

## Work of Luther Burbank Is Explained

Hints to Gardener and Orchardist Are Given From Career of Wizard of Plant Life.

**I**N THIS, the early spring days, when the men and women whose diversion involves work in the garden and in the orchard, it might be well to take a lesson from the resultful methods of the greatest of all horticulturists, Luther Burbank. While the world knows much of his achievements in the creation of new forms of plant life, only a very small number of those familiar with his work really know how he gets the phenomenal results that have made him the genius that he is.

Luther Burbank has several fundamental methods of procedure—perhaps the most important being the hybridizing of more or less closely related species and varieties of plants. Early in his career he discovered that he could produce new varieties, and in some cases new species, by cross-fertilizing different species of plants. As testimonials to his success in this field, we have his well known plumcot, a cross between the plum and the apricot, crosses between the apple and the pear, apple and quince, quince and pear, peach and lemon, orange and lemon. By crossing different varieties within the species, he has produced hundreds of new varieties of plums, prunes, peaches, apples, pears, cherries and quince. His stoneless plum and prune and his gigantic cherries are notable instances of his creations by crossing different varieties of the same species.

### Judgment Is Keen.

As a supplement to the process of hybridization comes his keen judgment in the selection of varying individuals of the same species or variety. By taking a cherry that bore fruit early in the season, he developed his present early appearing cherry. By selection he evolved the Burbank sugar prune with a 23 per cent sugar content.

Burbank's method precludes guess work. He always knows exactly what he is striving for and only uses such examples as contain in the embryo the ultimate qualities desired. If he desires to make the cherry larger, wider, redder and juicier he reduces the size of the plant and shortens the stem to make the tree a hardy and a prolific bearer. He blends the right hereditaries and after securing plants that show a given combination in a superlative degree, he then proceeds to produce a great quantity of seedlings.

### All Seeds Are Saved.

Here, perhaps, lies the secret of his success, for by this he accomplishes, within a comparatively short time, what would otherwise take years to do. After his attention is attracted to a plant, Burbank saves all of the seeds and sows them in soil placed in green house boxes about 18 inches square and four and one-half inches deep. The soil itself is prepared by mixing 50 parts of pure sand, forty parts of loam containing leaf-mold, eight parts powdered moss or peat and two parts bone fertilizer. The soil is moistened by dropping boxes into a tub of water. The seeds are sown on the surface and covered lightly with a thin layer of soil and powdered moss.

The seedlings are transplanted into a field and then subjected to a rigid inspection—out of many thousand seedlings Burbank may select less than a dozen for further experiment. In his selection he lays particular stress on the sturdiness of the stock, the branches, round fat buds, large thick leaves, rich color, vigor and tendency to upright growth.

### How He Saves Time.

In order to bridge time and to breathe into the complex hybrid, and various trees of the different species, he gets a seedling from its own root and grafts it as a scion on the branch of a mature tree. He grafts his seedling, as a rule, on a twig nearest the end of a branch. The scions thus placed usually bear fruit in the second year, whereas, if they had been left to grow on their own roots, five or six years of growth would be necessary to secure a bearing. Because of this method experiments are carried on through five or six generations in the time that would originally be required for two generations.

At the Burbank proving grounds at Sebastopol, will be found many trees with a score or more of graftings on each and every one of them.

All of Burbank's work has a permanent quality in it, and the methods that he employs, might be used by anyone who has more than a mere cursory interest in plant development.

Never work a team of colts together until they are thoroughly broken, as they will worry each other.

## Getting More Money From Egg Crop

**B**AD EGGS cause farmers a loss of between three and four million dollars annually. Government experts estimate that 5 per cent of the eggs marketed have developing chickens and that 3 per cent are "rotts" due to the embryo decaying. All these losses could be avoided by keeping roosters out of the flocks, thus having only infertile eggs produced. If farmers would follow this plan, they could save one and three-fourths millions of dollars annually.

Infertile eggs produced by flocks in which there is no male bird are the only kind that can reach the consumer in good condition during the hot summer months. The only object in having a male bird in the flock is to get fertile eggs for hatching purposes. Now that the hatching season is over, colleges of agriculture urge all farmers to sell off all the roosters or shut them away from the hens.

Last year in July and August nearly one-half the eggs leaving the farms were unfit for food. The farmer, as a result, received a low price. Prevent that loss this year by getting rid of the rooster. Now is the time to act to prevent future losses.

### The Note.

"Oh, by the way, dear," said the merchant as he was preparing to leave the house in the morning, "if I find I can't be home to dinner I will send a note by messenger."

"Don't trouble," said his wife, sweetly, "I have already found it on the blotting pad."

## Forest Fire Season Gets Early Start

**F**IRST REPORTS of forest fires have begun to come in to Washington from the national forests and they indicate to the federal officers an early start of the fire season, with unfavorable weather conditions from the very beginning. In the Northwest there was less snow on the mountains at the end of the winter than for many years past. Railroad rights of way which were last year deep in snow are reported clear now and dry enough to burn readily.

From the Canadian border to Mexico the reports are similar, and there have already been extensive fires in California and Arizona.

The chief forester reports, however, that the fire-fighting forces of the service are organized better than ever before, particularly in respect to the fire detection system of lookout stations. By means of these stations fires are reported quickly and accurately, so that the control forces may be on the ground at the earliest possible moment.

In those states where the gravest danger threatens, special efforts are being made by the government foresters and by co-operative fire protection associations organized among timberland owners, to secure care with fire on the part of campers, prospectors, loggers and by railroads. The Northwestern Forestry and Conservation Association, with headquarters at Portland, Oregon, is one of the leaders in this campaign.

Last year the fire loss on the Canadian timber reserves was the smallest ever known, only one-fiftieth of one per cent of the area being burned over.

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