# **Current State of Ornamental Plants' Market in Ukraine**

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#### Abstract

Ukrainian market of ornamental plants is on the way of development. The aim of the article is examination of such features as structure and volume of both own production and import, determination of main supplier countries, the structure of expenses for growing seedlings. The value of imported products in 2013–2015 by six categories (bulbs / tubers in the bloom phase, rhododendrons and azaleas, roses, indoor plants, cut flowers) and own products by four categories (seedlings of flowers, bulbs / tubers, flowering plants, ornamental deciduous and coniferous plants, cut flowers), were defined. Garden centers are the main channel for sale bareroot plants (35 %), and online stores for containerized plants (30 %). Salary and heating amount 80 % of production costs of potted flowers. Perspective directions for enterprises development are improving energy efficiency, introduction of automated equipment and diversification of plant products.

Key words: ornamental plants, market, import, export, own production

#### Аннотация

Украинский рынок декоративных растений находится на пути развития. Целью статьи является изучение таких характеристик, как структура и объем как собственного производства, так и импорта, определение основных стран-поставщиков, структура затрат на выращивание саженцев. Определена стоимость импортируемых продуктов по шести категориям (луковицы / клубни в фазе цветения, рододендроны и азалии, розы, комнатные растения, срезанные цветы) и собственных продуктов по четырем категориям (рассада цветов, луковиц / клубней, цветковых растений, декоративные лиственные и хвойные растения, срезанные цветы) в 2013—2015 гг. Садовые центры являются основным каналом для сбыта растений с открытой корневой системой (35%), а интернет-магазины — для контейнерных растений (30%). Оплата труда персонала и отопление составляют 80% от стоимости производства горшечных цветов. Перспективными направлениями развития предприятий являются повышение энергоэффективности, внедрение автоматизированного оборудования и диверсификация ассортимента растений.

Ключевые слова: декоративные растения, рынок, импорт, экспорт, собственное производство.

#### Introduction

Humanity is inseparably linked with nature. And, despite of intensive building up, the planning structure of cities includes areas of *greenery* within urban space. These territories are intended for active or passive recreation of population, reduction of noise and pollution of air with dust and harmful gases. In addition, plants affect the microclimate, as they change speed and direction of the wind, increase the humidity of the air and reduce the level of solar radiation. One of the main tasks of ornamental horticulture is providing the high quality seedlings and seeds to meet society needs and ensure sustainable urban development.

The following features characterize modern ornamental plant nurseries with high development level: intensive amplification of private nurseries, specialization of production, growing of a wide range of garden plants and its constant expansion, active use of the latest technologies and equipment for manufacture.

The base of ornamental plants nurseries in Ukraine consists of enterprises of three forms of ownership. The number of manufacturers with state ownership forms is about 250 enterprises, private – more than 150, communal – more than 40. Communal and state nurseries use 4000 hectares of land (40 square kilometers), while the area of private producers is 656 hectares (6.56 km²). One of the features that distinguish Ukrainian nurseries from advanced enterprises of

other countries is a significantly poorer assortment of cultivated plants, especially in state-owned enterprises (Kosenko, 2015).

According to results of the nurseries managers' survey, the main achievements of ornamental plants nursering in Ukraine are the mastering of new technologies for growing seedlings and the creation of a network of private nurseries (Maurer, Kosenko, 2013).

The modern floral business is a multinational economic sector. There are both imported and own productions represented in the ornamental plants' market. Therefore, the needs of consumers in ornamental seedlings, seeds, cut flowers and related products are satisfied (Cherniajeva, 2011; Solomakha, 2013; Ezhov, Rudnyk-Ivashchenko, Shevel, 2014; Jukhnovska, 2013).

The purpose of the study was to analyse the market of ornamental plants in Ukraine, namely to determine such indicators as the structure and volume of own production, the structure and volume of imports, the main supplier countries, the structure of the costs of growing seedlings, sales channels of ornamental plants.

### Research methods

Research was conducted during 2013–2016 years. Information provided by the State Statistics Committee of Ukraine was used for the analysis of ornamental plants market situation. The change in the annual volume of imports was characterized by the following product categories: bulbs / tubers in the rest phase, bulbs / tubers in the bloom phase, rhododendrons and azaleas, roses, indoor plants and cut flowers. For determination volume of domestic production the next categories were chosen: seedlings of flowers, bulbs / tubers, flowering plants, ornamental deciduous and coniferous plants and cut flowers.

