AF systems occurred the next day (30 August) near to Bogyiszló, about 30 km from Fajsz.

At the initial meeting, Andrea Vityi described the AGFORWARD project and explained the purpose of the stakeholder workshops including plans to establish a national network on agroforestry systems (Vityi, 2014) (Figure 5). This was followed by a presentation by Anna Varga (Hungary Academy of Science) on silvopastoral systems such as wood pasture, grazing forest and grazing in the forest) (Figure 6). Tibor Nagy, an(owner and manager of a wood pasture systems, (Figure 6) and András Máté, a manager of rural development and agroforestry consultancy service and manager of wood pasture systems also gave presentations.

Figure 5. Andrea Vityi (researcher, NyME KKK) introduces AGFORWARD project and describes the aim of the workshop

Anna Varga summarised the past, current state of affairs and future potential of agroforestry in Hungary. Wood pastures and grazed forests have always been an integral part of land use in Hungary as demonstrated by a number of archive and historical sources. The economic and social value of such systems is hinted by the name "*Glandifera Pannonia*" (meaning 'acorn bearing Pannonia') to denominate Transdanubia in the Roman Age. The significance and operation of silvopastoral systems has reduced substantially in the past 100 years, and common ownership of pastures in forested areas has vanished almost entirely. It is estimated that there is currently only around 5500 ha of used or abandoned wood pasture in Hungary; with a third in a protected area. Grazing in forests is prohibited in areas officially qualified as forests.

In recent years, agri-environment subsidies, nature conservation management practices, and the rising demand for organic food mean that some formerly abandoned areas are now farmed again as wood pastures. However in places this change is hindered by legal impediments such as complicated legal ownership structures. Benefits of silvopastoral systems can include high quality food products and the preservation and maintenance of high natural and cultural values. Hence when granting subsidies to tree planting, planting only and exclusively native tree species and local fruit varieties indigenous in the forestry landscape should be permitted, while preserving the natural values of the grassland (Varga, 2014).

Figure 6. Presentation by Anna Varga and Tibor Nagy

Tibor Nagy, a Bakony farmer from Tűzkövesbörc Tanya (Hárskút-Pénzesgyőr, Veszprém county) explained the benefits and difficulties of renewed farming on a partly abandoned and afforested wood pasture (Figure 6). He pointed out that such husbandry required a 'man who lives on that land'. Key problems included subsidy system and the prohibition of grazing in forests. He described himself as a family farmer keeping only traditional and indigenous livestock breeds. He felt that a wood pasture-forest system provided good conditions for raising extensive traditional breeds and landraces throughout the year to produce high quality organic meat and dairy products (Nagy, 2014)

András Máté is an agricultural extension worker operating in the area between the Danube and the Tisza rivers. He explained the economic implications of wooded-pasture-forest systems and that their habitats were of high value. He highlighted the new payment scheme for the establishment of agroforestry systems in the greening measures of the common agricultural policy. He noted that the actual subsidy granted was very low compared with the possible costs. He also indicated that new agroforestry systems ought to be established with a view to preserve and maintain the "natural" landscape. This included the management of certain Natura 2000 forest types (such as forested steppe forests), and the reduction of the roughness factor of floodway forests. To guarantee the operation of silvopastoral systems, it would be advantageous to permit grazing in forests in certain cases, contingent on stringent controls. He also discussed the legal implications related to agroforestry systems (Máté, 2014).

5. Field visit

The participants of the workshop visited the Akasztó wood pasture in the neighbourhood of Bogyiszló community in the county Tolna. Leaders of the sheep division at the Bogyiszló Production and Sales Cooperative, Bálint Bajusz and Benjámin Pilisi, together with István Tóth (Mayor of Bogyiszló) welcomed the group of visitors under the roughly 300 years old ancient oak and wild pear trees in the pasture (Figure 7).

Figure 7. Bálint Bajusz, Benjámin Pilisi, and István Tóth welcomed the AGFORWARD workshop participants under the 300 years old trees of the wood pasture

The shepherds using the pasture highlighted the protective and shade providing function of the trees, and that the sheep ate both the acorns and wild pears. There are some people in the village who use the wild pears for making spirits, and the trees for grafting. They also reported that grazing was important on the more afforested, closed canopy parts in the floodplain forest where grazing suppressed weedy overgrowth.

