

RESEARCH ON THE EUROPEAN FLOWER MARKET AND MAIN SYMBOLIC VALUES OF THE MOST TRADED SPECIES

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Abstract

Cultivated by passion or as part of a business, flowers are present at any event in people's lives, either joyful or sad. As the European flower market is a large and varied one, the aims of this article are: to present the evolution of European flower market between 2008-2016 using as main indicators: the areas cultivated and the total production obtained in the European Union; the import and export values; to sketch the cultural role of the most traded species. The economic data taken from the European Commission - Agriculture and rural Development, Eurostat and International Association of Horticultural Producers (AIPH) sites, were processed and interpreted statistically; while for the symbolic values of Roses, Carnations, Lilies, Chrysanthemums, Orchids and Gladioli we used documentation on various, eclectic, formal sources related mainly to religion, art, florigraphy. Results highlight that the European Union represents 10% of the world's floral area and 31% of the value of flower and ornamental plants production in 2016; the Netherlands, France and Italy are the main producing and cultivating countries; the European Union is an exporter of cut flowers and foliage, potted plants, conifers, perennials, bulbs and corms, and, first of all, an importer of cut flowers and foliage. The trade balance is in favor of exports.

Key words: cut flowers, productions, surfaces, symbolic value.

INTRODUCTION

The flower market is a large one and due to the variety of floral species it consists of fresh or dried cut flowers, foliage - present in the composition of bouquets, potted plants - for interior decoration, saplings, tree saplings, shrubs and other types of planting material for landscaping, bulbs, seeds, etc. In addition, the flowers can also be grown to serve as raw materials in the pharmaceutical industry (teas, medicines, and oils), cosmetics, alternative therapies, even for culinary use and others.

The production and commercialization of flowers is an important segment of the EU's horticultural activity and worldwide. With cultivation peculiarities and marketing specifics, flowers are not an indispensable asset in everyday life but they are influenced by the incomes of the population [12].

The analysis of the statistical data shows that the European Union accounts for 10% of the world's floral area and 31% of the production value of flowers and potted plants for the year 2016. The Netherlands, France and Italy are the main producing and cultivating countries. Also, the European Union is an exporter of cut flowers and foliage, potted plants, conifers, perennials, bulbs and corms and mainly an importer of cut flowers and foliage.

Lately, experts in the field have stepped up their research into finding new varieties to meet the needs of the lovers of beauty.

The aims of this paper are the analysis of the flower market and to highlight that a flower, on market or outside it, bears symbolic values, besides the aesthetic and social ones. Nowadays, new trends and the afferent technology driven by financial interests but also in close connection with past and present

values, ideals and human symbols, allow us to offer or receive a cryogenic flower which lasts years; such “immortal” flower “talks” about the same ancient, ceaseless and transcultural human effort to preserve beauty, life, positive feelings and memories. The option for a syncretic and trans-disciplinary work nevertheless poses great risks, impossible to avoid in the narrow context of this work, but we have estimated it deserves to give it a try as flower market trades the object with probably the most subtle and significant cultural meanings comparing with the other agricultural products.

MATERIALS AND METHODS

Flowers were given symbolic meanings in religion, heraldry, arts (especially painting and literature), folklore and everyday life. Medieval gardens were created to reflect the symbolism of the flowers - a practice continued in the Renaissance [26].

For the cultural role of the most traded species on the European market (*Roses, Carnations, Lilies, Chrysanthemums, Orchids and Gladioli*) we used documentation and further selection, analysis, synthesis, also comparison and generalization where necessary on various, eclectic, formal sources related mainly to religion, art, florigraphy within the European frame and values.

Along with the presentation of the main symbolic meanings of the flowers in various fields of activity, the paper followed the evolution of the flower market at EU level. For this purpose, the following indicators were analyzed: area cultivated in the EU; total flower production; the selling price of the most sold floral species, imports and exports

of floral products, as well as cut flowers. Also, the work has referred to the cultural role of the most traded species. The analyzed indicators were surprised by their dynamics for the period 2008-2016. The data used for this research was taken from sites such as: European Commission - Agriculture and Rural Development, Eurostat and the International Association of Horticultural Producers (AIPH). The statistical data has been processed, interpreted and presented largely in tables and graphics.

RESULTS AND DISCUSSIONS

The main trends in the production and marketing of flowers at EU level will be presented below:

Today, when everything is reduced to money, the flower market is an important source of income for those who produce and commercialize these products. It is important to specify that the Netherlands is the most representative country in producing and marketing flowers. There is even a Flower Market at Aalsmeer, where flowers can be purchased through the clock system and there are on average about 60,000 transactions a day [1].

Table 1 shows the evolution of the areas planted with flowers and ornamental plants (except nurseries) in the main cultivating states of the European Union.

