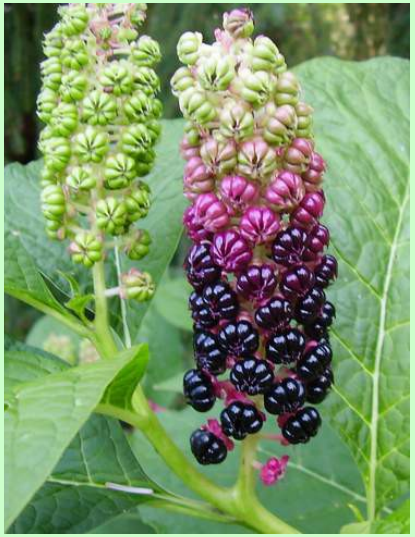



Account of European Workshop on Control and Eradication of Invasive Alien Plant Species

Ágnes Csiszár – Márton Korda

„Managing invasive plant and animal species in the protected areas of Central and Eastern Europe”

Workshop for experts, 02-06 May 2016
Hortobágy National Park, Hungary

European Workshop on Control and Eradication of Invasive Alien Plant Species

19-21 April 2016, Budapest, Hungary

Agenda

(final, updated on 14/04/2016)

19 April 2016		
10:00-11:00	**Registration & Coffee break**	
11:00-12:40	**Session I**	• Opening and welcome by Duna-Ipoly NP Directorate and WWF Hungary • Zoltán BOTTA-DUKÁT: Plant invasion: what can the science tell to nature conservation practice? • Arnaud MONTY: Monitoring the occurrence of invasive plants in different types of natural habitats • Mihai DOROFTEI, Silviu COVALIOV: Invasive ligneous species in Danube Delta 5 mins discussion after each presentation Chair: Katalin SIPOS
12:40-13:40	**Lunch break**	
13:40-15:40	**Session II**	• Myriam DUMORTIER: EU Policy on Invasive Alien Species • Lívia KISNÉ FODOR, Vera GÁSPÁR, Rozália ÉRDINÉ SZEKERES, Kinga BATA, Ildikó VARGA, Zoltán CZIRÁK & Olivér VÁCZI: Opportunities of implementing the EU Regulation on combating invasive alien species in Hungary • Ema GOJDIČOVÁ, Marta MÚTŇANOVÁ: Invasive plants and nature conservation - current situation in Slovakia • Alla ALEKSANYAN: Invasive alien plant species in Armenia: main threats for natural ecosystems 5 mins discussion after each presentation Chair: Zoltán BOTTA-DUKÁT
15:40-16:40	**Poster session & Coffee break**	
16:40-18:20	**Session III**	• Sonja DESNICA: Legal framework for invasive alien species in Croatia • Petra KUTLESA: Control and eradication of invasive alien plant species in Croatia - measures taken and planned • Nejc JOGAN: Invasive alien plants and the Ljubljana Municipality • Csaba VASZKÓ: Invasives from floodplains to energy • Ágnes ZÓLYOMI: Biogeographic Seminar process of the Pannonian, Steppic and Black Sea regions 5 mins discussion after each presentation Chair: Zoltán BOTTA-DUKÁT
19:30	**Social dinner in the city centre**	

20 April 2016		
9:00-11:00	**Session I**	• Eugenio GERVASINI: Presentation of the European Alien Species Information Network (EASIN)

ROSALIA Handbooks

Practical Experiences in Invasive Alien Plant Control

Duna-Ipoly National Park Directorate

European Workshop on Control and Eradication of Invasive Alien Plant Species

19-21 April 2016, Budapest, Hungary

Summary in numbers:

- 3 days
- >100 participants from 15 countries
- in 7 sessions 31 presentations

Main topics:

- Theoretical background
- Monitoring and occurrence of IAS
- Policy and regulation of IAS
- Control of eradication of IAS
- Database of IAS
- Knowledge and attitude towards invasive species

Recommendations of the European Workshop on Control and Eradication of Invasive Alien Plant Species

❖In relation to the 1143/2014 EU Regulation on the prevention and management of the introduction and spread of invasive alien species

We recommend to the European Commission and Member States:

-the expansion of the list of invasive alien species
-to differentiate the IAS lists according to their use, risk and management in Member States
-to set up an early warning system based on fixed criteria
-to set up a mapping system on spreading and monitoring
-to share their data

Recommendations of the European Workshop on Control and Eradication of Invasive Alien Plant Species

❖In relation to financing combatting IAS from EU and national sources

We recommend to the European Commission and Member States:

-to integrate the long term management of IAS to EU funding
-to integrate to national Rural Development Plan and Regional Development Programmes
-to develop a special LIFE fund for pilot projects against IAS
-not to support activities from EU funding that contribute the spread of IAS
-for those that cause the spread of IAS set up a specific fund to manage these invasive species ‚Polluters Pays Principle'

Recommendations of the European Workshop on Control and Eradication of Invasive Alien Plant Species

❖In relation to the need of adequate responses of inter-sectorial regulations

We recommend to the European Commission and Member States:

-to develop rules for the operation of linear establishments
-to transform of the agricultural and forestry measures
-to incorporate IAS control into the management systems as obligatory

❖Further recommendations:
-to collect and present the experiences in IAS control and providing public information
-to enable and promote cooperation with transboundary non-EU countries

Downloadable: http://www.dunaipoly.hu/uploads/2016-02/20160202200313-rosalia-handbook-ver2-6xtoafsq.pdf

