



EASTER LILY GROWING.
TO BECOME AN AMERICAN INDUSTRY
GUY ELLIOTT MITCHELL.

The general policy of the Department of Agriculture has been to endeavor to produce at home such plants as are grown abroad and shipped into the United States. This is just as true with regard to luxuries as to necessities, and especially apropos is its reference to the Bermuda or Easter Lily. For some years efforts have been made to cultivate successfully the Easter Lily in the South-eastern States, but it has been found that the climate of that section is not as favorable for the lily bulbs as it is in the Bermudas and Japan.

Experiments have demonstrated that bulbs of the Easter Lily can be carried over a season in cold storage, with a result that they are benefited very materially as it subjects them to a condition approaching that existing in Japan, the native country of the species, where the bulbs are heavily covered with snow during the resting period. This discovery has opened new possibilities in the cultivation of the lily. Heretofore, bulbs have been planted in some parts of the South early in the fall, with the result that they sprouted considerably before cool weather set in. When severe weather, such as the South gets at some periods of the winter, does come, this growth is killed and the plant more or less injured. During the period before coming into bloom, the plants rendered sickly during the winter often suffer severely from lack of moisture, resulting in poorly developed bulbs.

On the Blue Bermuda Islands.

Lily growing on the Bermuda Islands is an exceedingly profitable industry. Practically all the land available for the production of bulbs is utilized for this purpose, and while the rotation of crops, together with the most ap-

plants can be grown which are entirely free from disease, and most important of all, that the seedlings give an opportunity to select better types than exist at the present time.

The very best of these seedlings, some of which will undoubtedly show superiority in several ways over the parents, can be retained for seeds, and by keeping up the system of selection there will develop in a very few years strains from seed which will be proven of great value.

George W. Oliver, the plant propagator of the Department of Agriculture has been working on this particular line for a number of years, with every indication of success. In some instances he has obtained blooming plants in from 7 to 9 months from germination of the seed, while in recent trials, as many as twelve magnificent blossoms have been cut from a plant within fourteen months after the plant has shown itself above ground.

In order to further this class of work, the Department of Agriculture has obtained plots of land in California and Oregon where it is believed the Easter Lily can be grown as profitably if not more so, than it is in either Bermuda or Japan.

A point greatly in favor of raising the Easter Lily from seed, to constitute the crop of marketable bulbs, is that from one to two years' time is saved in the operation over the scale method. The results of the work of the Department of Agriculture in obtaining blooming plants in so short a time after planting the seed would probably seem like a fairy tale to the participants of the lily conference held in London in 1901. One of the papers read at that time states that many species of *Lilium* must have from ten to twelve

Orchard Notes.

Soon is the time when the apple borer will emerge from the trunk of the tree in the shape of a fly and look about for crevices in the tree trunks in which to deposit her eggs. A way often recommended is to take a hoe and hill up each tree about six inches. This will necessitate the laying of the eggs on the trunk where they can be easily gotten at and destroyed later.

May will be a good time to walk rapidly through the orchard and rub off the new shoots, or water sprouts, on the trunks of the trees. If much pruning has been done these will be found in abundance. When soft and green, as they are during this month, they can be easily removed, pulled out by the roots, as it were, whereas later they will have to be cut off, causing a liability to sprout again.



This Magnificent Bouquet was Grown from Seed in Fourteen Months.

If any top grafting has been done and the grafts have taken, all sprouts below the grafts should be rubbed off clean, allowing the full vigor to go into the graft.

For the best results fruit and other trees should be cultivated early and often during the spring and early summer, as that is the time when most growth is made. When the fruit is small there is plenty of sap for vigorous wood growth, but after the fruit approaches maturity the wood growth decreases.

Caring for Transplanted Trees.

It is well the first year a large tree is transplanted to put a tile at its base or a square box five or six inches in diameter, in an upright position, and stimulate the tree by pouring down soap suds or other water. This furnishes sub-irrigation and allows but little of the water to evaporate.

Trees should also be dug around from time to time if rapid growth is desired. A tree can grow up in sod and practically stand still or by the use of manure and cultivation it can be made to grow as fast as desired. The sod method is frequently followed by the man who has no time to spend on the convenience and appearance of his place.