To achieve the set goal, the following methods were used: monitoring (for collecting secondary information about the market under study), general scientific (analysis, synthesis), statistical (for processing of received data and establishment of regularities) methods. Statistical information was collected by V.M. Ezhov and O.P. Lytovchenko. Its graphic representation by the formation of diagrams was executed by I.B. Kovalyshyn.

#### Results

The main supplier countries of ornamental plants in Ukraine were Netherlands (20 %), Germany (24 %), Italy (18 %) and Poland (17 %). In the period of 2013–2015, main part of ornamental plants market was formed by import production. In the conditions of the crisis state of country's economy, the volume of ornamental plants import have rapidly decreased, in addition, the average price of production has significantly reduced (Fig. 1).

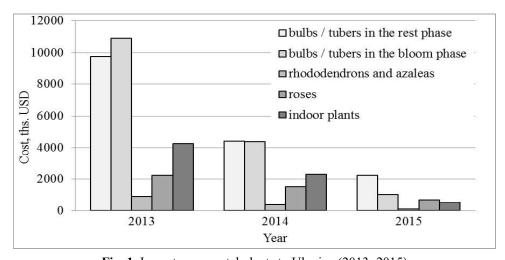


Fig. 1. Import ornamental plants to Ukraine (2013–2015)

All experimental categories were characterized by downward trend. In 2013, the bulbs and tubers were imported into Ukrainian market in the flowering phase more than in a state of rest, in 2014 these indexes almost equaled, and in 2015 the number of bulbs and tubers in a state of rest was twice as many as in the flowering phase. In total, the cost of bulbous and tuberous plants import declined by 57.5% in 2014 and by 84 % in 2015 (compared with 2013).

In two years the value of imports of rhododendrons and azaleas has decreased by 89 %, roses – by 69 %, indoor plants – by 86 %. The total value of ornamental plants for the above categories in the period of 2013–2015 has decreased six times (from 28 mln. USD to 4.6). The cost of imported cut flowers (roses, carnations, chrysanthemums, etc.) also decreased 11.5 times (from 74 mln. USD in 2013 to 6.4 in 2015).

The own ornamental plants production was investigated by the volume of five categories: seedlings of flowers, bulbs and tubers, flowering plants, ornamental deciduous and coniferous plants, cut flowers.

The total price of goods from listed categories in 2013–2015 fluctuated within the limits of 401.3 (2013) – 418.8 (2014) million UAH. The largest fraction of this quantity occupies the value of cut flowers, which grew during the trial period from 80 to 86 %. In accordance, the cost of seedlings of ornamental plants decreased from 80.4 to 56.1 million UAH (Fig. 2).

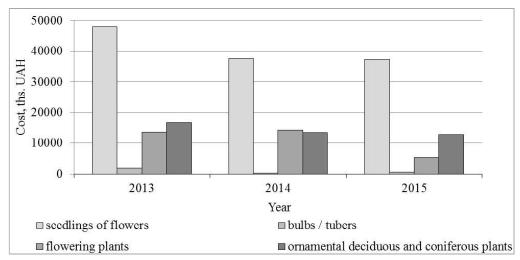


Fig. 2. Domestic production of ornamental plants in Ukraine (2013–2015)

Cost of flowers' seedlings decreased from 48 to 37 million UAH, but it amounted an average of 61.1 % of the landing material categories cost annually. Value of flowering shrubs fell sharply in 2015 and amounted to 5.4 mln. UAH, comparatively with 14.3 in 2014. Ornamental deciduous and coniferous plants had maintained their popularity among consumers, in contradistinction to previous category. Bulbs and tubers do not exceed their value of 2.5 % of the total.

The overall balance of ornamental plants' retail in Ukraine in 2016 amounted in a total volume more than 530 mln. UAH in the proportion of domestic and import products 51: 49 %, accordingly.

Technological and economic conditions allow ornamental plants' nurseries to produce competitive products for both domestic and foreign markets. The restoration of ornamental plants export from Ukraine confirms it. Worth noting the fact, that in addition to traditional partners of Ukraine in this segment of economic activity (Belarus, Moldova, Russian Federation), ornamental plants were exported to Poland and the Netherlands (Fig. 3).

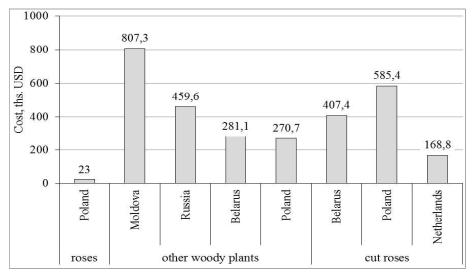


Fig. 3. The value of ornamental plants exports

Totally, in 2016 the cost of Ukrainian export of ornamental plants was 3 mln. USD. The largest importer of ornamental woody plants' seedlings was Moldova. This country imported ornamental plants amounting to 807.3 ths. USD. Cut roses were exported to Poland, Belarus and Netherlands in the amount of almost 1.2 mln. USD.