DUNA-IPOLY NEMZETI PARK 1997

ROSALIA Handbooks

Practical Experiences in Invasive Alien Plant Control

Duna-Ipoly National Park Directorate

Summary of invasive plant control experiments

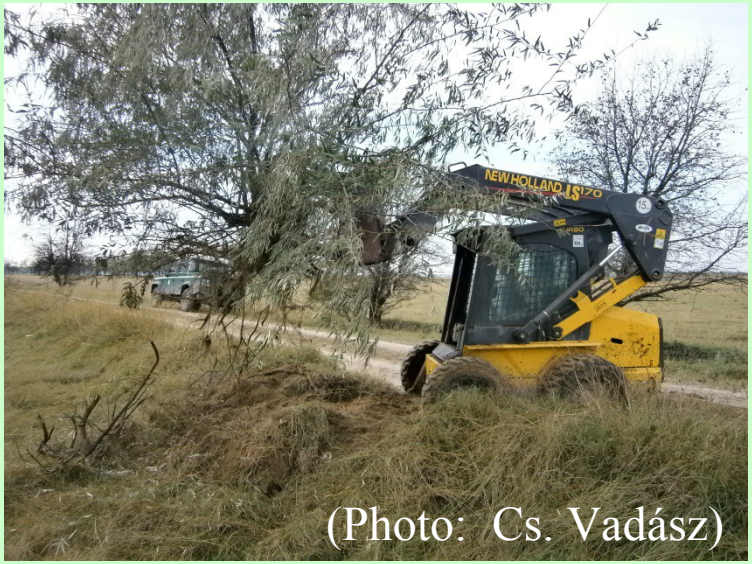
Non-chemical methods for controlling Russian olive (*Elaeagnus angustifolia*)

Method		Stand characteristics	Timing	Number of treatments	Effectiveness	Comments
Uprooting	With sand loader or tractor equipped with a lifting fork	For trunks of any diameter that can be lifted out with the loader (2-3.5 tons depending on the type of machine)	Anytime during the year except for the nesting period	1	Effective	– Under suitable soil conditions – Minimum root suckers can be observed, which can be treated in the following year with partial bark stripping method treatment
Felling and removal of sprouts		Any trunk diameter	Outside the vegetation period (all year if necessary)	The treatment needs to be repeated at least once	Ineffective	– Continuous resprouting – Chemical follow-up treatments needed

Results of chemical treatment experiments performed on Russian olive (*Elaeagnus angustifolia*)

Method	Treatment			Stand characteristics	Timing	Number of treatments	Effectiveness	Comments
	Chemical	Additive	Concentration					
Spraying	Medallon Premium	Nonit or Sil-wet Star and N-fertilizer	33–50 % vol.	Trunk diameter < 5 cm	September	1–2	Effective	– High weather sensitivity and high risk of drift
	Dominátor	Nonit	3.5%	shoots	In the vegetation period	1	Effective	– More effective in sunny and warm weather
Partial bark stripping	Medallon Premium Fozát 480 Figaro Clinic 480 SL NASA	–	100%	Trunk diameter < 8 cm	August–October	1–2	Effective	– Repeat treatment rarely necessary – 100% selective
Trunk injection	Medallon Premium Fozát 480 Figaro Clinic 480 SL NASA	–	100%	Trunk diameter > 8 cm	In the vegetation period	1–2	Effective	– Most effective from end of August to September
					August–October	1–2	Effective	– 1 drill hole per every 5 cm of trunk girth – 100% selective
Cut stump treatment	Medallon Premium	–	100%	Any trunk diameter	In the vegetation period	2	Effective	– Higher effectiveness if mixed with diesel oil
		Oil emulsion		Trunk diameter > 5 cm	September	1	Moderate	– Cost effective – Medium level of weather sensitivity and risk of drift

Techniques for Woody Plant Control



Non-chemical methods

❖Manual removal:

Prunus serotina, Acer negundo, Fraxinus pennsylvanica, Celtis occidentalis

–seedlings up to 1-1,5 m

Amorpha fruticosa

–collecting for firewood

–autumn – winter

–regularly every year

❖Uprooting:

Elaeagnus angustifolia

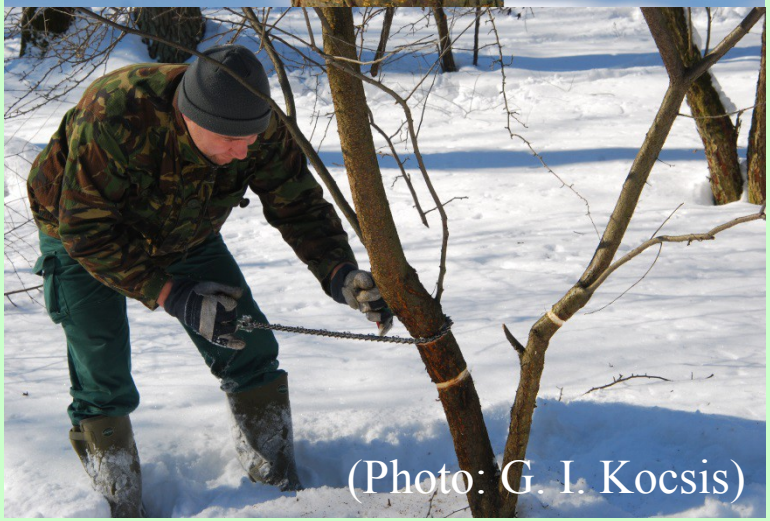
–all sized trunk

–by loader or tractor with lifting fork

–except nesting period

–under good soil conditions

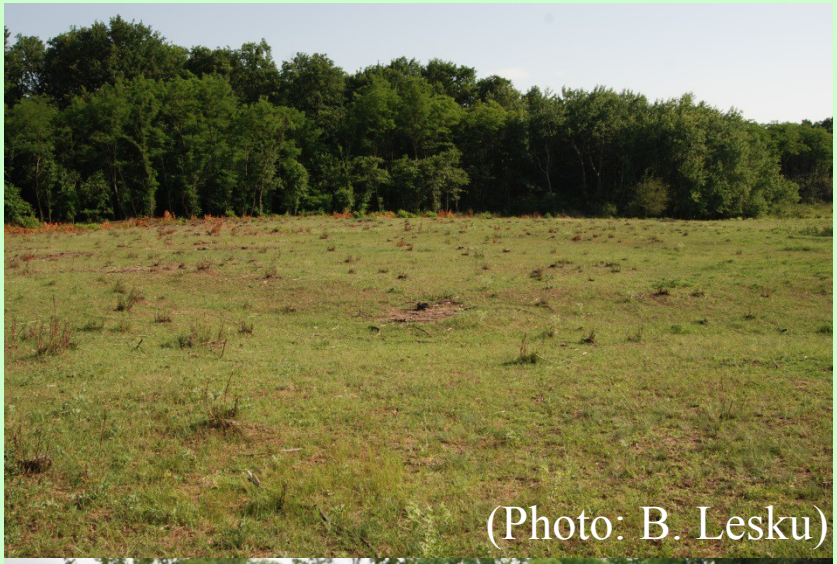
Techniques for Woody Plant Control



❖Felling and sprout removal:
Acer negundo, Fraxinus pennsylvanica, Celtis occidentalis, Elaeagnus angustifolia
–all trunk diameter
–without chemical sprout control
ineffective

❖Girdling:
Prunus serotina
–trunk diameter 1-20 cm
–by chain saw or machete
–2 rings with double chains
–15-20 cm wide girdle
–lower trunk part can survive

Techniques for Woody Plant Control



❖Grazing:

Robinia pseudoacacia

–young sprouts only

–by sheep and cattle

–continuously at least 2 years

Amorpha fruticosa

–1-2-year-old stands

–by grey cattle

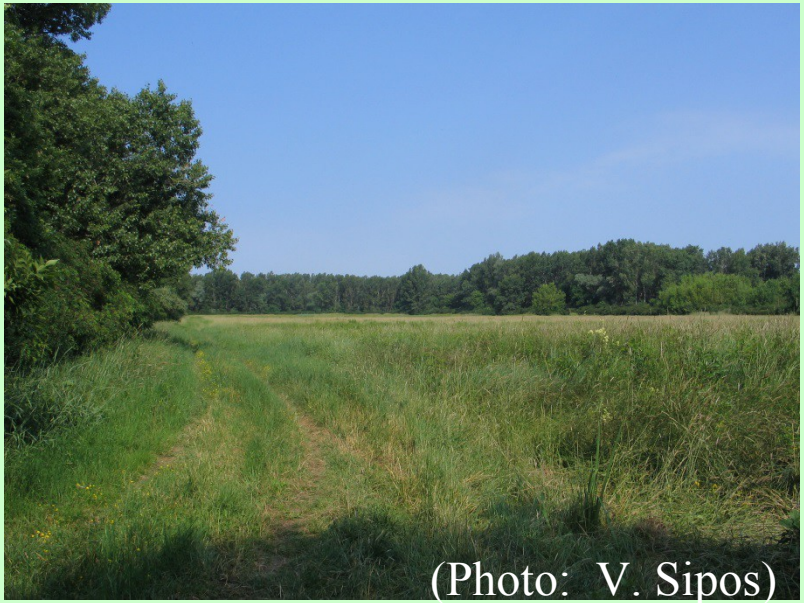
–April -November

–mowing at the end of grazing

–after 2-3 years turn into grassland

Techniques for Woody Plant Control

❖Flail mowing followed by grazing:
Amorpha fruticosa
–dense, tall stands
–by grey cattle, goat, donkey, horse, Hungarian pied cow
–flail mowing twice, grazing: 3-5 times
–after 4-5 years turn into grassland



❖Habitat reconstruction:
Amorpha fruticosa
–flail mowing + afforestation
–tree species change
–felling, bundling, cut stump treatment, root raking, afforestation

Techniques for Woody Plant Control


(Photo: G. I. Kocsis)