As the warmth of spring approaches the system craves some fresh acid, and nothing is more grateful than rhubarb. A most satisfactory practice is to cover a couple of thrifty stools of rhubarb with an old half-barrel, inverted, and pile around it green manure. This will force it into quick growth.

Green Manuring.

Very sandy soils are more apt to show a beneficial effect than heavy soils from plowing under green crops as compared with applications of fertilizers or manures, for the reason that in such soils fertilizer or manure leaches quickly away, whereas the humus afforded by the green crop is more entirely retained, itself adding to the body of the soil. Sandy soils, too, are nearly all deficient in vegetable mold, and green manure is the easiest and cheapest method of supplying this factor.



THE PHILIPPINE LILY.

Planting overgrown nursery stock because it can be secured cheaper than young stock is a serious mistake. In the first place the handling is much greater, and, again, such trees will never make the sturdy and vigorous growth of the younger ones. To use them at any price is poor economy.

The Eskimo gives his doctor a fee as soon as he comes. If the patient recovers, it is kept; if not, it is returned.

The gates of Pekin are closed every evening with elaborate and formal ceremony. The closing of the gates is one of the sights which strangers travel far to see.

The beautiful patterns which are used for Cashmere shawls are frequently copied from the leaf of the begonia.

THE COMING FARMBOY.

The Educated Farmer Becoming a Power in State and Nation.

The time is fast coming, if, indeed, it is not already here, when the intelligent, industrious and energetic farmer will occupy a far more prominent place in the affairs of State and Nation than ever before. The rapid pace necessarily adopted by those engaged in professional and mercantile pursuits, in order to successfully meet the competition assailing them on every hand, is not conducive to the mental endowment of their descendants, and the farmboy of rugged constitution and industrious habits will be in ever growing demand to fill their depleted ranks. Much has been written in regard to the prominent part played by such breeding and early country training, in the successful management of great mercantile enterprises and the marvelous discoveries and achievements of great professional leaders and much more will still be written upon the same subject. The farms of the country have been and will continue to be the nurseries from whence the degenerating forces of those overworked brains and shattered nerves will be recruited.

More important still, there is also a most promising future for the farmboy who takes up agriculture as an occupation. Farming is no longer mere drudgery and muscular exertion, in which man occupies about the same place as the beasts of burden, but it is an industry calling for the keenest intelligence and the application of well defined principles.

If the farm boy can be made to understand that the cultivation of the soil and the feeding of stock are based upon principles as clearly defined as those underlying any mechanical or mercantile pursuit, and that the same skill and energy applied to the former as to the latter will yield equally profitable returns, he will be more greatly attracted to his home acres. When to these facts are added the opportunity to participate in public affairs and the assurance that because he becomes a farmer, he does not surrender all claim to public recognition and renown, he will enter upon the work of the farm with greater zest and courage and with less foreboding.

In order to obtain these results, it is necessary that the farm be fitted for the work as thoroughly as persons are fitted for other professions. He must study agriculture as one who is to become a physician studies medicine, or the one who is to be an attorney studies law. He must not only know how to do all things, but he must also know why the things are done. He must know the effect upon the soil of different methods of culture and the effect upon animals of various systems of feeding. He must know a thousand things unknown to his ancestors a generation or two ago, and then—not and still then will he be in a position to practice farming as intelligently and as successfully as the physician practices medicine or the attorney practices law.

It requires time, hard study and some money to acquire this knowledge, but not so much as is required to prepare for other occupations and professions yielding good returns. There is no study necessary for the laborer who uses pick and shovel at a dollar and a half a day, but preparation is necessary for him who earns three or four times that amount in any line of work. There is no preparation necessary for the farmer who is content to harvest what the soil produces of its own accord, but preparation is necessary for the farmer who produces three or four times the average yield of the soil. The man who manipulates the soil and directs the elements of nature in an intelligent manner in the production of that crop is an almost greater factor than the soil itself. Father and mother who desire their boys to become or remain farmers, should encourage them to make the requisite preparation for their life work and then there will be fewer abandoned farms and fewer discouraged and disheartened farmers.

The Joke was Moss Grown.

He said it in all innocence. It was at a nice, homelike little party the other evening, and Gabley had just told his time-worn story.