The main channels for the sale of ornamental plants are specialized stores, supermarket, market and street trade, garden center and online stores (Table.).

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Channels of sale	Bareroot plants	Containerized plants
Specialized stores	25.0	20.0
Supermarkets	<del>_</del>	10.0
Markets and street trade	20.0	15.0
Garden centers	35.0	25.0
Online stores	20.0	30.0

**Table.** Channels of ornamental horticulture products' sale (2016), %

The type of planting material affects the trading platform where its implementation is carried out. So bareroot plants are not sold in supermarkets, and almost the third of containerized plants are sold through online stores. In general, the largest amount of planting material is presented in garden centers (bareroot plants -35%, containerized plants -25%). Containerized plants are more versatile type of product and implemented through all of analyzed channels.

The main elements in the structure of expenses for growing potted flowers are salary,

pesticides, fertilizers, electricity and heating (Fig. 4).

Salary and heating occupy 80 % of the expenses for production of potted flowers. Therefore, introduction of new technologies, automated equipment in the production process and increasing energy efficiency of greenhouses are important issues of planning the work of ornamental plants' nurseries in Ukraine.

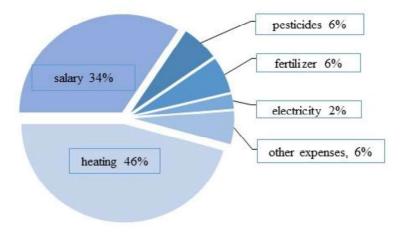


Fig. 4. Structure of expenses for growing potted flowers, %

## **Conclusions**

Ukraine has great potential for development of ornamental plants, due to natural conditions, scientific and entrepreneurial potential. The main achievements of the industry are the introduction of modern technologies and formation of a private nurseries network.

The economic crisis of 2014–2015 has had a positive impact on the state of ornamental horticulture in Ukraine. According to materials highlighted in the article, most domestic nurseries, which from the beginning of the 2000s had been actively absorbing the foreign experience of ornamental plants' producing, were prepared for this situation in a technological and organizational term. Gradual replacement of imported products by own confirms this. The export indicator shows the competitiveness of ornamental horticultural products grown in Ukraine.

Perspective directions for improvement of the existing ornamental horticulture system are in the following positions: diversification of ornamental plant products by promotion of Ukrainian selection and attracting achievements of foreign colleagues; creation closed cycle of production within the country; increasing the fraction of containerized plants; adaptation of the domestic legal base to the standards of EU countries for free trade; rising of energy efficiency at enterprises.

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# Современное состояние рынка декоративных растений в Украине

#### Резюме

Импортные растения занимают значительную часть рынка декоративных растений Украины. Национальные производители представлены тремя формами собственности: государственные, коммунальные и частные. Количество декоративных рассадников государственной и коммунальной форм собственности почти дважды превышает количество частных предприятий и занимают в шесть раз большую территорию. Основными достижениями украинского декоративного садоводства, по результатам социологического опроса руководителей предприятий различных форм собственности, является расширение сети частных питомников и внедрение новых технологий для выращивания растений.

Так как продажа декоративных растений является международным экономическим сектором, целью исследований был анализ украинского рынка, в частности структуры и объема предлагаемых товаров собственного производства и импорта, определение основных стран-поставщиков, каналов сбыта, а также структуры затрат на производство саженцев. Для достижения цели использовались мониторинг, анализ, синтез и статистические методы.

Основными странами-поставщиками декоративных растений в Украину являются Нидерланды, Германия, Италия и Польша. На протяжении 2013—2015 гг. общая стоимость импортированных декоративных растений (луковицы и клубни, рододендроны и азалии, розы, комнатные растения, срезанные цветы) стремительно снизилась. Объем продукции собственного производства существенно не изменился. Больше 80% от ее общей стоимости принадлежит срезанным цветам. В 2016 г. продукция собственного производства занимала половину объема рынка декоративных растений. Так же в 2016 г. Украина возобновила экспорт растений в соседние государства (Беларусь, Молдова, Российская Федерация) и представила продукцию декоративного садоводства (срезанные розы) на рынке Нидерландов.