Chemical methods

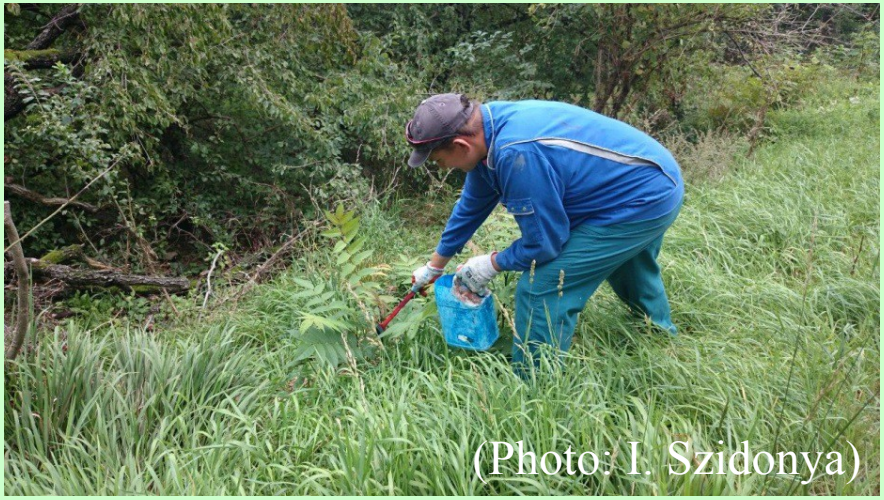
- ❖Spraying:
  Ailanthus altissima, Prunus serotina, Acer negundo, Robinia pseudoacacia, Fraxinus pennsylvanica, Celtis occidentalis, Elaeagnus angustifolia
  –seedlings, sprouts
  –herbicides + fertilizer + surfactant
  –1-2-(3) treatments in vegetation period
  –weather sensitive
  –high drift risk


(Photo: A. Csór)


(Photo: I. Nagy)


(Photo: Z. Bajor)

Techniques for Woody Plant Control

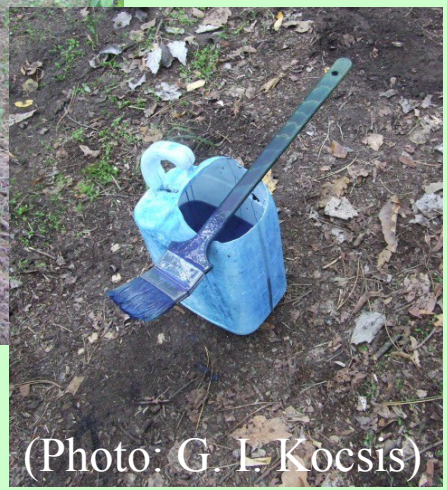

(Photo: I. Szidonya)


(Photo: G. Takács)

❖Wiping herbicides:
Ailanthus altissima
–seedlings, sprouts
–glyphosate herbicides
–1-3 treatments
–in warm, sunny weather

❖Partial bark stripping:
Ailanthus altissima, Prunus serotina, Acer negundo, Robinia pseudoacacia, Fraxinus pennsylvanica, Celtis occidentalis, Elaeagnus angustifolia
–all trunk sizes (< 8 cm)
–glyphosate herbicides
–1-2 treatments
–100 % selective
–repeating rarely necessary

Techniques for Woody Plant Control



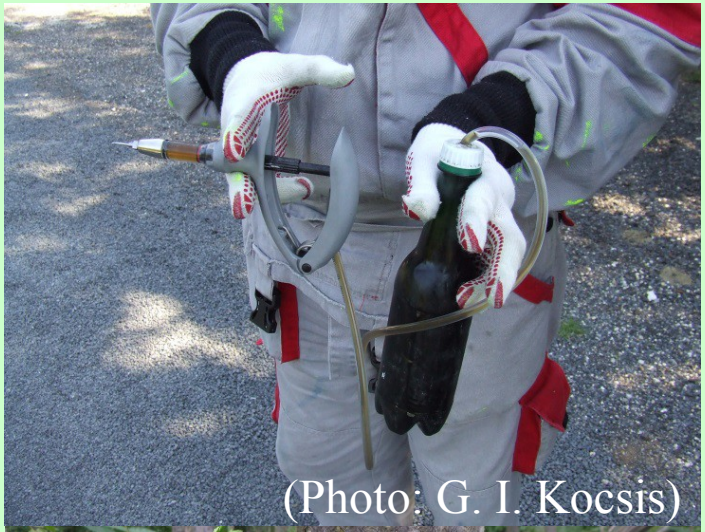
(Photo: G. I. Kocsis)

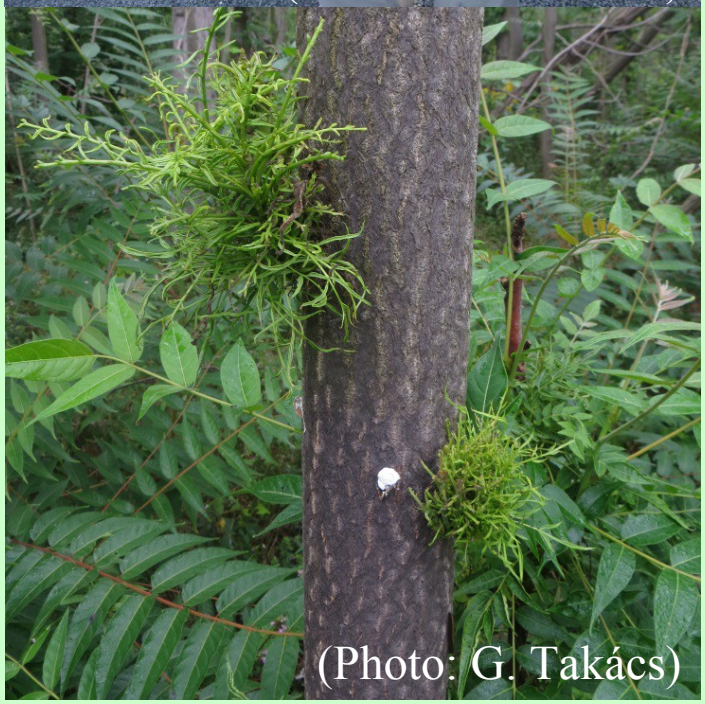
- Bark treatment without cut:

Ailanthus altissima, Prunus serotina, Acer negundo, Fraxinus pennsylvanica, Celtis occidentalis

- young trees with thin bark
- glyphosate herbicides + oil emulsion
- 1-2-(3) treatments: August-October
- 10-15 cm strip with 40 cm width
- 100 % selective

Techniques for Woody Plant Control

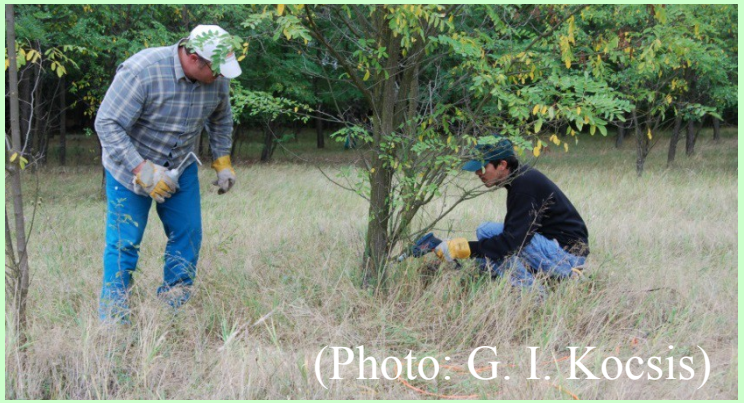

(Photo: G. I. Kocsis)


(Photo: G. Takács)

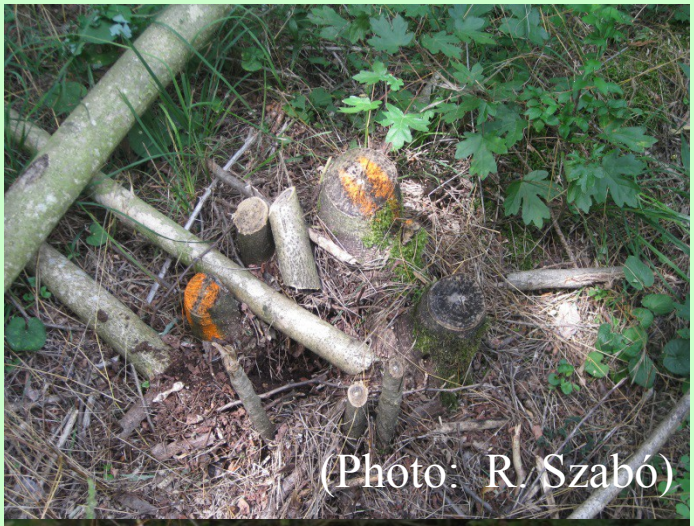
- Trunk injection:

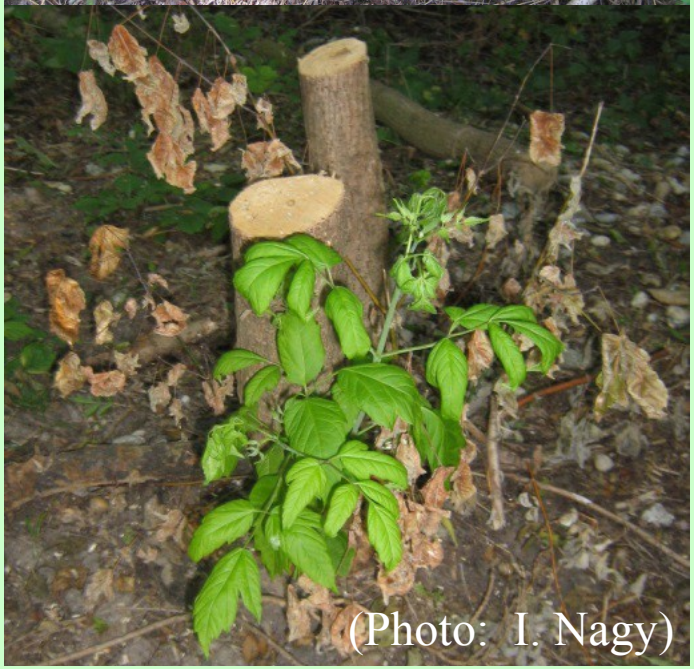
Ailanthus altissima, Prunus serotina, Acer negundo, Robinia pseudoacacia, Fraxinus pennsylvanica, Celtis occidentalis, Elaeagnus angustifolia

- trunk diameter >5 cm
- 1 drill hole / 5 cm of girth
- 1 ml solution / drill hole
- glyphosate herbicides
- 1-(2) treatments: August-October
- 100 % selective
- time consuming, high living labour


(Photo: G. I. Kocsis)

