

Practical Window Gardening
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Very few people are rich enough to own conservatories or green-houses, but almost every one appreciates flowers, especially through the winter months, when everything out of doors is bleak and bare. For this reason, flowers have been grown in windows of the homes of rich and poor alike. As this method is simple, and inexpensive, requiring a small amount of care in proportion to the returns, it is wide-spread. Of course some understanding is necessary to success. Experienced floriculturists can give the information necessary to a beginner and the actual test of practical window-gardening will do the rest.

All plants do not grow equally well under the same conditions, and for this reason all windows are available for plants. Some plants, like the geranium, will do fairly well even under unfavorable conditions. Others, like the coleus require much sunshine. Pansies, ferns and palms grow best in the shade, while fuchsias do well with partial shade. South windows are best for bringing out the bright tints of blossoms, but the blossoms are retained longer if set in the north window. A deep window ledge is desirable, the larger the window the better and the larger the panes the better, of course a low window is best if it can be had but all preparations must be shaped according to convenience.

Flowers grown indoors require more care than those grown out of doors, because the conditions are more artificial, making it hard for the plant to adapt itself. The chief requisites of success are (1) Plenty of light during the day, with darkness and cooler temperature at night; (2) Plenty of good fresh

air; (3) Perfect cleanliness; (4) Proper amount of moisture; (5) Good soil; (6) Good healthy plants to begin with, and (7) The placing of plants in positions suited to their needs.

Sunlight is necessary to plant growth for without it the little chlorophyll grains can do no work. Even if the food is within the soil, the plant can not use it without the aid of sunlight. Pots should be turned in the window so that the sunlight can act alike on all parts of the plant, thus producing symmetrical growth. Darkness at night is just as essential as sunlight during the day. Plants require sleep and rest just like any other living, growing thing. Lower temperature at night than during the day is also absolutely essential. Different plants require different temperatures, but they must not go below 35°F . If by some accidents plants do go below 35° and do get frosted they need not be thrown away. They may be thawed out by placing in cold water, and leaving in a cool cellar for two or three weeks. Usually when treated in this way, plants will grow again.

The temperatures best suited to window gardening in general are from 45° to 50°F during the night, and from 60° to 70° during the day, although some plants grow best in warmer temperature and others in cooler. This suggests the possibility of arrangement in the windows with those plants requiring warmer temperature at the top. Care should be taken to shield the plant from too sudden transitions from heat to cold or darkness to light.

Plants need air just as much as human beings do, and often air in which human beings are content to live is too foul for good plant growth. Plants must never be subjected to draughts, but there must be free circulation of air between the pots. The air must be pure and abundant. The air and the water together are used by the plant in forming starch and ^{other} carbohydrates which are its most important foods, and if the air is insufficient the plant actually starves.

Water must be furnished as regularly as air. Some plants require more water than others and it takes experience and care to know just what each one needs. The soil must contain sufficient moisture, and yet should not be continually soaked. Damp, soggy soil becomes sour and plants growing in it will be sickly at best. If the plant is rightly watered, the soil will be moist and if well-drained the soil will not be sour. Plants should never be watered when the sun is hot, as they are likely to scald. Water should never be given when the soil is moist to the touch, wait until it is dry. The supply of water must always be regulated by the demand of the plant. Most plants need more water when in bloom than at any other time, and as a rule the soft, porous, hairy leaved plants should be watered cautiously while those with hard shiny leaves should be watered frequently. The purpose of watering is to get the material in the soil in solution so it can be absorbed by the plant hairs. Not only is moisture necessary to the roots but the atmosphere surrounding the leaves must also be moist. All the moisture that is necessary to the atmosphere may be obtained by a little water kept boiling on the

stove. As rainwater contains more ammonia than hard water, it is better for plants. Morning is the best time for watering and better results are obtained if the water is warmed to about 60°F.

Cleanliness is as necessary to healthy plants as it is to healthy human beings. Plants can not breathe with their pores filled with dust, neither can they let the surplus water evaporate. The pores should be kept open by shower baths or sponging of the leaves. A clean plant grows better than a dirty one, and makes a nicer appearance, and plants that are kept clean are rarely infested by insects. Soap and water are the best remedies for plant ailments, and nothing is more beneficial to plants than to be set in a warm rain. One point in cleanliness must not be omitted, i.e. cleanliness of surroundings.