The analysis of the data presented in the table shows, in general, the increased surfaces, except for Hungary and Italy. In the case of the other countries, the highest increase is registered by Belgium, from 0.9 thousand ha (2009) to 5.28 thousand ha (2016).

Table 1. Areas cultivated in the EU with flowers and ornamental plants in the period 2009-2016 (1,000 ha)

Specification	2009	2010	2011	2012	2013	2014	2015	2016	2016/2009%
Belgium	0.90	5.00	4.88	5.30	5.24	5.11	5.35	5.28	586.7
Germany	6.20	8.38	8.40	7.60	7.70	7.30	7.50	7.30	117.7
Spain	4.20	6.68	6.49	7.01	6.98	7.06	6.30	6.44	153.3
France	8.80	8.08	8.52	9.13	9.01	8.80	8.83	8.88	100.9
Hungary	0.90	0.52	0.56	0.69	0.54	0.60	0.58	0.54	90
Italy*	-	-	-	-	-	9.42	8.85	8.78	-
Netherlands	27.40	26.23	27.06	26.20	26.20	26.30	27.64	32.63	119.1
Poland	2.60	3.80	3.30	3.30	3.40	3.50	3.50	4.90	188.5
Portugal	1.79	2.06	2.32	2.59	2.85	2.85	2.85	3.45	192.7
United Kingdom	5.00	5.00	5.00	6.00	6.00	6.00	7.00	6.00	120

Source: Eurostat [14], own calculation. Note: *lack of data for 2009-2013

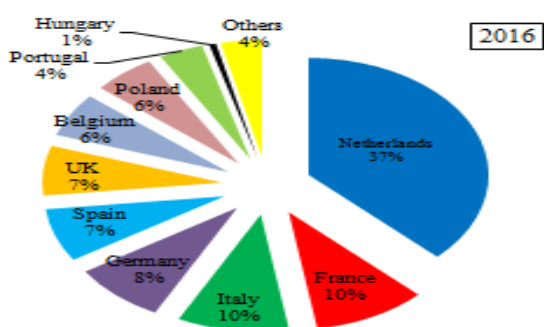


Fig. 1. The share of areas planted with flowers and ornamental plants in the European Union (%)

Source: Eurostat [14], own calculation.

The largest area cultivated with flowers and ornamental plants is registered in the Netherlands, which clearly stands out from the other states. In 2016, 32.63 thousand ha of

flowers and ornamental plants were grown in this country. It is followed by France (8.88 thousand ha in 2016) and Italy (8.78 thousand ha in 2016).

The area cultivated in the Netherlands with flowers and ornamental plants accounts for 37% of the total European Union surface area in 2016 (Figure 1), and the surface area in France and Italy accounts for 10%.

The main countries producing ornamental flowers and ornamental plants in the European Union are the Netherlands - a detached and undisputed leader on the flower market, France, Italy, Germany and Spain (Table 2).

Table 2. The production value in the main EU countries producing ornamental flowers and ornamental plants (producer prices) in 2008-2016 (Million Euro)

Specification	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016/2008 %
European Union	20,605.19	19,786.74	21,005.08	20,783.70	20,538.23	20,350.58	20,673.21	20,848.20	21,055.34	102.2
Austria	280.96	289.40	291.08	301.75	298.11	293.19	315.01	335.50	356.50	126.9
Belgium	530.85	557.55	569.28	564.75	582.54	513.77	512.94	497.35	477.45	89.9
Denmark	504.72	473.53	478.68	511.44	487.37	472.56	431.92	434.19	436.22	86.4
Germany	2,673.00	2,580.00	2,807.94	2,826.67	2,601.96	2,461.54	2,308.86	2,244.64	2,202.13	82.4
Spain	2,144.51	2,164.80	2,219.06	1,981.36	1,789.17	1,955.27	2,078.91	2,133.40	2,203.86	102.8
France	2,176.10	2,175.60	2,254.80	2,440.60	2,556.40	2,470.20	2,852.20	2,900.10	2,948.13	135.5
Italy	3,206.48	2,932.25	2,906.73	2,813.68	2,731.29	2,613.18	2,585.88	2,487.48	2,449.89	76.4
Netherlands	6,065.20	5,881.01	6,264.76	6,195.79	6,174.64	6,401.84	6,486.70	6,558.66	6,781.40	111.8
Portugal	493.88	507.23	495.02	493.73	463.49	468.82	443.21	474.03	506.72	102.6
United Kingdom	1,028.36	986.42	1,162.23	1,283.48	1,408.95	1,401.89	1,446.25	1,582.47	1,466.89	142.6

Source: Eurostat [14], own calculation.

