



LUTHER BURBANK

THE PLANT WIZARD

LUTHER BURBANK CAME TO BE KNOWN AS "The Plant Wizard," although he himself never liked the phrase. Still, it gives us an idea of the miracles he accomplished with flowers, fruits and vegetables. Through selective culture, the crossing and grafting of various stock, which produced many new and useful plants, and improved many others, Burbank made a great and lasting contribution to agriculture.

He was born in Lancaster, Massachusetts, in 1849. From his early childhood, he showed a particular

liking for flowers and plants. He attended public schools and later, the Lancaster Academy. In the local library, he found books on plant and animal life which fascinated him. He became a student of the things that grow in the ground. One winter day, when Burbank was seventeen, he was walking through the woods, with a young friend. There was snow on the ground. . . .

FRIEND: Luther—look at the tracks in the snow! Maybe it's a fox!

LUTHER BURBANK: I don't think so. They look like rabbit tracks to me. Yes—that's what they are. See where the back feet land together?

FRIEND: Let's trail him! Come on!

LUTHER BURBANK: The tracks don't look very fresh.

FRIEND: They're plain enough. Come along, Luther. Let's see where he went.

LUTHER BURBANK: All right. It won't be hard.

FRIEND: Wait till we get to the top of this rise. There—see? He went into that patch of brambles. Shall we follow him?

LUTHER BURBANK: If you want to.

FRIEND: We'll get all scratched up.

LUTHER BURBANK: No, we won't—not if we're careful. Easy, now. Watch yourself.

FRIEND: I am. Where do the tracks go, Luther?

LUTHER BURBANK: I don't know—but look!

FRIEND: What have you found? Let me see. Well, look at that—green grass—at this time of year!

LUTHER BURBANK: It must be on account of this little spring. It's—why, it's sort of warm! It must come from a long way down in the earth. Feel it.

FRIEND: It isn't hot—but it *is* kind of warm. I never saw anything like it before, did you?

LUTHER BURBANK: No—and I never saw green grass in the winter, either. You know, it gives me an idea. Perhaps you could make things grow even in cold weather, if you could keep them warm.

FRIEND: Well, this grass is certainly green enough.

LUTHER BURBANK: I think I'll try it, with some corn. I'll grow it in the house—and I'll have corn to eat a month before anybody else. I'll plant the seeds in a box of earth, early in May—indoors. And by the time the shoots get too big to keep in the house, it will be warm enough outside to transplant them, in the garden. I'll still have corn a month ahead of Father.

FRIEND: It sounds like a good idea, Luther. But let's keep on tracking that rabbit.

LUTHER BURBANK: The rabbit? Oh, yes. You know, I'd forgotten all about him!

Young Luther Burbank tried the experiment of planting corn indoors and proved that his idea was a good one. He continued experimentation with the

early planting of vegetables through the next four years. In 1870, when he was twenty-one, he bought a farm of his own, a seventeen-acre tract of land near Lunenburg, Massachusetts. Here he began his life work of plant breeding. From his reading and his experiments, he had proved to himself that proper selection was the way to improve any plant strain. In 1870, the common New England potato was scrawny and poor-tasting. But Burbank had hopes of improving it. One afternoon he was working in his potato patch with a farmhand. . . .

FARMHAND: Bugs ain't so bad this time of year, Mr. Burbank.

LUTHER BURBANK: The bugs? No. But perhaps they're just getting tired of the kind of potatoes we're raising.

FARMHAND: The potatoes we raise on this farm are as good as any.

LUTHER BURBANK: Yes—and so are our other vegetables. I wish we could grow better potatoes, though. Say, Jim—look! Did you ever see one of these things?

FARMHAND: Sure. I saw one quite a while ago. It's a seed ball—a potato plant gone to seed. They do that sometimes.

LUTHER BURBANK: I've seen pictures of them, but this is the first one I've ever really seen.

FARMHAND: If you plant them there seeds, you

get potato plants, same as when you plant the eyes.

LUTHER BURBANK: So I've read. But look, Jim—no two of these seeds are exactly alike.

FARMHAND: They all look alike to me.

LUTHER BURBANK: But they're all a little bit different. I could prove it to you, if I had my magnifying glass. You'd see it in a minute, then. I can see it just looking at them in my hand.

FARMHAND: Maybe you can. But what does it mean?

LUTHER BURBANK: Well, I believe that the plants and the potatoes will be as different as the seeds are. Some of the seeds may produce better potatoes. That's what I've found out from working with other vegetables.