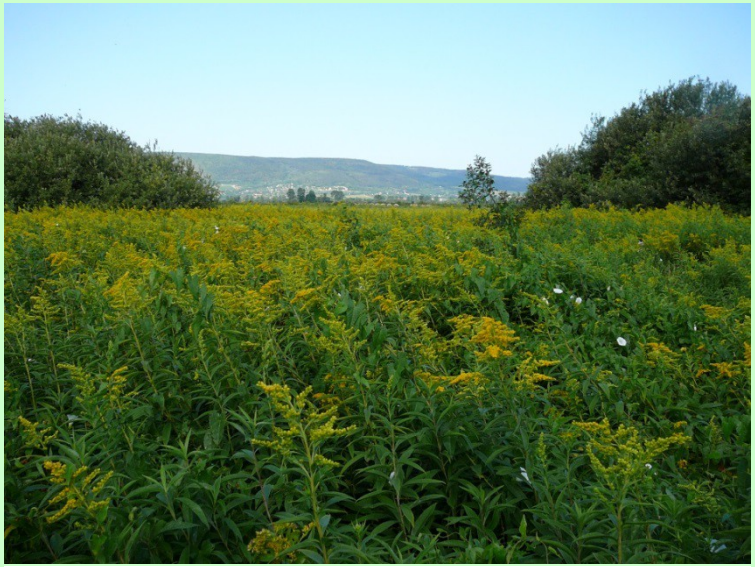
Techniques for Woody Plant Control


(Photo: R. Szabó)


(Photo: I. Nagy)

❖Cut stump treatment:
Ailanthus altissima, Prunus serotina, Acer negundo, Robinia pseudoacacia, Fraxinus pennsylvanica, Celtis occidentalis, Elaeagnus angustifolia
–trunk diameter >5 cm
–glyphosate herbicides + colouring
–1-(2) treatments: June-October
–sprouts may spring up
–stump edges carefully treated
–rapid herbicide treatment after cutting
–medium level of weather sensitivity and drift risk

Techniques for Herbaceous Plant Control



Non-chemical methods:

Solidago gigantea, S. canadensis

❖Flail mowing:

–homogenous and mixed stands

–1-2-3 treatments

–for 2-3 years regularly

❖Flail mowing followed by grazing:

–homogenous stands

–by grey cattle, buffalo

–effective by regularly grazing

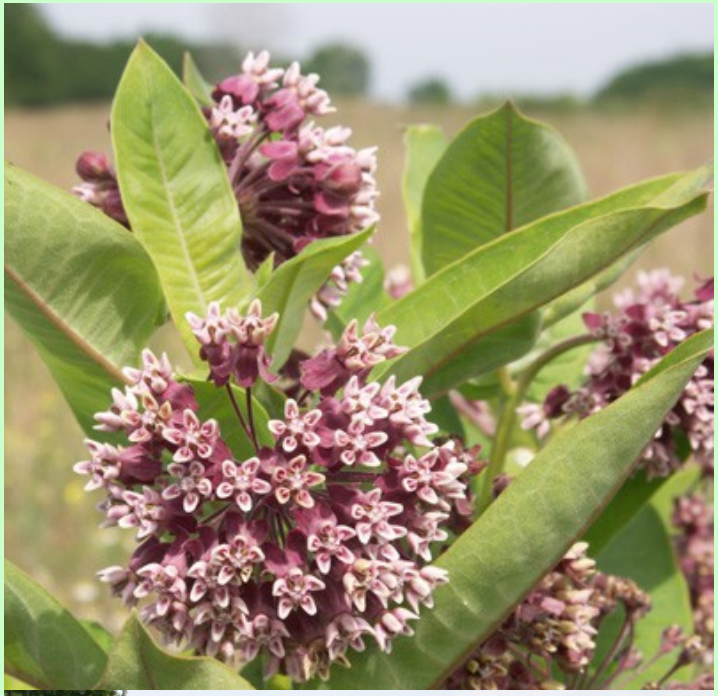
❖Inundation:

–homogenous stands

–20-60 cm deep water

–effective habitat transformation

Techniques for Herbaceous Plant Control



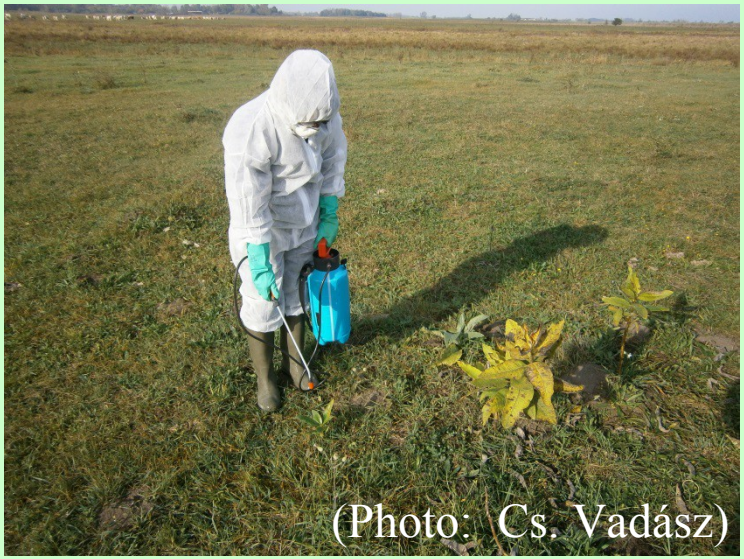
Non-chemical methods

- ❖Manual removal:
  Asclepias syriaca
  –to inhibit seed dispersal: effective
  –to eradicate: ineffective

- ❖Mowing, flail mowing:
  Asclepias syriaca
  –to inhibit seed dispersal: effective
  –to eradicate: ineffective

- ❖Grazing:
  Asclepias syriaca
  –small patches
  –by goat and sheep
  –proved effective once