For the analyzed period, increases in the value of flowers and ornamental plants are recorded in 2016 compared to 2008 in the following countries: Austria (+26.9%), Spain (+2.8%), France (+35.5%), The Netherlands (+11.8%), Portugal (+2.6%) and the UK (+ 42.6%).

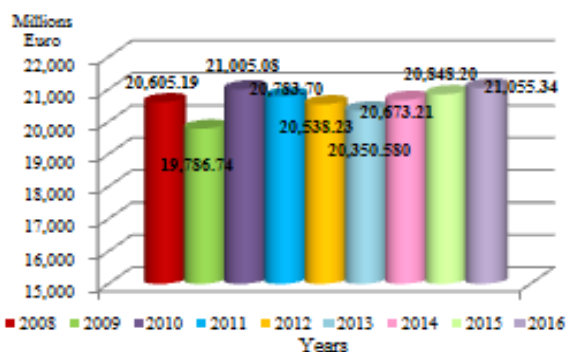


Fig. 2. The dynamics of the production value for flowers and ornamental plants in the period 2008-2016, in the EU, at producer prices

Source: [13]

In the European Union, the production value increased by 2.2% in 2016 compared to 2008 (Table 2, Figure 2).

It is noticed that this increase is starting from 2013. The highest value was recorded in 2016 (21,055.34 million Euros), and the lowest in 2009 (19,786.74 million Euros).

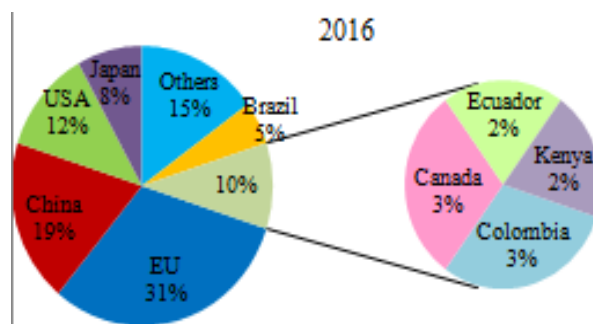


Fig. 3. The share of the value of production of flowers and ornamental plants worldwide (%)

Source: AIPH [16]

The European Union is the largest producer of flowers and ornamental plants in 2016, with a share of 31% of the total world production value (Figure 3).

In this ranking of production values are also ranked on the first positions: China (19%) and the USA (12%).

Selling prices of flowers during 2015-2016 varied from country to country depending on the species (Table 3). Overall, there was an increase in prices in 2016 compared to 2015.

For *Roses*, the highest selling price was recorded in France (72.80 Euro / 100 pcs, in 2015) and the lowest price was registered in Portugal (23.96 Euro / 100 pcs, in 2015). For the second category of flowers analyzed,

Carnations, Latvia recorded the highest selling price (56.88 Euro / 100 pcs, in 2016) and the lowest price in Portugal (9.25 Euro / 100 pcs, in 2016).

For the *Chrysanthemums* category, the highest selling price was recorded in Latvia (72.93 Euro / 100 units, in 2016) and the lowest in Holland (27.00 Euro / 100 units, in 2015).

The *Gladioli* category recorded the highest selling price in France (88.30 Euro / 100 pcs, in 2016) and the lowest price in Hungary (15.11 Euro / 100 pcs, in 2015) and for the *Tulips* the highest price was recorded in France (112.70 Euro / 100 pcs, in 2016) and the lowest in Holland (14.01 Euro / 100 pcs, in 2016).

Table 3. The selling price of some floral species in some European Union countries (Euro/100 pcs)

Specification	2015					2016				
	<i>Roses</i>	<i>Carnations</i>	<i>Chrysanthemums</i>	<i>Gladioli</i>	<i>Tulips</i>	<i>Roses</i>	<i>Carnations</i>	<i>Chrysanthemums</i>	<i>Gladioli</i>	<i>Tulips</i>
Belgium	29.04	21.47	36.59	28.39	18.83	31.19	21.17	33.98	29.65	16.82
France	72.80	39.30	29.80	73.60	89.40	72.60	47.20	33.40	88.30	112.70
Latvia	59.59	55.42	72.61	31.78	31.78	65.12	56.88	72.93	32.83	35.38
Hungary	42.05	13.07	46.52	15.11	24.13	44.83	13.92	49.31	15.14	18.54
Netherlands	38.23	19.00	27.00	16.00	15.65	39.47	20.00	28.00	17.00	14.01
Portugal	23.96	9.52	34.43	34.40	29.62	27.89	9.25	33.77	44.74	31.04
Romania	41.17	32.39	51.51	40.72	41.84	49.22	35.41	49.88	39.64	42.76

Source: Eurostat [14]

For more transparency, in order to boost trade and reduce bureaucracy, the EU has eliminated the marketing standard for live plants.