Good soil is necessary to success in window-gardening, but it must be remembered that the soil for all plants should not be the same, what might be excellent for one plant might be poor for another. For bulbs, the soil should be light. The bulb should be placed in the centre of the pot and covered with fine leaf or turf mould. The cacti require sandy soil, geraniums and roses grow best in a mixture of one part river sand to two parts each of leaf mould and garden loam. For plants in general the most easily available materials for a compost are rich garden loam, sand and thoroughly decayed cow manure. The proportion should be one half loam to one fourth of each of the others. Leaf mould is excellent for plants when available and the more decomposed the mould or manure the better. When no other material is available,

garden loam is often used alone, and with great success, but if the loam contains clay sand must be added in order to make the soil more porous. Fill the bottom of the pot to the depth of one inch with broken brick, mortar or charcoal unless the pot is small enough to drain the plant perfectly.

All care regarding air, temperature, cleanliness, moisture and soil is useless the plants are good and thrifty to begin with. Even the expert florist can do little with sickly, puny plants; much less can an amateur window-gardener. Besides sickly plants require more care and give less satisfaction than healthy ones. As the window garden is at its best in the winter, preparation for winter should begin early in the spring and summer. Roses, geraniums etc. should be potted in small pots, changing to larger sizes as their growth demands. After the middle of June, the plants may be set out of doors, leaving them in the pots and burying the pots to the rim. Wood or coal ashes sprinkled under the pots will help to keep away the insects. Great care must be taken in potting the plants in the fall not to injure the roots. If the hole in the pot is stopped up, when set out in the spring, the root will have no chance to escape, will become root-bound thus making the taking up process less dangerous. All flower buds should be picked immediately, for unless this is done the plant exhausts its strength before winter. Seeds for winter blooming should be sown in summer. Use shallow boxes and keep in a warm place, planting the seeds thickly, then transplanting when the plants grow larger.

A few general directions regarding plants are: transplant

when at the period of rest; make cuttings when the plant is most active; check the growth of leaves and stems, and more strength can be given to the flowers; do not allow blossoms to stay on the plants too long, as they exhaust the strength; cut away all faded flowers and dead leaves.

Plants grow much better when they have stimulants, their leaves are brighter and grow thicker. All stimulants must be used with caution. They must be well diluted and not applied oftener than once a week and with some plants once in three weeks is sufficient. A good liquid fertilizer can be made by putting several shovelfuls of manure together with a pint of charcoal dust (to neutralize the odor) into a bucket, adding boiling water.

Apply to the plant when weakened to the color of weak tea. Ammonia dissolved in water is good, one fourth ounce of pulverized or one teaspoonful aqua ammonia to a gallon of warm water is the right proportion.

Insects sometimes infest plants even when they receive careful attention. The most troublesome insects are the red-spider, aphid or green fly and the mealy bug. All sorts of concoctions are resorted to, to get rid of these pests, tobacco smoke, tobacco soaked in water, sulphur on hot coals and other remedies have been tried with success by experienced florists; but for the ordinary window-gardener such methods are dangerous to the plants. Going over the plants with a damp sponge and cleansing with soap and water is the best remedy. Here, as in every other place, "An ounce of prevention is worth a pound of cure," and if the soil is good, the plants kept clean, the temperature

cool enough and moist enough, there will be little trouble. If the plants are strong and healthy, insects are not to be feared.

There are three general ways of propagating plants: by seeds, by bulbs, and by cuttings. In nine cases out of ten where plants root with difficulty from slips, they propagate freely from seeds. There is no rule by which we can designate what plants are propagated from seeds and what plants by cuttings, experience only will tell.

Under the method of growing by seeds the necessary things to remember are: temperature, moisture, oxygen and absence of sunlight, the richness of the soil is not important. Shallow boxes containing from an inch and a half to two inches of soil are the best for propagating by seeds. Seeds planted should germinate at once. Those later in coming up should be thinned out.

