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DIVERSITY AND STATE OF THE ORNAMENTAL PLANT IN A GREEN OF SCHOOL GROUNDS CENTRAL PART OF MINSK

The objects of study in 2013–2014 years are elements of ornamental decoration of children's educational institutions of Minsk. The technique works are based on conducting literature search on the subject of research, detailed field surveys, photographic images most characteristic ornamental compositions. Range of elements ornamental design of children's educational institutions of Minsk is studied. The condition of crops monogrades and long-term use in ornamental compositions is assess. Decorative elements of landscaping on the school grounds of the central part of Minsk due to the use, along with annual flower seeds perennial plant species. The perennial crops spring-summer timing of flowering and flowering in late summer dominate in flower decoration of school territories. Range of plants, flowering in spring and autumn, limited. It is revealed a sufficiently rare perennial crops in planting of Minsk. The trends of increasing the area under flower crops and a variety of annual and perennial crops are identified, which it is indicates about of growing interest in the flower design of school grounds. In general, the potential of flower perennials in terms of ensuring the continuity of flowering, durability in crop diversity of not implemented in full.

Key words: perennial herbaceous plants, ornamental composition range of flower crops, the state of plants, decorative.

Introduction. 32 flower-decorative compositions, which located on the territory of six schools and grammar schools of Minsk, were studied in detail in 2013–2014. The researches were based on the usage of technique developed by N. A. Makoznak, T. M. Burganskaya, M. V. Sidorenko [1].

Main part. The conducted researches showed that in flower-decorative design of school terrains of the central part of Minsk a wide variety of flower cultures is used. The basis of assortment of 2014 made perennial plants (56% of occurrence of all cultures which used in creation of flower compositions) and plants with beautiful blossom of one-seasonal using (20%). Decorative-foilage plants of one-seasonal use and carpet plants are used in 2 and 3% cases accordingly from the general occurrence of kinds. Perennial plants not wintering in open ground are also used (3%). Climber annuals were not found. Woody plants make up 16%. Proportion of different groups of decorative plants in ornamental decoration of territories of children's educational institutions of Minsk is shown in Fig. 1.

The assortment of perennial flower cultures in the landscape gardening of territories of children's educational institutions of Minsk is presented by plants with beautiful blossom and by decorative-foilage plants. Cultures with stability of decorative characteristics throughout the vegetative season (hosta, day lily, bergenia, etc.) represent the greatest value.

The percentage ratio of decorative plants according to the production groups in the assortment of flower-decorative compositions on the objects of landscape gardening studied in 2014 is shown in Fig. 2.

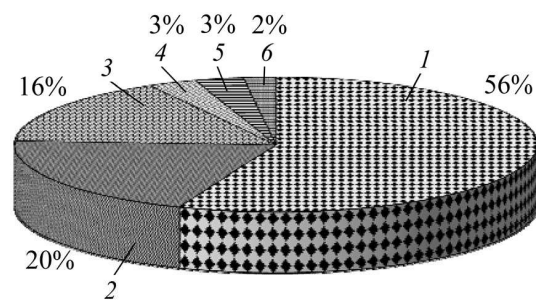


Fig. 1. Proportion of decorative plants groups used in ornamental decoration of territories of children's educational institutions of Minsk in 2014:
1 – flower perennial plants wintering in open ground;
2 – annuals plants with beautiful blossom;
3 – woody plants; 4 – carpet plants; 5 – flower perennial plants not wintering in open ground;
6 – decorative-foilage annuals

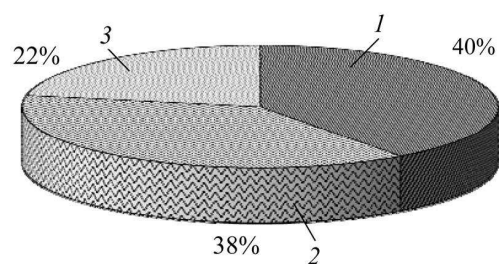


Fig. 2. Proportion of different groups of decorative plants in the flower ornamental decoration of territories of children's educational institutions of Minsk in 2014:
1 – herbaceous plants of one-seasonal use;
2 – herbaceous plants of perennial cultures;
3 – woodyplants

The data, which presented on Fig. 2, indicate that in ornamental decoration of territories of children's educational institutions of Minsk herbageous plants of one-seasonal use (40%) and perennial use (38%) are used approximately to the same extent in decoration of flower composition. Woody plants make up 22% of the examined flower-decorative compositions.