Under the Single Market Organization (CMO) Regulation, the Commission is authorized to establish, before the marketing period, the minimum prices for exports to third party countries of bulbs, tubers, corms, rhizomes (code NC060110). These products may subsequently be exported at a price greater than or equal to the price originally established [13].

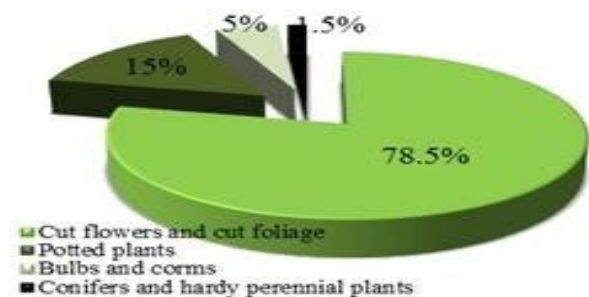


Fig. 4. Imports of EU floriculture products in 2016 (%)

Source: [13]

In 2016 the value of imports of floriculture products at EU level was 1,689,506 thousand Euro (Figure 4).

According to some studies, in 2016 there was a 0.3% increase in the value of imports of EU floral products compared to 2015. It was observed that the largest increase was registered in the category *Cut flowers and cut foliage* imports (5.3%) [13]. At the level of 2016 the largest share in the imports of floral products was *Cut flowers and cut foliage* (78.5%). In terms of value, imports of *Cut flowers and foliage* in 2016 were 1,325,222,000 Euros. Also in 2016, the other categories of floral products recorded the following values: *Potted plants* 15% (254,169 thousand Euro); *Bulbs and corms* 5% (84,515 thousand Euro) and *Conifers and hardy perennial plants* 1.5% (25,599 thousand Euro).

The main countries where the EU imports floriculture products are: Kenya (27.5%); Ethiopia (11.1%) and Ecuador (11.1%) (Figure 5). For the period 2008-2016, there is an increase in imports (especially *Cut flowers*)

from: Kenya; Ethiopia; Ecuador; Colombia and the USA. From the data presented, there is also a decrease in imports from Israel, Costa Rica and China [13].

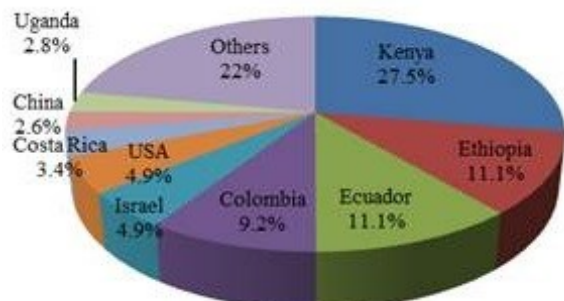


Fig. 5. Provenance of EU imports of floriculture products (%)
Source: [13]

The imports of *Cut flowers* of the EU in 2016 are made up of: 84% *Roses* (5,593,591,629 pieces); 14% *Carnations* (902,620,188 pieces) and 2% other floral species: *Orchids*, *Chrysanthemums*, *Lilies*, *Gladioli* (156,996,408 pieces) (Figure 6).

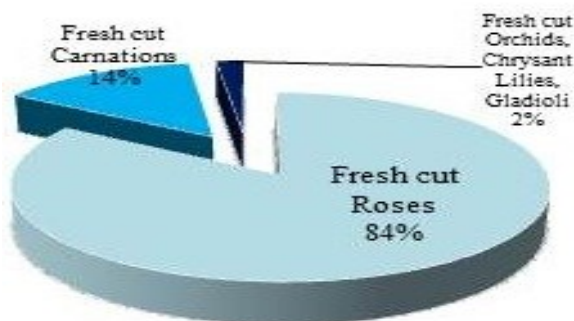


Fig. 6. The main floral species imported by the EU in 2016 (%)
Source: [13]

The main countries importing floriculture products from the EU are Germany (29.7%), UK (12.7%) and France (13%) [13].

As far as the EU exports of floriculture products are concerned, in 2016 they reached the value of 2,025,486 thousand Euro. The category *Cut flowers and cut foliage* accounted for 33.4% of the total exports, namely 677,114 thousand Euro. Also in 2016, the other categories recorded the following values: *Potted plants* 552,066 thousand Euro (27.3%); *Bulbs and corms* 538,990 thousand

Euro (26.6%) and the lowest value of exports was recorded for the category *Conifers and perennial plants* 257,316 thousand Euros, having a weight of 12.7% (Figure 7).