One of the major problems in maintaining the woody pasture was the ageing and desiccation of oak trees and the lack of oak seedlings. One of the underlying causes of desiccation, besides ageing, was the dramatic change in water management of the pastureland. This was confirmed by the ethnographer Dr. Bertalan Andrásfalvy who is an expert on the landscape history of the floodplain along the river Danube. Dr. Andrásfalvy indicated that the pasture was regularly inundated by the water from the Danube only 50 years ago. The network of beds crossing the pasture created a former “fok” system. Land users in the area tried to plant young oak trees, without much success. Both the leaders and the local inhabitants in Bogyiszló are proud of the former village commons and the several hundred years old ancient trees found there.

6. Summary of plenary discussions

The following points summarise the discussion during the plenary session and identifies key ideas on the development of agroforestry systems, reflecting on some of the positive and negative aspects of silvopastoral systems.

Co-operation of groups: cooperation between various specialist fields and interest groups could help promote wood pastures. The groups could include sectors such as animal husbandry, forestry, rural development, nature conservation, water management, fruit production, production of medical herbs, cultural heritage, tourism, and organic farming. Decision making and supervisory bodies such as the Ministry of Rural Development (VM), Agricultural and Rural Development Agency (MVH), and National Food Chain Safety Agency (NÉBIH) could also be involved.

Legal issues: currently, the operation of silvopastoral systems is impeded by legal provisions, which in many cases prevent and prohibit forest grazing. Likewise the stakeholders felt that that agricultural subsidies under the single area payment scheme required woody vegetation to be removed.

Prohibited grazing in forests: keeping domesticated animals in an area qualified as a forest is a banned activity. The stakeholder group recommended lifting the full ban and instead sought regulation of forest grazing in accordance with a stringent licensing and control system. This solution may provide the opportunity to utilise enclosed woody spots, which spring up in pastures due to their abandonment, and it could also represent a cost effective and environmentally sound method of nature conservation management practices such as maintaining forested steppe forests under the Natura 2000 scheme, suppression of invasive plants, and reduction of the roughness factor in forested flood plain areas.

Use of native tree species: agroforestry should enrich both natural and cultural values. Hence the stakeholders present felt that agroforestry systems should only plant exclusively native tree species and local fruit varieties indigenous in the forestry landscape.

Stakeholders actively participated in the plenary session, giving their opinion on the system, describing their experiences and suggesting next steps. The content of these oral discussions matched the written responses given in the questionnaires summarised in the next section.

Ranking of positive and negative aspects of wood pastures

The participants were asked to complete a brief questionnaire which sought to highlight the key positive and negative aspects of the wood pasture systems. Eleven persons filled out this part of the questionnaire. One of those who did not rank aspects felt that “the form was too simplistic”. Only one participant completed the form in a consistent way, ranking the positive aspects as: 1. disease and weed control, 2. biodiversity and wildlife habitat, 3. runoff and flood control, 4. landscape aesthetics, 5. complexity of work. The negative aspects according to this respondent were ranked as: 1. Losses by predation, 2. Administrative burden, 3. Inspection of animals, 4. Disease and weed control, and 5. Labour. Other respondents did not rank the options.

7. Qualitative written responses

Fourteen respondents gave a written answer to the question: "what constraints and challenges could be addressed by changes to an existing agroforestry system or establishing a new agroforestry system". The key issues are outlined below:

Legal background

Half of the respondents stated that one of the most significant barriers to the establishment a new agroforestry system or change to an existing one is the recent legal background. It appears that agroforestry systems are a kind of 'ex-lex' (lawless state) since they are not defined clearly by the law (Marosvölgyi, 2014). Some respondents pointed out the following concerns:

- Grazing in forests is prohibited by the Hungarian Forestry law
- It is difficult for the farmers to interpret the law (i.e. can the land be classified forest or pasture? Is grazing prohibited or not?)

The majority of stakeholders claimed that national legislation makes proper operation of agroforestry systems impossible at the moment.

