



## TYPES, QUANTITY AND EXTENT OF DISTRIBUTION OF CEREAL WEEDS AMONG INDIGO (INDIGOFERA TINCTORIA)

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### ABSTRACT

*The Weeds reduce the productivity of the agricultural cultures, worsen the quality to product. Under average sowing productivity falls on 20-30%, but under strong in general possible not to get the harvests.*

It is planned to grow more than 110,000 tons of food products out of repeated crops sown on an area of more than 12,000 hectares in our republic. This, in turn, will serve as an important factor in ensuring affordability and price stability in all markets of the region in the fall of this year and in the winter and spring months of next year. But in recent years, due to the excessive growth of weeds among agricultural lands, they are affected by various diseases, insects and pests. The main reasons for this are the edges of fields where crops are sown, roadsides, large and small ditches along the banks of ditches, field edges, uncultivated lands, irrigation fountains, low-quality juices, local manure, which is brought in without composting, spreading weed seeds on the ground and without cultivation between crops. In this case, in addition to agrotechnical measures, if immediate chemical control measures are not taken on the fields, in 2-3 years the state of the fields may become unsuitable for sowing crops. Weeds interfere with normal plant growth from germination to harvest. They effectively use water, light, nutrients and other environmental factors, reduce the rate of absorption of nutrients contained in fertilizers by 30-40%, reduce crop yields by 20-50%, spoil the quality of cultivated crops, cause the spread of various diseases, insects and pests. Thick weeds cover cultivated fields, increasing labor and reducing labor productivity.

Therefore, it is important to Picht them. To combat them, it is very important to know their type, quantity, level of occurrence, biology and classification.

Weeds found in fields sown with indigo on saline soils of the Khorezm region

### Annual prickly weeds

Wild oat - *Avena fatua* L. grows up to 120 cm in height, the stem is straight, the ear is round, the seeds germinate in March, it is found in all irrigated fields (Pic. 1-2).



**Wild oat - *Avena fatua* L - (Picture 1-2)**

Foxtail millet - *Setaria glauca* is an annual grassy weed that germinates after the temperature rises above 14 0C. Height 40-50 cm. Grows up to The ability of the seed to germinate reaches 10-15 years. The guest dog mainly pollutes the soil with its seeds, per 1 sq.m. On average, there are 3-5 pieces on the site. Germinates after the air temperature exceeds 15 0C. The rhizome is strong, one bush produces up to 5000 seeds, the seeds quickly crumble after ripening (Pic. 3-4).



**Foxtail millet - *Setaria glauca* (Picture 3-4)**

Barnyard grass - *Echinochloa crus-galli* (L.) is an annual dicotyledon weed found mainly in irrigated, sometimes dry lands. Grows up to 100 cm tall, blooms and seeds in July-September. Turmeric reproduces only by seeds. Seeds do not lose their germination for 8-10 years, 1 sq.m. yields up to 6,000 seeds per field on average (Pic. 5-6).



**Barnyard grass - *Echinochloa crus-galli* (L.) (Picture 5-6)**

Mouse barley - *Hordeum Murinum* L is an annual grassy weed. The height of the stem reaches 80-90 cm. During the ripening period, wild barley seeds of type 1 pollute the soil and grain, mainly among grain crops (Pic. 7-8).



**Mouse barley — *Hordeum murinum* L (Picture 7-8)**

Blackgrass - *Alopecurus myosuroides* Huds. annual or overwintering herb. The growth period lasts from autumn to spring, the stem grows upright, the height reaches 60 cm. One foxtail bush produces an average of up to 200 seeds. Ripening Grain seeds ripen during or after harvest. When harvesting grain, it pollutes grain and soil (Pic. 9-10).



**Black-grass — *Alopecurus myosuroides* Huds. (Picture 9-10)**

**Perennial thorny weeds**

Purple nutsedge - *Cyperus rotundus* L. is a perennial weed found predominantly in irrigated lands. Flowering and fruiting begins in the second half of summer, propagated by seeds and buds. It is found in weeds, cotton, vegetables and other crops. On average, 3-5 pieces are found per 1 sq.m (Pic. 11-12).



**Purple nutsedge - *Cyperus rotundus* L. (Picture 11-12)**

Bermuda grass - *Cynodon dactylon* is found mainly in irrigated land. Its height is 20-30 cm. It blooms in June-July, bears fruit in August-September. Dirt pollutes the soil with seeds and roots. On average, 3-4 pieces are found per 1 m<sup>2</sup> of area (Pic. 13-14).



**Bermuda grass - *Cynodon dactylon* (Picture 13-14)**

Johnson grass - *Sorghum halepense* L. Perennial grass weed. Mainly found in irrigated and semi-arid lands, rhizomatous weed, emerges in March-April and propagates by rhizomes and rhizomes. Its perennial thick rhizome is located at a depth of 10-40 cm under the soil. Its height is 15-20 cm. It blooms from June to autumn, the fruits ripen in July. Gumai grows until evening frosts. One bush can produce up to 2000 seeds. On average, 3-4 pieces are found per 1 sq.m (Pic. 15-16).