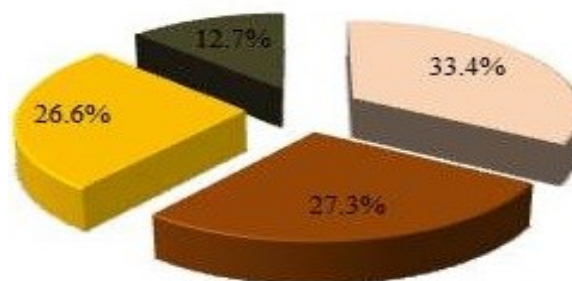


Fig. 7. Exports of EU floriculture products in 2016 (%)
Source: [13]

The official statistical data showed that in 2016 there was a 2.1% increase in exports of floricultural products compared to 2015. This increase was registered for all categories of exported floral products except for the *Cut flowers and cut foliage* category where exports remain at the same level as in 2015 [13].

The main EU partners in 2016 for exports of floriculture products are Switzerland (21.7% of total exports), Russian Federation (18.5% of total exports) and USA (12.3% of total exports) (Figure 8).

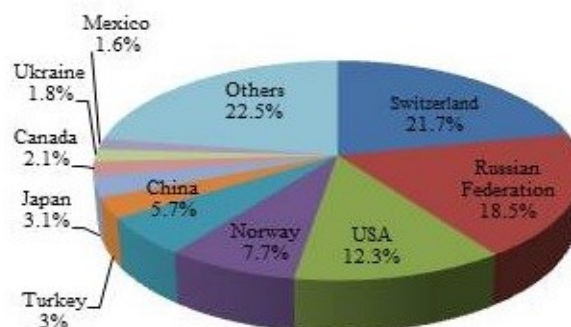


Fig. 8. Destination of EU exports of floriculture products (%)
Source: [13]

In general, value exports increased to most partner countries, but there were two exceptions: the Russian Federation (-8%) and Ukraine (-11%). For the *Cut flowers and cut foliage* category there was an increase in exports to the USA and a decrease to: Ukraine, Russia and China [13].

The main flowers exported by the EU in 2016 belong to the following categories: *Chrysanthemums* 49% (291,315,825 pieces), *Roses* 40% (235,661,803 pieces), *Carnations* 7% (43,215,754 pieces), *Lilies* 3% (16,687,900 pieces) and 1% *Orchid* (5,271,501) (Figure 9).

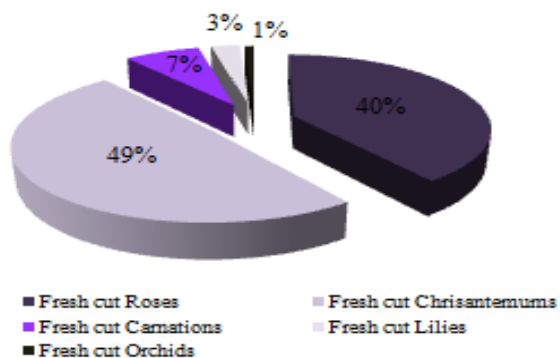


Fig. 9. Main floral species exported by the EU in 2016 (%)

Source: [13]

Analyzing the collected data, we notice that the floral species mentioned above recorded increases during the period 2009-2014, the highest share for this period being for *Roses*. Since 2014 there have been decreases for all the floral species, the most pronounced being for *Roses* (which have lost their first position in the list of the most exported flowers) and *Chrysanthemums* [13].

The exports of cut flowers between EU member states are dominated by *Fresh Cut Roses*, which represents 66% of the exports, that means 3,232,896,356 pieces (Figure 10).

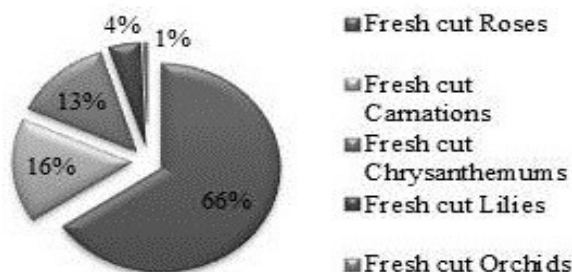


Fig. 10. Main floral species exported in the EU in 2016 (%)

Source: [13]

Followed by *Fresh Cut Carnations* 16% (794,960,290 pieces), *Fresh cut Chrysanthemums* 13% (659,780,051 pieces),

Fresh cut Lilies 4% (207,208,927 pcs) and *Fresh cut Orchids* 1% (33,048,998 pcs.). The main countries exporting floriculture products in the EU are the Netherlands (67.1%), Germany (8.4%) and Italy (6.6%) [13].

The EU trade balance for flowers and floriculture products is positive from 2002 until now. From the balance analysis it is revealed a net trade surplus for live plants and for floriculture products.

Sketch on the symbolic values of the most traded species: *Roses*, *Carnations*, *Lilies*, *Chrysanthemums*, *Orchids* and *Gladioli*

Etymology

Rose comes from Latin *rosa* and means pink or red in some European languages. The Romanian word *trandafir* comes from ngr. *Triandáfyllon* (Scriban) [23] and etimologically mean *thirty-leaves*.