In propagation from cuttings, bottom heat must be obtained. There are various devices for doing this, perhaps the most practical way for the window-gardener is by placing a pot within a pot, filling both with earth. Place the cuttings in the one inside and the moisture in the other. The heat can be obtained by placing on the back of the stove. The soil for cuttings should be sharp, clean sand. It should be well-drained and well-ventilated. The cuttings when well started should be placed in a soil composed of garden loam with twice as much sand as humus. Propagation by bulbs will be treated under bulbous plants.

The varieties of flowers that can be grown in window-gardens are too numerous to mention. With proper care flowers of all kinds and colors may be grown. The richest colors, the

most delicate perfumes and the finest blossoms may be grown in any one's windows. Some beautiful plant can be found suited for any reasonable condition. No one need confine herself to a few common varieties of flowers, but may have a good assortment of choice blossoms, if she is willing to give them proper care. Some of the plants that might be grown are geraniums, pellargoniums, fuchsias, heliotropes, begonias, mignonette, pansies, cypripediums, hyacinths, English ivy and Madeira vines.

The geranium is the plant most common because it can be grown so easily and does reasonably well even when slighted. The chief requirements for the geranium are good garden soil, some sunshine and plenty of water, but the more care the better the reward. Geraniums are grown chiefly from cuttings, but sometimes from seeds. Both require a sandy soil until well started. This plant has been cultivated until there are very many varieties of blossoms of most beautiful coloring from the purest white to the deepest scarlet, both single and double. The leaves also are beautifully colored. For winter blooming plants should be started early in September. Partial shade is best for a week or so, then give more sunshine. Plants thus started will be thrifty and well set with buds by December, and will keep in bloom for several months.

Pellargoniums and geraniums belong to the same class of plants, and have many characteristics in common. The hues of the pellargonium are in every shade of scarlet, crimson, cherry, purple to lilac and white; they are blotched spotted and marbled. They are easy of culture requiring rich soil, plenty of light air - and

water. The cuttings rooted in spring make large plants by fall. New varieties are grown from seed sown in March. These plants blossom but once a year and after blooming require a period of rest, during which time water should be almost entirely withheld for three months, after which water should be given sparingly until new growth begins; then give plenty of light, air and water. Liquid manure is a good thing for this plant while it is developing flower buds. Its growth is vigorous, and re-potting both in spring and fall is required for perfection of bloom. This is one of the most beautiful plants for house culture and can never be equalled by the geranium.

The fuchsia also is easily grown. No plant will more fully repay attention given. The soil should be light, sandy loam enriched with well-rotted manure; it should be well-drained, and never allowed to get dry except during the period of rest, which lasts about two months. Especial care must be taken given to the moisture because the fuchsia drops its buds when too dry or too wet. Propagation is by cuttings which should be strong healthy and woody, containing not less than three or four joints. The main stem should be grown straight, and may be kept upright by means of stakes.

There is one really winter-blooming variety of fuchsia, a single, white and red, known as *Speciosa*. Sometimes other varieties will bloom in winter, but this is seldom and it is hardly worth while to try to grow them. This variety will bloom from nine to ten months of the year in a window garden. Fuchsias do not require the direct rays of the sun all the time and do not need high

temperature.

A good collection is hardly complete without the heliotrope. It is found in shades from white to purple, the white often reverting back to purple. The delicate fragrance of these flowers is more pleasing even than the flowers themselves. If the plant is pruned and kept in a healthy condition, the older the plant the more profuse the blossoms. The temperature for flowers is from 68° - 70° but at 50° the plant will still do well. The heliotrope will not bear drought or over-watering; it must have the direct rays of the sun, and will not grow in a shady location. Good drainage is especially needful, and the soil should be good and rich, with an admixture of sand. The red spider is the heliotrope's worst enemy, but careful sponging keeps it away. Cutting root easily, either in sand or water. If taken in March they will make fine plants by another winter.

Begonias give a large variety. They are of three kinds: Rex, flowering and tuberous rooted. The Rex is beautiful for decorative purposes the whole year round. Its leaves are bright, glossy and variegated, and for beauty can be replaced by nothing else. The flowering type is always in bloom. It has clean, glossy leaves and delicate pink and rose-colored flowers.

Nothing cheers a dark room better than the bright little faces of fuchsias in their shady corner. They bloom best when the plants are small and well-rooted, as the plants increase in size the blossoms become smaller and inferior, but more abundant.