Techniques for Herbaceous Plant Control



Chemical methods

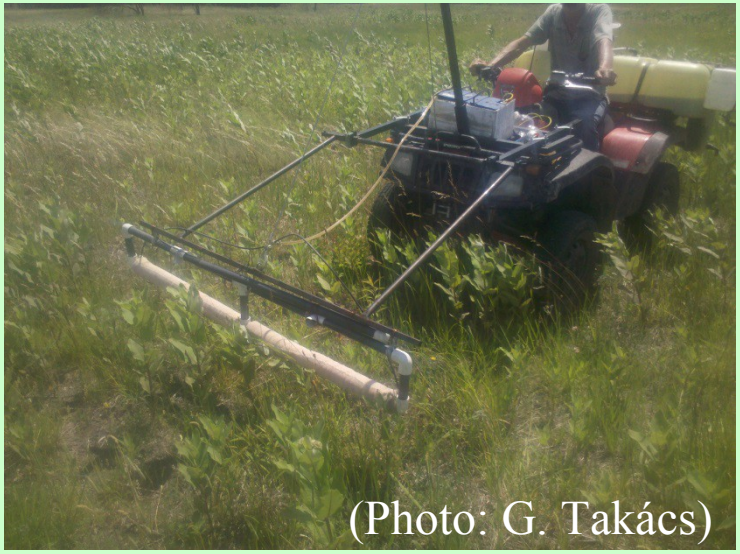
- ❖Spraying:

Asclepias syriaca

–different sized patches
–before flowering
–different based herbicides
–1-2 treatments
–in the morning hours
–necessary time: 3 years

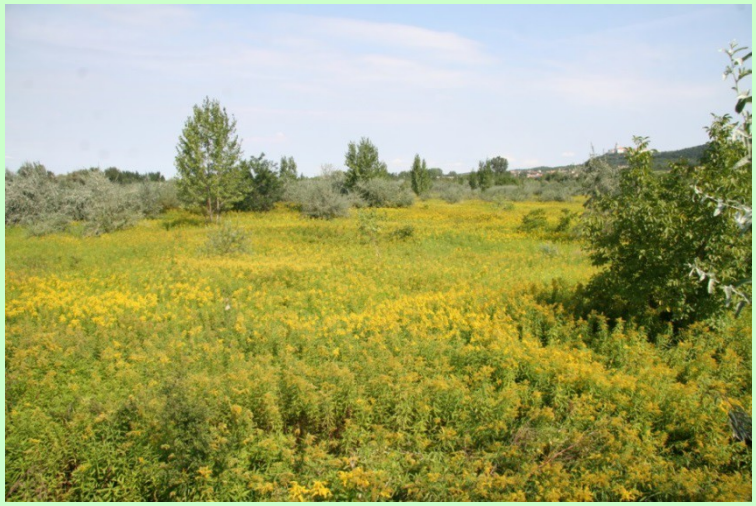
Techniques for Herbaceous Plant Control

❖Applying herbicide on leaves:
Asclepias syriaca
–sporadically occurring plants
–before flowering
–glyphosate herbicides
–1-(2) treatments
–high drift risk



❖Mechanical application by quad:
Asclepias syriaca
–any type of stands
–before flowering
–glyphosate herbicides
–lot of additional damage

Techniques for Herbaceous Plant Control



Chemical methods

- ❖Spraying:

Solidago gigantea, S. canadensis

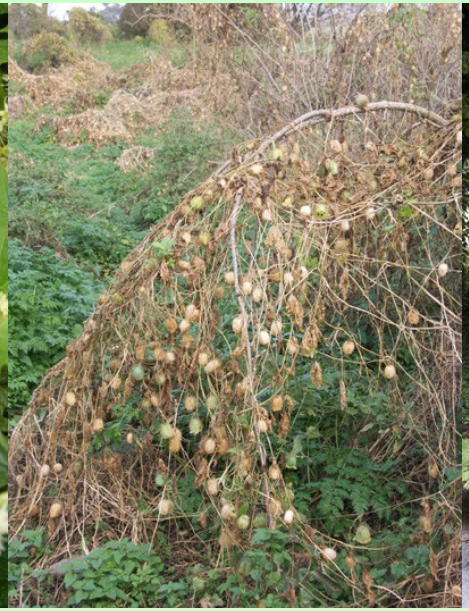
- –different sized patches
- –before flowering
- –glyphosate herbicides
- –1-2 treatments