Carnation probably comes from Italian dialectal *carnagione* (flesh color) from Late Latin *carnationem* [3]. Carnations were mentioned in Greek literature 2,000 years ago. *Dianthus* was coined by Greek botanist Theophrastus, and is derived from the Greek words for divine *dio* and for flower *anthos*. Some scholars believe that the name carnation comes from coronation or corone (flower garlands), as it was one of the flowers used in Greek ceremonial crowns. Others think the name stems from the Latin *carnis* (flesh), which refers to the original color of the flower, or incarnation of God made flesh.

In Romanian, the word for carnation is *garioafa* and one of its roots is ngr. *garófalon*, it is also surnamed “flower of royalty”.

Lily - Old English *lilie*, from Latin *lilia*, plural of *lilium*, cognate with Greek *leirion*. In Romanian, the word for lily is *crin* from ngr. *κρίνον* (DER 1958-1966)[6].

Chrysanthemum - Latin *chrysanthemum*, Greek *khrysanthemon*, literally golden (*khrysos*) flower (*anthemon*) [4], has similar word in Romanian *crizantemă*.

Orchid gets its name from the Greek *orkhis* (genitive *orkheos*) literally *testicle* [21], from the appearance of subterranean tuberosities of the genus *Orchis*. The word *orchis* was first used by Theophrastus in his *The natural history of*

plants [20]. It has a similar word and etymology in Romanian, *orhidee*.

Gladiolus comes from Latin *gladiolus wild iris, sword-lily*, literally *small sword*, diminutive of *gladius sword* (see *gladiator*); the plant as called so by Pliny in reference to its sword-shaped leaves. It has a similar word and etymology in Romanian, *gladiola* [15].

Symbolism in mythology and religion

The ***rose*** has long been used as symbol: in the classical civilization and the ancient Middle East, roses were synonymous with beauty, fertility, purity, and were dedicated to Aphrodite (Roman Venus), Muses, Aurora and Dionysus [26]. Following the Christianization of Rome, the Rose symbolized the Virgin Mary and eventually led to the creation of the rosary and other devotional prayers in Christianity [8].

According to a Christian legend, "***Carnations*** first appeared on Earth as Jesus carried the Cross. The Virgin Mary shed tears at Jesus' plight, and Carnations sprang up from where her tears fell" pink Carnation becoming the symbol of a mother's undying love [18].

Lily is mentioned in the Song of Songs (within the biblical Old Testament), which, both in Jewish and Christian tradition, is attributed to have hidden meanings behind the first, literal, meaning: "As the lily among thorns, so is my love among the daughters" (Song of Songs, 2:2). "The words, which apparently speak of the love between Groom and Bride, lead the reader to the mystical meanings of the union between Jahve and his people on the one hand, or between Christ and the Church, on the other hand" [7].

In Greek mythology, the lily was associated with Hera's milk and meant purity and chastity. For Roman Catholics lily symbolizes purity medieval depictions of the Blessed Virgin Mary, especially at the Annunciation, often show her holding these flowers or show them nearby. Meaning purity, the Lily is the symbol of Virgin Mary. Also, the archangel Gabriel and St. Joseph are frequently depicted with lilies [17].

Like in their native countries (China, Japan, Korea) where white ***Chrysanthemums*** symbolizes adversity, lamentation and/or grief, in some European countries

(e.g. France, Belgium, Italy, Spain, Poland, Hungary, Croatia) incurve *Chrysanthemums* symbolize death and are used only for funerals or on graves, while other types carry no such symbolism [5].

Symbolism and / or aesthetic role in art (references in popular art and culture, literature and picture)

Flowers are a popular subject/ theme/ motive in art, where their natural traits and beauty can get a second, symbolic meaning and their frequency in art makes our next selections extremely poor, risky and unjustly reported to the multitude of masterpieces and artists who had them as muses.

Literature

Folklore from European countries gather manifold proverbs relative to flower, rose especially, from which we can selected further few but eloquent. English proverbs: "The rose has its thorn, the peach its worm." "He that plants thorns must never expect to gather roses". French proverbs: "A sow prefers bran to roses." "It is the belief in roses that makes them flourish". German Proverbs: "Love sees roses without thorns." "Not every one may pluck roses." Danish Proverb: "Beauty without virtue is like a rose without scent." Italian Proverb: "Roses fall and thorns remain." Spanish Proverb: "Truths and roses have thorns." Russian Proverb: "If your heart is a rose, then your mouth will speak perfumed words." Hungarian Proverb: "Even the white lily casts a shadow." Romanian Proverbs: "If you lie upon roses when you're young, you'll lie upon thorns when you're old." / "The fairest rose at last is withered."