Pansies can be kept back after spring flowering by picking the buds, and when kept back until December they will bloom during the whole winter. The ease with which pansies can bear changes of atmosphere make them desirable for window gardens. Pansies can be grown from seeds, by division of the roots and by cuttings, but are most easily grown from seeds. They are great feeders and grow best in the richest soil that can be provided for them. Shade is their delight, and the northwest window, their favorite.

Mignonette is desirable, not so much for its flowers as for its delicious perfume. For winter blooming the seeds should be sown in August. Thin out to three or four strong roots to the pot; pinch off the top shoots to keep the plant from straggling, and by November the pot will be filled. By December there will be blossoms in great profusion. To have mignonette the year round, begin sowing in February, sowing again in April, September and October. Thin out the plants to about five in each pot as fast as they grow up. Shade from the sun in the heat of the day. Train to small stakes in the pot, in any shape that may be desired. The soil for mignonette should be rich, but not heavy.

Cypripediums afford endless variety in color, shape and growth. The secret of success in them is starting them right, and never letting them stop growing until they are rooted and ready to bloom. Never let them get dry or root-bound. Give plenty of soil.

The bulbous plants are too numerous and beautiful to pass by unnoticed. They are attractive for their beauty of color, their variety, brilliancy and delicacy, but more for their delightful fragrance. The hyacinth is preeminent among them. It has been popular for more than three hundred years and is still popular. It will adapt itself to most any condition but no plant pays better for culture. It can be grown in a variety of ways but the best, simplest and most common way is growing in pots. The bulbs should be secured about September, and immediately potted in soil composed of equal parts of good loam, leaf-mould and well-rotted manure with an addition of one fifth good, clean sand. The pots should be about five inches across, and eight inches deep, and after having been filled, should be plunged in an open border for the purpose of encouraging root growth. If these bulbs are brought in by the first of December, they will bloom until New year. If you wish continuous blossoms of bulbs, set in a cool place and bring into the sunlight from time to time. Bulbs will not bloom well but once, the blossoms will be poor and straggling after that.

Two vines for house culture are the ivy and Maderia vines. The ivy will grow for almost every one, and for this reason is sometimes called the poor man's vine. It will live a long time in one pot without change of soil or position. It accommodates itself to all temperatures except below freezing; but the temperature must be uniform with some warmth. It requires rich soil and much water, but it can be made to grow in water

alone. It is not sensitive to change of light. It is propagated from cuttings taken from the young tender branches. These cuttings should be put in wet sand, which must be kept so for about a week, until the cuttings are rooted. Then the roots start, put in garden loam with one third sand. Ivy with a centre-piece of ferns is very pretty for a hanging basket. This plant is grown more for foliage than for flowers. The Madeira vine is propagated from tuberous roots. It has large, dark green, glossy leaves and fragrant white flowers. It is more sensitive than ivy, and cannot bear exposure to extreme heat or cold. Garden loam, partial shade, and a moderate amount of water are essential to its growth. For winter the tubers should be planted in early fall.

This production might be continued indefinitely, naming the plants that might be grown and giving general directions for their cultivation; but enough has been said to show what may be done. The next question is, "What are the benefits derived from window-gardening"? The answer is —

The presence of flowers always aids in the development of refinement and elevated taste. They suggest purity and always bring cheer. "A simple flower stand near the window, a hanging basket over head, all shedding their perfume, add, day by day, brightness to the other generalities of the home; and through all the wintry months furnish food for pleasant thought. Window gardening helps to make home more beautiful. It educates a healthy sentiment, interests children as well as

grown people, and furnishes means for healthful activity. Besides this the knowledge necessary for ~~their~~ cultivation is easily gained by patience and experience. Its simplicity and inexpensiveness makes it accessible to all. Its use in the home is told in these words —

"Make your home beautiful, sure 'tis a duty;
Call up the little ones, teach them to walk
Stand in hand with the angel of Beauty;
Encourage their spirits with nature to talk.

"Make your home beautiful; weave round its portals
Breaths of jessamine, and delicate sprays
Of red-fruited wood-bine, with gay immortelle
That blesses and brightens wherever it strays.

"Gather the blossoms, too — one little flower
Varied verbenæ or sweet mignonette
Still may bring bloom to your desolate tower,
Still may be something to love and to pet."