

Weeds in Forestry of SERBIA

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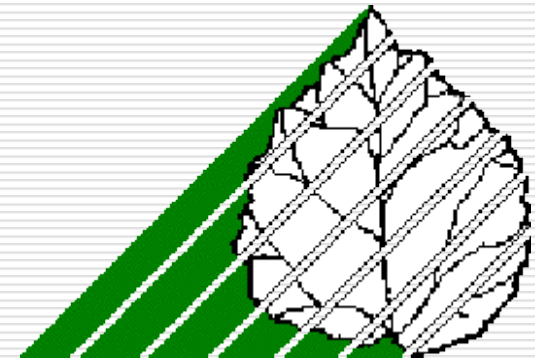
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- **Total area: 8 840 000 ha**
 - **Agricultural area: 5 734 000 ha**
 - **Forest area: 2 413 000 ha**
 - **Urban / other area: 693 000 ha**
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· **Total area of forests and forest land in Serbia is 26.7% which is somewhat lower than the average percent forest cover in Europe, which is 29% and in the world 30.3%.**

· **Spatial Plan of the Republic of Serbia predicts the increase of forest cover percentage till 2050 from the present 26.7% of the territory under forest to 41.4%.**

· **In the forest structure in Serbia broadleaves account for 90.7% (beech forests account for 27.6%, oak forests 24.6%, other hard broadleaves 6.0%, poplars 1.9%, other soft broadleaves 0.6% and mixed soft and hard broadleaf stands 30%) conifers 6% and mixed forests of broadleaves and conifers 3.3%.**

· Thanks to wide inter-row spaces and open canopy in the early phases of development, forest nurseries represent ideal places for the development of floristically rich and diverse weed flora.



- In the Institute of Lowland Forestry and Environment has lately been working on the mapping of weeds in forest area.***
 - Especially attention is paid to research the efficiency and selectiveness of herbicides in forest nurseries and plantations.***
 - The research is focused on the herbicides which are characterised by favourable eco-toxicological properties and are not hazardous to the environment.***
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- **Weed mapping was conducted on the territory of Vojvodina in the period from 2006 to 2010.**
- **Abundance of the species in the forest nurseries and plantations, was determined by Brauen-Blanquet scale.**
- **During this period at different locations was conducted a study to investigate the weeds in nurseries and plantations in the Vojvodna.**



- **During the research identified large number of weed species**
- **Dominant weeds in forest nurseries and plantations:**
- **Grass:** *Sorghum halepense*, *Cynodon dactylon*, *Alopecurus myosuroides*,
Digitaria sanguinalis, *Echinochloa crus-galli*, *Poa annua*, *Setaria spp.*
- **Broadleaf:** *Amaranthus retroflexus*, *Ambrosia artemisiifolia*, *Asclepias syriaca*, *Stenactis annua*, *Chenopodium album*, *Cirsium arvense*,
Convolvulus arvensis, *Erigeron canadensis*, *Datura stramonium*, *Galium aparine*, *Solanum nigrum*, *Polygonum spp.*



EMERGENT MACROPHYTES IN IRRIGATION AND DRAINAGE CHANNELS (PROVINCE OF VOJVODINA)

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In the majority of hydro system channels presence of emergent macrophytes obstructs water flow, thus influencing negatively on the function of this system. In our country, as well as in Europe, special problem represent emergent weeds such as *Juncus effuses* L., *Carex hirta* L., *Phragmites communis* Trin., *Scirpus lacustris* L., *Scirpus maritimus* L., *Typha angustifolia* L. and *Typha latifolia* L. (Barret and Robson, 1974., Eaton *et al.* 1981., Winfield and De Ath, 1985., Arsenovic *et al.* 1986., Siriworakul and Benyasut, 1992., Konstantinovic *et al.* 1998.).



Due to neglecting of weed control, at the majority of the hydro system channels the occurrence of woody weed species has been recorded. Among these, the most frequent are *Prunus spinosa*, *Robinia pseudoacacia*, *Amorpha fruticosa*, *Sambucus nigra*, *Salix alba*, *Acer campestre*, *Crataegus oxyacanta* and other species from the family *Rosaceae*.



Dominant broad-leaved weed species on channel banks and sides are the following: *Amaranthus retroflexus*, *Erigeron canadensis*, *Ambrosia artemisiifolia*, *Daucus carota*, *Cirsium arvense*, *Convolvulus arvensis*, and perennial grass species *Sorghum halepense*.



Of submerged weeds the most frequent are the following: *Myriophyllum spicatum*, *Ceratophyllum demersum*, *Ranunculus aquaticus*, *Potamogeton lucens*, *Potamogeton perfoliatus* and *Potamogeton pectinatus*. Frequent floating hydrophytes are: *Lemna trisulca*, *Lemna minor*, *Lemna gibba*, *Salvinia natans*, *Hydrocharis morsus-ranae*, ~~*Nymphaea alba*, *Nuphar luteum* and *Trapa longicarpa*~~.



In the channel at locality Bačka Palanka mass occurrence of invasive weed species *Asclepias syriaca*, has been determined. Characteristics of this weed species, as well as all invasive ones are fast spreading in new ecological aeriels, high generative capability, and wide ecological spectrum that enable them to inhabit and spread in new areas. *Aslepias syriaca* L., originates from the west part of the Northern America where it represents one of the most widespread weeds.