Flowers are a perennial theme of poetry within a wide range of poems (romantic, comic, celebratory, *carpe diem* etc.) from ancient times up to the present. We quote few lines from "Song of the Rose" by Sappho (640-570 BC), the most prolific lyrical poet of Greek antiquity: "If Zeus chose us a King of the flowers in his mirth, / He would call to the Rose, and would royally crown it; / For the Rose, ho, the Rose! Is the grace of the earth, / is the light of the plants that are growing upon it! [...]".

The greatest writer in the English language and the world's pre-eminent

dramatist, William **Shakespeare** (1564 – 1616), English poet, playwright and actor, is the author of Sonnet 54, which according to Wordsworth, for its merits of thought and language is one of Shakespeare's greatest poems [24], where youth is compared with the rose: “O how much more doth beauty beauteous seem, / By that sweet ornament which truth doth give! / The rose looks fair, but fairer we it deem / for that sweet odour which doth in it live. / The canker-blooms have full as deep a dye / As the perfumed tincture of the roses, / Hang on such thorns and play as wantonly / When summer's breath their masked buds discloses: / But, for their virtue only is their show, / They live unwoo'd and unrespected fade, / Die to themselves. Sweet Roses do not so; / Of their sweet deaths are sweetest odours made: / And so of you, beauteous and lovely youth, / When that shall fade, my verse distills your truth.” Another sonnet which appeal to lilies for the final antithesis is Sonnet 94, approached as the type and model of a detached observation on human nature or as portrait of the youth - potentially fickle and ready to abandon the pledges he has made, a beauteous flower, but corrupted at the core: “For sweetest things turn sourest by their deeds; / Lilies that fester, smell far worse than weeds.” [25]

Our last quote keeps *The Lover Tells of the Rose in His Heart* of W.B. Yeats (1865 – 1939), Irish poet and playwright, Nobel Prize laureate in 1923: “All things uncomely and broken, all things worn out and old, / The cry of a child by the roadway, the creak of a lumbering cart, / The heavy steps of the ploughman, splashing the wintry mould, / Are wronging your image that blossoms a rose in the deeps of my heart. / The wrong of unshapely things is a wrong too great to be told; / I hunger to build them anew and sit on a green knoll apart, / With the earth and the sky and the water, re-made, like a casket of gold / For my dreams of your image that blossoms a rose in the deeps of my heart” [27].

Painting

Flowers are a favourite subject in still life (that type of painting or drawing of an arrangement of objects that do not move, such as flowers, fruit, bowls etc.) and also they can

belong to another types of compositions. We can mention here only the famous tradition of the Flemish and Dutch flower painters Brueghel, Ruysch, van Huysum, de Heem and their heir Pierre-Joseph Redouté (1759 – 1840, the painter and famous botanical illustrator of all time [22]), most valued European painters in various traditions with remarkable flowers-paintings (Monet, Renoir, Van Gogh) and also the Romanian Stefan Luchian (1868-1916, who developed his studies in universities from Bucharest, München and Paris), surnamed “the painter of flowers”.

Still, due to our topic, we focus only on one representative work: *Bunch of flower* by Jan Brueghel the Old, painting belonging to the Romanian National Art Museum, also the biggest and most complex bunch of this painter and a model for still nature for the disciples – as it has a symbolic meaning according to the art critics from this museum while being a true visual encyclopedia.



Photo 1. Bouchet of flowers, Jan Brueghel the Old (Bruxelles, 1568 - Anvers, 1625).

Flemish School, oil on wood, 162 x 132 cm

Source: [2]

Critics note that among the dozens of species and varieties of flowers there are hiding about 20 types of insects. The blooming or died-up flowers and the caterpillars that metamorphose in chrysalides and then in butterflies measure the passage of time and suggest the cyclical character of life, the painting thus becoming a meditation on the

fragility and ephemeral character of beauty and life, but also on the divine nature of art. Only the buzz of the fly from the edge of the bowl seems to interrupt this meditation [2].

Floriography

Flower language is a mean of communication achieved by the cryptologic use of a flower or floral arrangement. For hundreds of years, the method has been practiced in traditional cultures in Europe, Asia and the Middle East. Flowers have been given secret meanings, inspired by mythology, folklore, religion and historical events. Over time, the study of the significance of flowers has become a true science, called, in the Victorian era, floriography. Lady Mary Wortley Montagu (1689-1762) introduced floriography in British culture and it was popularized in France during 1810-1850, in Britain during the Victorian era (ca. 1820-1880) and in the United States between 1830 - 1850. Thus, messages could also be transmitted by offering a small floral bouquet called *nosegay* worn in an accessory (tussie-mussie holder), attached with a chain to the wrist. Carrying the bouquet meant the acceptance of the message or of the sentiment thus transmitted [19] (selective synthesis by the cited reference).

