EXAMINATION OF THE WEED FLORA OF RUDER HABITATS AND THE POSSIBILITY OF SUPPRESSION WITH HERBICIDES

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Abstract: Ruderal flora, as well as the vegetation that flora forms, represent an extremely dynamic floristic-vegetation complex and arean integral part of the most immediate living and working environment of human. It is formed and developed mainly in human settlements, as well as in the other anthropogenic environments that are occasionally or permanently under direct or indirect influence of various forms of human activity. Ruderal vegetation is found not only directly around the settlements, but also around all urban and accompanying facilities: along roads, paths and fences around houses, yards, walls and roofs, in avenues, on ruins, construction sites, landfills, along railway tracks, road and defense embankments, on wet and nitrified banks of rivers, near human settlements, in abandoned lawns, on the street walks with sandy areas, cemeteries, in degraded pastures, forests, etc. This essay presents the distribution and representation of economically harmful, invasive and quarantine weed species (*Abutilon theophrasti*, *Agropyrumrepens*, *Amaranthusretroflexus*, *Calystegiasepium*, *Cirsiumarvense*, *Chenopodium album*, *Chenopodiumhybridum*, *Convolvulus arvensis*, *Cynodondactylon*, *Daturastramonium*, *Sonchusarvensis*, *Sorghum halepense*, *Xanthium strumarium*...) at ten sites in the Nisava district. The assessment of species representation was done in two shootings (May and August) according to scale 1-4. The proper selection of herbicides depends, in a large extent, on the presence of dominant weed species and on the time of application.

Keywords: weed flora, ruderal habitats, distribution, herbicides.

1. INTRODUCTION

Ruderal flora, as well as the vegetation that flora forms, represent an extremely dynamic floristic-vegetation complex and arean integral part of the most immediate living and working environment of human. It is formed and developed mainly in human settlements, as well as in the other anthropogenic environments that are occasionally or permanently under direct or indirect influence of various forms of human activity. Ruderal vegetation is found not only directly around the settlements, but also around all urban and accompanying facilities: along roads, paths and fences around houses, yards, walls and roofs, in avenues, on ruins, construction sites, landfills, along railway tracks, road and defense embankments, on wet and nitrified banks of rivers, near human settlements, in abandoned lawns, on the street walks with sandy areas, cemeteries, in degraded pastures, forests, etc.

2. MATERIAL AND METHODES

The experiment was set up in ten locations in the Nisava district. The distribution and representation of economically harmful, invasive and quarantine Weed species (*Abutilon theophrasti*, *Agropyrumrepens*, *Amaranthusretroflexus*, *Calystegiasepium*, *Cirsiumarvense*, *Chenopodium album*, *Chenopodiumhybridum*, *Convolvulus arvensis*, *Cynodondactylon*, *Daturastramonium*, *Sonchusarvensis*, *Sorghum halepense*, *Xanthium strumarium*) have been observed. The assessment of species representation was done in two shootings (May and August) according to scale 1-4.

3. RESULTS OF WORK

At all ten sites, the presence of the following weeds was noticed: *Abutilon theophrasti*, *Agropyrum repens*, *Amaranthus retroflexus*, *Calystegia sepium*, *Cirsium arvense*, *Chenopodium album*, *Chenopodium hybridum*, *Convolvulus arvensis*, *Cynodon dactylon*, *Datura stramonium*, *Sonchus arvensis*, *Sorghum halepense*, *Xanthium strumarium*, and the assessment of representation according to scale 1-4 is given in Table 1.

Table 1. Representation of weeds according to scale 1-4 and according to phases of weeds growth

Weed	Evaluation of representation	Phase of weed development s-small plant a-adult plant
<i>Abutilon theophrasti</i>	2	s-a
<i>Agropyrum repens</i>	3	s-a
<i>Amaranthus retroflexus</i>	3	s-a
<i>Calystegia sepium</i>	1	s-a
<i>Cirsium arvense</i>	4	s-a
<i>Chenopodium album</i>	3	s-a
<i>Chenopodium hybridum</i>	1	s-a
<i>Convolvulus arvensis</i>	2	s-a
<i>Cynodon dactylon</i>	3	s-a
<i>Datura stramonium</i>	2	s-a
<i>Sonchus arvensis</i>	2	s-a
<i>Sorghum halepense</i>	2	s-a
<i>Xanthium strumarium</i>	4	s-a

The appropriate choice of herbicides, mostly depends on the presence of dominant weed species as well as of the time of their use. Herbicides of weed suppression in ruderal habitats are shown in Table 2.

Table 2. Herbicides of weed suppression in ruderal habitats

Weed	Herbicides	
	Destroys weed great	Destroys weed well
<i>Abutilon theophrasti</i>	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifoheh), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach, Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul)
<i>Agropyrum repens</i>	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifoheh), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach, Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul)

Amaranthusretroflexus	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach,Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul)
Calystegiasepium	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach,Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul) Also herbicides used at crops can be used, but in bigger quantity
Cirsium arvense	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach,Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul) Also herbicides used at crops can be used, but in bigger quantity
Chenopodium album Chenopodium hybridum	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach,Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul) Also herbicides used at crops can be used, but in bigger quantity
Convolvulus arvensis	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach,Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul) Also herbicides used at crops can be used, but in bigger quantity
Cynodon dactylon	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach,Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul) Also herbicides used at crops can be used, but in bigger quantity
Datura stramonium	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach,Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul) Also herbicides used at crops can be used, but in bigger quantity

Sonchus arvensis	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach, Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul) Also herbicides used at crops can be used, but in bigger quantity
Sorghum halepense	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach, Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul) Also herbicides used at crops can be used, but in bigger quantity
Xanthium strumarium	glifosat (Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem), glufosinatamonijum (Basta-15, Rugby, Cunami), dikvat (Dessicach, Diqua, Galop)	2,4-D (Maton, Monosanherbi, Velox, Mustang, Esteron, Lentemul) Also herbicides used at crops can be used, but in bigger quantity

4. CONCLUSION

According to obtained and shown results, the most frequent weeds on ruderal habitats at ten sites in Nisava district are *Abutilon theophrasti*, *Agropyrum repens*, *Amaranthus retroflexus*, *Calystegia sepium*, *Cirsium arvense*, *Chenopodium album*, *Chenopodium hybridum*, *Convolvulus arvensis*, *Cynodon dactylon*, *Datura stramonium*, *Sonchus arvensis*, *Sorghum halepense*, *Xanthium strumarium* with a score of 1-4. Present weeds on ruderal habitats are in the phase of the pony and in the phase of adult plants.

Chemical agents that suppress above mentioned weeds are based on active substance Glyphosate with Glifosat, Glifosat SL-480, Glifomark, Pirokor, Roundup, Bingo, Cosmic, Apsolut, Glifohem preparations, and active substance glufosinate ammonium with Basta-15, Rugby and Cunamipreparations.

5. LITERATURE

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