"Oh, strangle it," called out Jonathan Happlegood in his sonorous voice, which made everybody look. "That story is more ancient and rock-ribbed than the hills."

Then the three spinster Hill sisters of uncertain ages got up and stalked stiffly out of the room with that set, hard expression which is akin to the "automobile face."

One of the Ranks.

"Hello," said the Pipe to the Black Cigar.

In the Smokers' grand parade, "I see you march with the Cigarettes Instead of your own brigade." The Black Cigar moved down the line, Ashamed as he could be,

And simply said, with deep-bowed head:

"I've joined the 'ranks,' you see."

Courtesy to the Cloth.

He was a young and smart-looking Scots clergyman, and was to preach a "trial" sermon in a strange church. Fearing that his hair might be disarranged or that he might have a smudge on his face, he quietly and significantly said to the beadle, there being no mirror in the vestry:

"John, could you get me a glass?"

John disappeared, and after a few minutes returned with something under his coat, which, to the astonishment of the divine, he produced in the form of a bottle with a gill of whisky in it, saying:

"Ye mauna let on about it, meenister for I got it as a special favor, and I wadna hae got it if I hadna told them it was for you."

The Man of the Hour.

He stood in the hall at midnight. But the clock was not striking the hour.

For his careful touch had stilled it. Ere the storm had time to lower.

He said, as the stairs he climbed softly, "A hero of labor I'm like—"

For surely this night I've averted A most disastrous strike."

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SECRETARY WILSON AND A LILY GROWN AT THE DEPARTMENT OF AGRICULTURE FROM SEED.

proved methods of selection and cultivation, would undoubtedly be eventually a good policy for the growers to pursue, yet, except in the case of the more progressive growers, there is little likelihood of this being done, as it would materially decrease the revenue from lily farming for the time being. This will readily be understood when it is stated that an acre of lilies will bring from \$1,000 to \$2,000. Some growers on the islands who thoroughly appreciate the importance of careful methods are using small bulbs in preference to scales, and are selecting and fertilizing carefully, but they are heavily handicapped by the many small growers who cultivate their crops according to old methods; and in these cases there is no selection with a view to producing and perpetuating good types. Little manure is used. The methods of propagation are very faulty and they have not been changed since the beginning of the industry in the islands. For instance, in the growing of the bulbs for American markets the smaller sizes are planted in the fall and harvested in July, or before the bulbs have thoroughly ripened. In the process of handling, many of the immature scales drop from the bulbs. These are not thrown away, as they ought to be, but are carefully saved and planted with a view to raising small bulbs. These bulbs ultimately form a large part of the general crop.

As a result of all these conditions the bulbs marketed by Bermuda have become impregnated with disease, so that, at the present time it is almost impossible to secure a bulb or plant which does not show some trace of disease.

The American Method.

Investigations made by the Department of Agriculture have shown that by the use of seeds instead of scales, larger bulbs can be secured in a much shorter time than can be produced by the scale method. Moreover, it has been demonstrated that in this way

years to develop a flowering bulb from the seed. A noted scientist who was believed to be an authority on lily growing, stated that "in three or four years at most, flowering bulbs will be produced from seed if the young plants are properly treated." While the experiments of the Department of Agriculture have shown that some seedlings are longer than others in coming into bloom, yet when these do flower, they reward all the cultivator's labor by producing a great amount of flowers—instances being known of plants with from ten to fourteen flowers at one time.

Hybrid Philippine Lily.

The Bureau of Plant Industry of the Department of Agriculture last year took up the problem of shortening the time of growing, as any shortening in the time of growth represents so much gain to the cultivator. With this in view the Department imported a species of lily from the Philippines which was known to bear flowers in from two to three months after planting of the bulb. This lily has been crossed with the common Easter Lily, and the result has been a hybrid, bearing as many flowers as the old Bermuda Lily, with no difference in appearance from this plant, except that the hybrid will develop in four or five months, representing a shortening in time of from one to three months. While the experiments of the Department are not yet completed, the results attained so far warrant the belief that the new hybrid Easter Lily can be produced cheaper than the old variety which blooms not less than from six to eight months after planting of the bulb.

Men's Trials.

See a pin and pick it up—and you can bet your wife'll ask you for it before you get a chance to use it.

There are Indian millionaires in Indian Territory and Oklahoma.