**Johnson grass - *Sorghum halepense* L. (Picture 15-16)**

Control measures: it is recommended to use herbicides at an air temperature of 15-20°C, using a working solution of 100-300 l/ha.

a) Preventive measures. First of all, it is necessary to prevent the spread of weeds as much as possible. In this case, it is necessary to prevent the spread of weed seeds through various sources. To do this, in early spring and before the weed seeds ripen, it is necessary to clean the edges of the fields and ditches and prevent them from falling through the water, to prevent the spread of unripe manure by animals, to pick weeds until the seeds of row crops ripen in fields sown with row crops;

b) Agrotechnical control measures. Agrotechnical measures should be applied correctly and at the right time. To do this, it is necessary to plow the soil to a depth of 30-40 cm with a two-tier plow, comb through with a new type of unit, soften the soil with a chisel in early spring, harrow, pluck and collect weed roots. When plowing the soil and loosening the top layer of soil before plowing, weed seeds in the soil germinate and die during plowing. After that, it is necessary to apply mineral fertilizers on time and moderately. A good knowledge of the biological characteristics allows the planning of effective control measures.

Rhizomes of weeds such as ajrik, gumai, reed can spread by sticking to the working bodies of agricultural machines.



Harrowing these weeds with disc harrows breaks the rhizomes into small pieces and produces several new plants.

Biological control measures: Biological control consists of the introduction of pathogens (fungi or bacteria) that infect certain plant species. They destroy different parts, leaves, roots, stems, seeds. But the application of this method in other climatic conditions, that is, in areas where there is no habitat, requires caution. This may be more common in plant species that naturally fight the pathogens they defeat. This situation can do more harm than good, causing an ecological disaster, and these pathogens themselves can become pests. In addition, they themselves can destroy cultivated plants, if their damage is not taken into account.

### The number of annual and perennial dicotyledonous weeds among Indigofera species and the degree of their defeat

№	Names of weeds			
	Names	In Latin	Meeting, at 1 sq.m.	Damage rate, points
<b>Annual prickly weeds</b>				
1	Wild oat	<i><u>Avena fatua L</u></i>	10,3	4
2	Foxtail millet	<i><u>Setaria glance</u></i>	6,8	4
3	Barnyard grass	<i><u>Echinochloa crus-galli (L.)</u></i>	7,3	4
4	Mouse barley	<i><u>Hordeum Murinum L</u></i>	7,6	4
5	Black-grass	<i><u>Alopecurus myosuroides Huds.</u></i>	8,3	4
	<b>Average:</b>		<b>8,02</b>	<b>4</b>
	<b>Total:</b>		<b>40,3</b>	<b>4</b>
<b>Perennial thorny weeds</b>				
6	Purple nutsedge	<i><u>Cyperus rotundus L</u></i>	16,5	5
7	Bermuda grass	<i><u>Cynodon dactylon</u></i>	11,1	4
8	Johnson grass	<i><u>Sorghum halepense L</u></i>	2,7	2
	<b>Average:</b>		<b>10,1</b>	<b>4</b>
	<b>Total:</b>		<b>30,3</b>	<b>4</b>
	<b>Overall:</b>		<b>70,6</b>	<b>4</b>

In the experiments, the species and number of weeds were determined twice. Before planting indigo, annual prickly weeds per 1m<sup>2</sup> area: Wild oat - (*Avena fatua L*) - 10.3, Foxtail millet - (*Setaria glaris*) - 6.8, Barnyard grass - (*Echinochloa crus-galli (L.)*) - 7.3, Mouse barley - (*Hordeum Murinum L*) - 7.6, Black-grass - (*Alopecurus myosuroides Hids.*) - 8.3, average number 8.02 pieces, i.e. 4 points, a total of 40.3 pieces, this indicator, in turn, showed the average infection of the field with one Annual dicotyledonous weeds. Perennial thorny weeds Purple nutsedge - (*Cyperus rotundus L*) - 16.5, Bermuda grass - (*Cynodon dactylon*) - 11.1, Johnson grass (*Sorghum halepense L*) - 2.7 total 30.3 pieces, i.e. moderately polluted and perennial dicotyledonous weeds totaled 70.6 pcs. This, in turn, testified to severe pollution.



Since the Indigofera plant is dicotyledonous, it is not difficult to get rid of monocotyledonous weeds. To combat grass weeds found among indigofera, it is necessary first of all to determine their types, quantity and degree of prevalence, to study their distribution. It is important to know the number of seeds and their degree of resistance. There are several ways to control weeds, and control measures are developed depending on their type.

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