

HARVESTING THE CUT FLOWERS

RECOLTAREA FLORILOR TĂIATE

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***Abstract:** People know flowers from ancient times and the weaving of flowers was born simultaneously with their knowledge.*

The first flower shops appeared in 1870 in the period of strong development of towns and so the culture of flowers extended. At the end of the century, the decorative art becomes prosperous due to the influence of the Japanese ornamental art as well as the popularity that flowers started to enjoy from.

Flowers and their culture must be seen through their economic importance. Thus, the flower cultivation may be very attractive and very profitable either as a basic economic activity or as a complementary activity.

***Rezumat:** Omul cunoaste florile din timpurile stravechi, iar elementele impletirii florilor s-au nascut simultan cu cunoasterea lor. Primele florarii apar in anul 1870 in perioada dezvoltarii puternice a oraselor, extinzandu-se astfel cultura florilor. La sfarsitul secolului arta decorativa devine infloritoare datorita influentei artei ornamentale japoneze, precum si popularitatii de care incep sa se bucure florile. Florile si cultura lor trebuie vazute si prin prisma importantei economice. Astfel, cultivarea florilor poate fi deosebit de atractiva si foarte profitabila, fie ca activitate economica de baza, fie numai ca activitate complementara.*

MATERIAL AND METHOD

The research was carried out by the "Moara de Vant" greenhouse of the D.S.P.M. Iasi. Like study object it was used plants from soil grown by *Crisanthemum hortorum*, *Alstromeria aurantiaca*, *Freesia hybrida* and *Zantedeschia elliotiana*. In the conditions of the classic technology, it was studied the behavior of plants after harvesting the stems by hand breaking, cutting with a sharp knife and pulling out, the vase life of flowers harvested at four stages - uncolored buds, colored buds, half opened flowers and full opened flowers (primary florets for *Alstromeria* and *Freesia*), and the period of day for harvest - early morning or afternoon.

Valorisation flow sheet for the cut flowers:

- flower harvesting;
- their manipulation and transport to the conditioning point;
- conditioning of flowers by sorting, calibration, special treatments and commercial packing;
- pre-cooling if it is not effectuated simultaneously with conditioning;

- long or short term preservation, humid or dry;
- transport and delivery;
- attendance at the beneficiary.

Each step from the flow sheet has its role and harvesting is given the least importance one of the reasons being that the great majority of flowers lovers buy them thus jumping to the last phase of the flow sheet - attendance at the final beneficiary.

The most important factor for harvesting is the moment when one cuts the flower from the plant, each flower having its own optimum harvesting moment. This moment depends on the moment of valorization, market, transport, the day period, season, culture conditions.

For an immediate valorization, they harvest flowers in an advanced stage when flowers have a maximum decorative effect and they do not need to be submitted to some strong hydric or physical shocks and the sale is sure.

Depending on the market, beneficiaries have certain requirements especially regarding the degree of bud bursting open.

After harvesting, transport is the most stressful moment of the valorization technology for the cut flowers and regarding from the viewpoint of the harvesting moment, the most recommended one is the bud stage.

In spring and summer flowers are harvested in the morning since they have a maximum degree of hydration and in autumn and winter they are harvested after noon when they had enough time to accumulate enough glucides.

The maturation degree of flowers when harvesting them is transposed in the quantity of reserve substances that can be found in the flower and represents an important factor that influences the life-span in the vase.

If they are harvested prematurely, the low contents of glucides cannot sustain the development of the flower, the tissues insufficiently lignified do not have rigidity and the flowers bent – rose, gerbera – and the flower will never reach its normal size.

Harvesting in amore advanced stage insures a high quantity of reserve substances but the real ornamental duration is shortened.

The compensation of the lack of reserve substances when harvesting in the bud phase is made by stimulation treatments for the buds to burst open by opening substances obtaining thus some very important advantages:

- increased resistance to thermal and hydric stress, ethylene;
- outrunning the term of a new culture on the same land, so the production increase;
- harvesting at longer time intervals
- due to the high resistance to mechanical damage, the flow sheet may be mechanized;
- less material is lost due to manipulation, storage and transport;
- the weather caprices are avoided – late or early frosts, hale, storms;
- expenses for storage and transport decrease due to the reduced volume;

- adaptability to the refrigerating method for long preservation without losing quality at the beneficiary;
- the capacity to correct some culture deficiencies – weak light and high temperature influencing negatively the quality, colour and life-span in the vase.

Besides the optimum stage of flower bursting open, it is also important “how” and “where” we cut the flower stems especially at the species producing several floriferous stems gradually by seasons. Each one wants to harvest the flowers with the longest stem but the future production must not be sacrificed. Calla lily, alstromeria and chrysanthemum may be cut as low as possible but freesias must have at least three or four leaves necessary to feed the tuber-bulb.

Though they recommend a sloping cut, it is more important that it be smooth and made with a very sharpened and disinfected knife especially when they want to keep the material for long. The tissue portions remaining on sections block the conducting vessels of the stems and produce the flower withering.

For calla lily – *Zantedeschia aethiopica* – flowers are harvested by snatching, the vigorous stems must be kept with both hands so as not to destroy them. If cut or torn, the stem remainders represent entry ways for the pathogen agents. The ends are reduced subsequently with a well sharpened knife, perpendicularly on the stem; conversely it will split in the vase. The optimum moment is morning, on the sunny days or at noon on the cloudy ones in the phase of semi-open cornet when the cornet starts to detach.

The alstromeria flowers– *Alstromeria aurantiaca* – are also harvested by snatching grabbing the stem as close to the soil as possible. It is not as sensitive as calla lily; its ends may be torn later by hand. The optimum moment is morning when the plants are well hydrated and buds are well coloured not necessarily burst open.

Chrysanthemums – *Chrysanthemum hortorum* – must be harvested in the morning as early as possible to be at its maximum turgescence, by cutting or tearing in the phase of semi-open bud.

Through well conducted farm practices, the freesia flowers – *Freesia hybrida* – may be harvested in any moment of day if the tuber-bulbs obtained as a secondary production are used to start a new culture, the flowers must be cut so that on the stem remain 4-5 leaves necessary to feed the seeding material in the soil. If the inflorescence is long, the first flower must well open; conversely it does not have enough nourishment to open the other in the vase. With stimulating treatments, freesias may be harvested also in the phase of coloured bud. The harvesting is made with a knife or scissors and not manually since they may be pulled out of the soil.

CONCLUSIONS

Harvesting the floricultural material in optimum conditions one avoids the subsequent appearance of complications, deficiencies and unjustified losses. This operation must be made by qualified personnel with experience so as not to compromise the production from the start or even the entire production.

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