Land conversion and ownership of the land

Four respondents indicated that issues around land conversion and ownership can prevent changes to an existing agroforestry system or establishing a new agroforestry system, where for example:

- the area required for agroforestry systems (formerly pasture or wood pasture of the municipality) now belongs to many individual owners or has joint ownership
- there are a small number of animals in small farm systems
- unreasonable and uneconomical land conversion was carried out, therefore agroforestry systems have to be discontinued
- the relatively short duration of the grant related to new agroforestry systems may result in a land use that is not sustainable in the long term.

Conflict of interests

Two respondents mentioned the conflicts of interests between nature conservationists/foresters and farmers. Agroforestry systems may be detrimental to the interest of the forestry lobby groups.

Financial support, interest, knowledge

The lack of financial support or proper support schemes was mentioned in two responses. Another two persons indicated the lack of interest or confidence in agroforestry systems, the loss of knowledge and forgotten experiences of the past.

Compatibility, high initial costs, and risk of a lack of grazing

One respondent indicated that the compatibility of species and site conditions would be of outmost importance, but this is frequently not checked in practice. One respondent highlighted that expenses are increasing as agroforestry system progress, but this needs to be stabilized. Lastly one stakeholder mentioned that the lack of grazing and too high ratio of forest cover risks the maintenance of steppe communities.

8. Potential solution and research themes

Twelve respondents gave written responses to what were potential solutions or research themes. Unless indicated, each suggestion represents an individual respondent.

Potential solutions

- Review and modification of the legislative background (4 respondents).
- Introduction of new land-use categories (e.g. forest pasture) or change the definitions.
- Propagation and dissemination activities providing possibility for consulting (2 respondents).
- Resolve conflicts of interest.
- Direct payment not only for establishment but also long-term maintenance of system.
- To foster sustainable management measures.
- Settlement of land ownership e.g. by governmental support and control.

Proposed research themes

Eight respondents felt that research on **environmental** effects would be necessary. Each of the research themes below were suggested by one respondent:

- Crop combination tests and effects on biodiversity.
- Effect of grazing in different types of forest stands, under different site conditions, with different species to prevent problems with forest and wildlife management
- Effect of wild and domestic animals on poaching of the soil resulting from grazing pressure on riparian grazed forests; use of agroforestry systems against the diffusion of invasive plants on riparian areas
- To test different agroforestry technologies to find the ones really effective in the given conditions
- Impact of grazing on the production in different production sites, "forests" with, for example, different mixes of species, ages, tree regeneration, and wildlife
- How to integrate agroforestry systems effectively in given agricultural conditions
- Research to prevent biotic and abiotic damages
- Environmental impact assessment

Three respondents suggested **economic** research themes:

- One respondent mentioned the need for research on economic aspects in general.
- Another person highlighted that it is necessary to investigate the economics of agroforestry systems, particularly in areas of land conversation
- In one response the importance of the analysis of yield security from an economic and sustainability perspective was highlighted.

Conclusions of the qualitative written responses

The qualitative results suggest that many of the challenges to operating a successful agroforestry system are of a legal nature. Operational and management issues appeared to have a more secondary role. These legal barriers will remain unless there is change in legislation, but to date there has been no strong national lobby to champion such change.

9. Potential innovations

During the discussion with stakeholders some potential future innovations were suggested for Hungarian silvopastoral systems. These are expected to contribute to more effective system management and/or essential experiences useful for both farmers and researchers:

- Testing and find out the best practice for renewing abandoned, infilled wood-pastures
- Comparison of methods for tree regeneration on wood-pastures that includes the study of naturally regeneration, plantations and seedling selection during deforestation and testing of different protection methods for seedlings. This study should focus specifically on oak, wild fruit and ancient fruit species. Additionally it should identify the feasibility of protection methods: nursery shrubs, artificial thorny protectors, different type of fencing and tree guards.
- Testing the best practice and solution of forest grazing and pannage for enhancing woodland biodiversity; keeping traditional livestock species; managing sustainable silvopastoral system.
- Comparison of different grazing and herding technology for managing silvopastoral systems
- Testing consumer interest in products with a silvopastoral brand; focusing on products that help in enhancing high nature and cultural value agroforestry systems

10. Next steps

During the meeting, the stakeholder held the First National Agroforestry Forum of Hungary, within the frame of the AGFORWARD project. Stakeholders present at the plenary discussion during the workshop are the founding members of this network. Some stakeholders specially farmers and herders, could not take part in the workshop, but were willing to respond to the questionnaire, and expressed interest in becoming part of the network and involved in future collaborations for the promotion of traditional silvopastoral systems. The questionnaires will be sent or discussed this group and the data gathered will be integrated to inform future planning processes and reports.