Approximately 28% of compositions are created using perennial flower cultures complemented annually by planting of cultures of annual use; flower cultures of annual use, of perennial use and woody plants are part of the majority of flower-decorative compositions (31%). There are compositions of only perennial cultures (2 compositions, or 6%) and of only annuals (7 compositions, or 22%). Thus, while creating flower beds various combinations of cultures of one-seasonal and perennial use are used, woody plants (14 compositions, or 44%) are often introduced into compositions.

Annual cultures in compositions on territories of children's educational institutions of Minsk are characterized by a long blooming period which lasts from June till October (ageratum Mexican, begonia ever-blooming, hybrid petunia, salvia sparkling, etc.). The assortment of perennial flower-decorative cultures is fairly various and it is presented mainly by kinds of plants with summer terms of blooming (common pink, the greatest moonpenny, bluebell carpathian, etc.).

Studying of compositions according to the quantity of flower cultures showed that in the ornamental decoration of territories of children's educational institutions of Minsk compositions of ten and more cultures (31%), and also of 3–5 and 6–10 cultures (25%) are found most often. Monocultures of plants of one-seasonal use (6% of compositions) and combination of two flower cultures (13% of compositions) (Fig. 3) are used in compositions considerably less often.

The majority of the examined compositions (59%) on territories of children's educational institutions of Minsk are created with participation of mainly plants with beautiful flowers and decorative-foliage flower perennial plants, such as hybrid

hosta, common pink, blood-red heuchera, thick-leaved bergenia, etc. From among the perennial cultures not wintering in the conditions of open ground, garden canna has the greatest diffusion in flower-decorative compositions; pot-plant evergreens – chlorophytum, spurflower, pelargonium are used in some cases. Annual cultures – begonia, cineraria, tagetes, salvia which are found in 25% of compositions are used more often than the others in flower-decorative design of the studied objects. Antirrhinum and coleus are relatively seldom presented in the examined compositions.

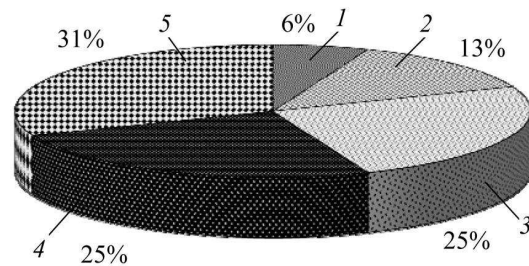


Fig. 3. Proportion of the studied flower-decorative compositions according to quantity of flower cultures on the school terrains of Minsk in 2014, pieces:
1 – 1; 2 – 2; 3 – from 3 to 5; 4 – from 6 to 10;
5 – more than 10

The distribution of flower cultures areas in the ornamental decoration of territories of children's educational institutions of Minsk is shown in the Table.

Comparative analysis of flower-decorative compositions conducted on the studied objects of landscape gardening in 2013–2014 showed a rising tendency in 2014 of the areas under annual flower cultures of 2–6 times (67% of schools) and under perennial cultures of 2–16 times (83% of schools). Only on the territory of Grammar school No. 40 of Minsk the area under flower cultures increased insignificantly. On the whole, areas under flower annuals in 2014 had a 2 times increase, under perennial cultures – a 4 times increase, that testifies to the interest increase towards flower-decorative ornamental design of schools territories (Fig. 4).