Combined methods

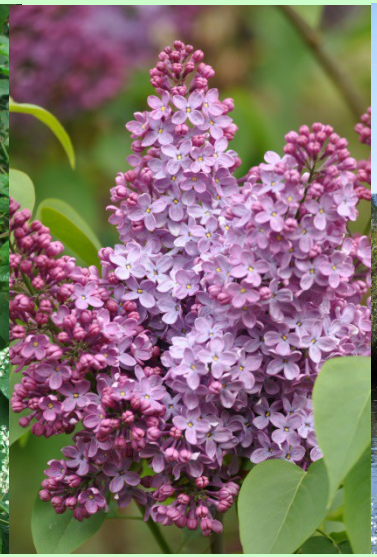
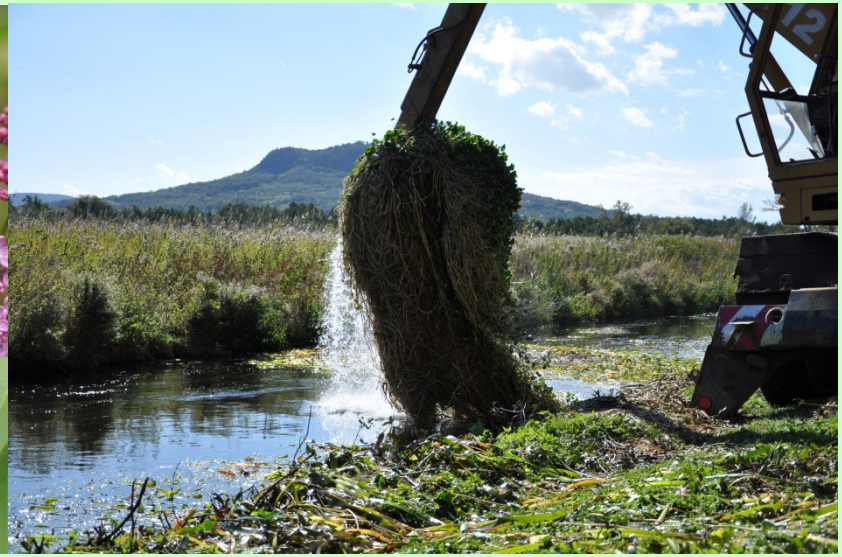
- ❖Mowing + spraying + grazing:

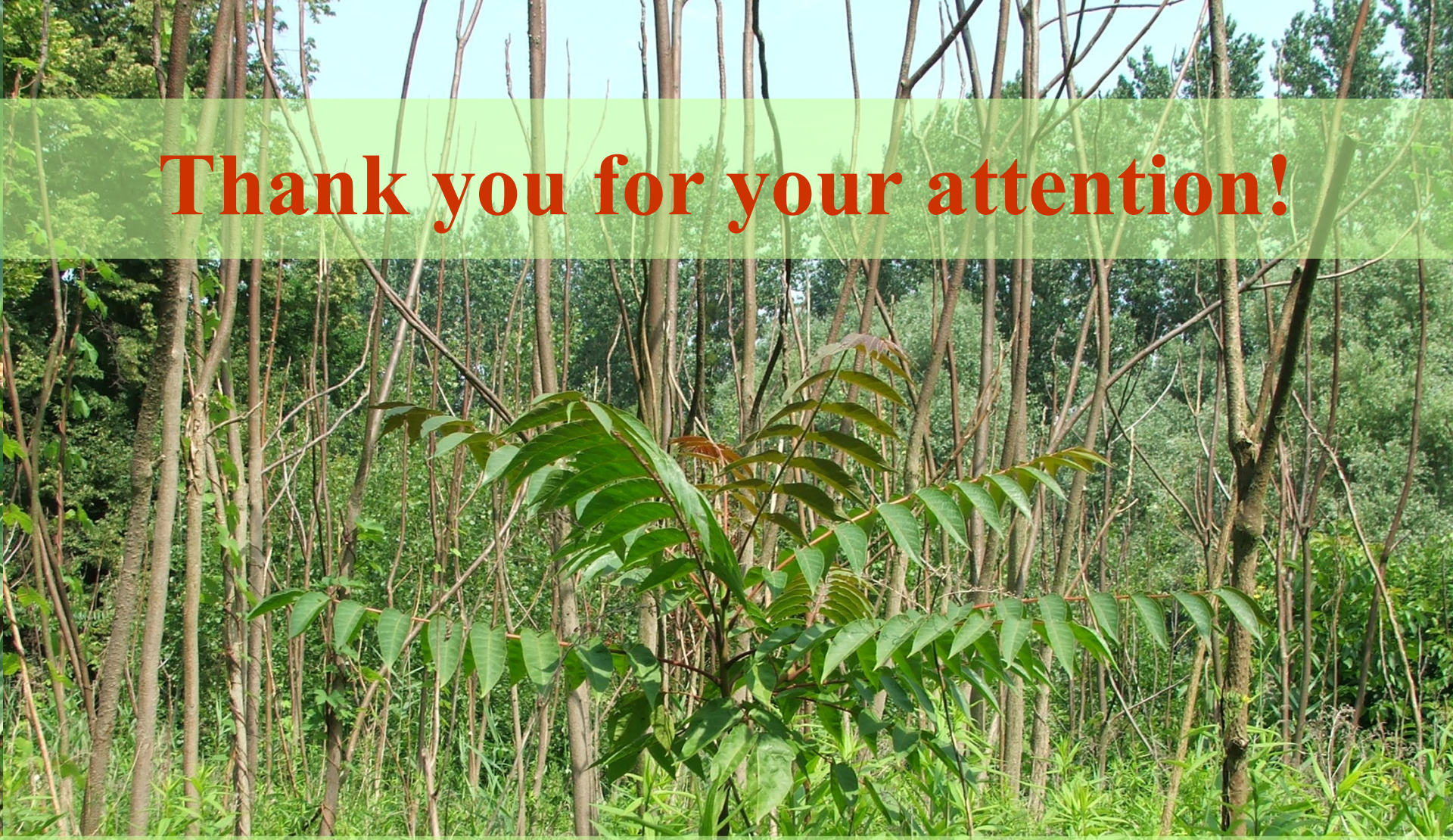
Solidago gigantea, S. canadensis

- –different stands
- –before flowering
- –glyphosate herbicides
- –1-2 treatments

Further species and future tasks



Thank you for your attention!

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