Of the sixteen people who completed the questionnaire, fourteen indicated that they would be interested in supporting research related to wood pastures and all of them would like to receive information concerning the AGFORWARD project, and general or special issues on agroforestry systems. The Hungarian partners of the AGFORWARD project plan to actively engage stakeholders in the development of the project and promote close interaction among network members by disseminating relevant pieces of information in Hungarian language, and regularly organizing round-table discussions, farmers' meetings, and on-site demonstrations.

11. References

Bölöni, J., Molnár, Zs., Biró, M., Horváth, F. (2008). Distribution of the (semi-) natural habitats in Hungary II. Woodlands and shrublands. *Acta Botanica Hungarica* 50:107–148.

Bölöni, J., Szmorad, F., Varga, Z., Kun, A., Molnár, Zs., Bartha, D., Tímár, G., Varga, A. (2011). P45 – Fáslegelők, fáskaszálók, legelőerdők, gesztenyeligetek. [Wood pastures, wooded meadows and chestnut orchards] In: Bölöni, J., Molnár, Zs., Kun, A. (szerk.) Magyarország Élőhelyei. Vegetációtípusok leírása és határozója: ÁNÉR 2011.Vácrátót: MTA Ökológiai és Botanikai Kutatóintézet. pp. 359-362.

Marosvölgyi, B. (2014). Az agroerdészet múltja és jövőbeni lehetőségei Magyarországon. Előadás, I.Magyar Agroerdészeti Fórum, 2014, Fajsz. [Past, present and future of agroforestry in Hungary. Presentation. First National Agroforestry Forum and Stakeholder Meeting, 2014, Fajsz]

Máté, A. (2014). Tanácsadói és gazdálkodói tapasztalatok az agroerdészettel kapcsolatban. [Agro-consulting and farmer experiences about agroforestry management in Hungary] Előadás, I.Magyar Agroerdészeti Fórum, 2014, Fajsz.

Nagy,T. (2014). Egy hazai fás legelő üzemeltetési kérdései. [Questions and experiences of a wood pastures management in Hungary] Előadás, I.Magyar Agroerdészeti Fórum, 2014, Fajsz.

Varga, A. (2014). Fás legelő és legelőerdő rendszerek egykor, ma és jövőbeni lehetőségei Magyarországon. [Silvopastoral systems of Hungary: past, today and future possibilities] Előadás, I.Magyar Agroerdészeti Fórum, 2014, Fajsz.

Varga, A. et al (2014). Magyarországi fás legelők és legelőerdők jelenlegi helyzete. [Present situation of the Hungarian wood pastures] Poszter. Első Magyar Agroerdészeti Fórum, 2014. Aug. 29., Fajsz.

Varga, A., Bölöni, J. (2009). Erdei legeltetés, fáslegelők, legelőerdők tájtörténeti kutatása. [Landscape history of forest grazing and wood-pastures]. *Természetvédelmi Közlemények* 15: 68-79.

Varga, A., Molnár, Zs. (2014). The role of traditional ecological knowledge in managing wood-pastures. In: Hartel T., Plieninger, T. (ed.) (2014): European Wood-pastures in Transition.

Vityi, A. (2014). Az agroerdészet jelenlegi és potenciális szerepe az EU-ban. Az AGFORWARD projekt bemutatása. Előadás, I.Magyar Agroerdészeti Fórum, 2014, Fajsz. [Recent state and future potentials of Agroforestry in Europe. Introduction of AGFORWARD project. Presentations. First National Agroforestry Forum and Stakeholder Meeting, 2014, Fajsz]

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