The areas under flower cultures in ornamental decoration of school terrains in the central part of Minsk in 2013–2014

Object name	Area under flower cultures, m ²			
	annual		perennial	
	2013	2014	2013	2014
Secondary school No. 130 of Minsk	19.0	35.1	18.0	168.7
Grammar school No. 40 of Minsk	83.5	91.0	94.6	99.2
Secondary school No. 24 of Minsk	19.5	24.4	30.5	51.3
Secondary school No. 47 of Minsk	22.5	135.8	29.5	113.7
Grammar school No. 17 of Minsk	13.0	46.4	13.0	207.1
Secondary school No. 189 of Minsk	9.0	34.0	12.5	69.0
<i>In all</i>	166.5	366.7	198.1	709.0

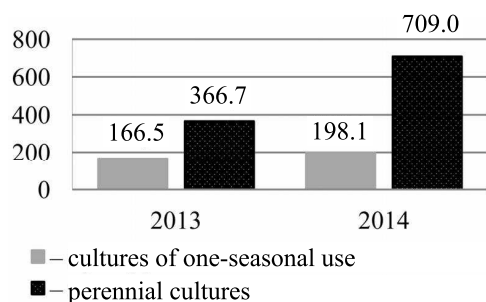


Fig. 4. Areas distribution under flower-decorative plants on the territories of children's educational institutions of Minsk according to years of research, m²

Perennial flower cultures prevailed according to the occupied area on the territory of the studied educational institutions because of their longevity and relative unpretentiousness. Cultures of one-seasonal use prevailed in the territory ornamental decoration only in one of the studied schools (secondary school No. 47) where a number of impressive thematic compositions were created using begonia, cineraria, salvia, canna.

Composition of cultures of one-seasonal use on the whole is traditional and allows to provide long and stable decorative effect of flower beds from spring till autumn. The assortment of flower-decorative perennial cultures in 2014 was characterized by a significant diversity (61 cultures) in comparison with flower annuals. Groups, mix-borders and rockeries (Fig. 5) were the most widespread types of compositions with participation of herbaceous perennial plants.

Perennial asters, bergenia, periwinkle, heuchera were characterized by high decorative effect and top condition. In some cases there was inadequacy of ecological growth conditions of perennial cultures and requirements to their cultivation.

10 kinds increase of diversity of annual cultures was revealed in 2014 as compared with 2013. Average and high rates of state evaluation and projective area of flower-decorative plants of one-

seasonal use in compositions in this situation are conditioned by planting already mature bloomers with earth clod in which there is the optimum quantity of mineral nutrition elements to the objects of landscape gardening.

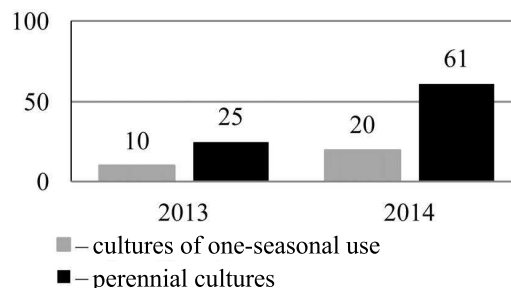


Fig. 5. Diversity of flower cultures on the territories of children's educational institutions of Minsk according to years of research, pieces

Conclusion. Decorative effect of landscape gardening elements on school terrains of the central part of Minsk is conditioned by use of perennial kinds of plants along with annual flower cultures. Plantings of flower annuals are characterized on the whole by significant uniformity according to a complex of decorative criteria. Deviations from the varietal signs are traced, as a rule, according to height of plants, less often according to color of their flowers. Plants of the majority of perennial cultures differ in dimensions, height and bush habitus, are characterized by non-uniformity of blooming and fructification.

In flower ornamental decoration of school terrains the perennial cultures of spring-and-summer blooming periods and blossoming in the second half of summer dominate. The assortment of plants, blossoming in spring and autumn is limited. On the whole, potentialities of perennial flowers in respect of ensuring of blooming continuity, longevity in plantings, and diversity of forms are realized not in full.

References

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