Each flower had its own significance, dictated by its variety, color, location, as a self-standing flower / nosegay / bouquet, and the arrangement and order added details (see the angles in which the flowers were placed), including their wearing in the hair, or on the corset transmitted decodable signals. The one who sent them could court, reject a candidate, and express positive or negative feelings [9]. “A bunch tied with a ribbon to the right indicates that the flowers were saying something about the sender, and the ribbon on the left said the meaning was valid for the receiver. A reversed strain suggested that the opposite meaning was intended. The elimination of the thorns said *Hope to all*, the removal of the leaves meant *Fear of all*” [10]. Due to many European thematic dictionaries published in that period, the symbolism attributed to each flower was not perfectly unitary, but there were interpretations and associations that conveyed the same idea: lily

- purity; chrysanthemum - joy, wealth, wonderful friend; carnation - love, affection, fascination, health; gladiolus - love at first glance; strength of character; generosity; orchids - love, beauty, refinement [11].

Table 4. The romantic language of flowers (Davies Gill, Saunders Gill, 2013)

COLOR/ FLOWER	LILY	CHRYSAN- THEMUM	CARNA- TION	ROSE
white	virginity, purity, greatness, “it is heavenly to be with you	truth	sweet and cute; innocence; pure love; lucky-gift for a woman	eternal love; innocence; heavenly; secret and silence white and red rose: together, unity
yellow	“Floating with happiness”; false; joyful	fugacious love, neglected love	„you disappointed me”; rejection, despise	friendship; jealousy
orange	Hate	-	-	-
pink	-	-	„I shall never forget you”	perfect happiness: “please, believe me”
red	-	„I love you”	“you make my feelings to suffer”; admiration	„I love you”
purple	-	-	capricious mood, fantasy	-
dark color	-	-	„yes”	Black rose- death, black magic

Source: own processing based on reference [19]

CONCLUSIONS

Generally, when a person gives flowers to another, the gesture itself indicates affection, attention, sympathy, friendship or love. Moreover, the flowers also means color, perfume and, for the initiates, symbols. The initiation in the cultural meaning of flowers (within a particular culture) allows extra value to the floral gift and / or allows inter-human dialogue to be richer in meaning, although possibly lacking in words -“say it with flowers”: „There is no colour, no flower... that has not a verse belonging to it; and you may quarrel, reproach, or send letters of passion, friendship, or civility, or even of news, without ever inking your fingers.” (Lady Mary Wortley, 1817) [19].

Following the analysis of the flower market at the EU level for the 2008-2016 period, the following were noted:

The European Union is the world's largest producer of flowers and ornamental plants in 2016 (31% of total value), followed by China (19%) and the USA (12%);

The value of production increased by 2.2% in 2016 compared to 2008. The highest value was registered in 2016 (21,055.34 million Euros) and the lowest in 2009 (19,786.74 million Euros);

The main flower and ornamental plants producing countries in the European Union are: The Netherlands, France, Italy, Germany and Spain;

The largest area cultivated with flowers and ornamental plants in the EU is in the Netherlands and in 2016 accounted for 37% of the total EU surface area. In 2016, the Netherlands cultivated 32.63 thousand ha with flowers and ornamental plants. Other cultivating countries are France (8.88 thousand ha in 2016) and Italy (8.78 thousand ha in 2016), representing each 10% of the total EU;

Flower prices varied over the analyzed period for all flower categories;

The highest price was recorded in France for the categories *Roses*, *Gladioli* and *Tulips* and in Latvia *Carnations* and *Chrysanthemums*;

The biggest share in the imports of floral products have the *Cut flowers and foliage* 78.5% (1,325,222 thousand Euro) in 2016;

The main countries from where the EU imports floriculture products are: Kenya (27.5%); Ethiopia (11.1%) and Ecuador (11.1%);

For the analyzed period there is an increase in imports (especially *Cut flowers*) from: Kenya, Ethiopia, Ecuador, Colombia and the USA;

Mainly, in 2016, the EU imported floriculture products from the *Cut flowers* category: *Roses* (84%, 5,593,591,629 pieces);

The exports of floriculture products in 2016 amounted to 2,025,486,000 Euro;

Cut flowers and foliage represented 33.4% of the EU exports of floriculture products, meaning 677,114,000 Euro, in 2016;

EU partners for export of floriculture products are: Switzerland (21.7% of exports), Russian Federation (18.5%) and USA (12.3%). Recorded export values in 2016 increased, except for the exports to Russia (-8%) and Ukraine (-11%);

Chrysanthemums represent 47% of the EU's "cut flowers" exports in 2016;

From 2002 until now the commercial balance for floriculture products is positive.

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