FARMHAND: Sounds like common sense, to me. Like father, like son—that's the old saying. You know, we can grow a whole patch of good potatoes from just a few good ones.

LUTHER BURBANK: And a big field of good ones from the best ones out of the patch.

FARMHAND: That's right, Mr. Burbank.

LUTHER BURBANK: That would give us enough to start a lot of other people growing them, people scattered all over the country. Be nice if we could give the world a better potato, wouldn't it, Jim?

FARMHAND: Sure would.

LUTHER BURBANK: Well, let's plant these seeds—and see what happens.

Young Burbank's reasoning was sound, and he had an excellent idea. He planted the potato seeds, and from two of them he grew a far superior brand of potato. There was a great market for them. Burbank might have become an extremely prosperous farmer, and from selling the new potatoes as seed, he might have built up a profitable business. But business and money-making did not appeal to Luther Burbank. Three years later, a stranger came to visit him, at the farmhouse at Lunenberg. . . .

MR. GREGORY: Good day, Mr. Burbank. I'm glad to see you, sir. My name is Gregory.

LUTHER BURBANK: How are you, Mr. Gregory? Will you sit down?

MR. GREGORY: Thank you. You're a *young* man, aren't you?

LUTHER BURBANK: I wish I were younger. There's a whole lot I want to do.

MR. GREGORY: Most people don't get that idea until they're about my age. But I know you're busy, so I'll come right to the point. Mr. Burbank, I want to buy your new potato—the Burbank potato, as they call it.

LUTHER BURBANK: You want to *buy* my new potato?

MR. GREGORY: That's right. I thought perhaps you'd heard of me. I come from Marblehead.

LUTHER BURBANK: Oh—of course. Your name's

Walter Gregory. You own the big farms down there.

MR. GREGORY: That's right.

LUTHER BURBANK: I've heard of them. I should have recognized your name.

MR. GREGORY: I want to buy the exclusive right to raise the new potato you've developed.

LUTHER BURBANK: Well, you see, Mr. Gregory, I'd hoped that everyone would have a chance to benefit from my new potato.

MR. GREGORY: But I'm talking about growing them. I want to do this thing on a big scale. I want to make every farmer in the country realize what this new potato is, so that he'll buy seed potatoes from me. That's the way to make a big thing out of it, Mr. Burbank.

LUTHER BURBANK: I suppose you're right.

MR. GREGORY: I am right! If you just go along as you are, making the Burbank potato general property, it won't spread half so fast. You've got to tell people about a thing to make them want it.

LUTHER BURBANK: I'm afraid I don't know much about selling things. I'm more interested in growing them.

MR. GREGORY: That's what I thought—and that's just why I came to see you. Now then, Mr. Burbank, how much money do you want for the exclusive rights to your new potato?

LUTHER BURBANK: A hundred and fifty dollars.

MR. GREGORY: I see.

LUTHER BURBANK: Is it too much? You see, I want to go to California. I have three brothers there now—and from what they say in their letters, it's just the kind of climate and soil I'm looking for. There are a good many experiments I want to make.

MR. GREGORY: With plants, you mean?

LUTHER BURBANK: Of course! Vegetables and fruits. Things grow fast in California. You can get results quicker. And a hundred and fifty dollars would just about pay my way out there. Is it too much money for the new potato?

MR. GREGORY: Why, no. I think it's about right. Yes—I'll pay it.

LUTHER BURBANK: Thank you, Mr. Gregory.

MR. GREGORY: Not at all, Mr. Burbank. As a matter of fact, I should thank *you*.

So, in 1875, Luther Burbank, then twenty-six years old, traveled to California, where he established a small nursery. He continued his experiments with vegetables and fruits, and built a small but profitable business by the same means he had used in developing the Burbank potato—the process of selection. One day, a fruit grower by the name of Wells—a man who had done business with Burbank before—came to the office of the Burbank nursery. . . .

MR. WELLS: I've an idea, Burbank.

LUTHER BURBANK: What is it Mr. Wells? I like

to talk with people who have ideas about this business we're in.

MR. WELLS: I'm thinking of trying a new line. It seems the whole country is beginning to use more prunes, and I have a notion the demand for them will keep on increasing. At least, I'm willing to gamble on it.

LUTHER BURBANK: A good prune is a fine thing! Delicious, nourishing fruit—when it's stewed up.

MR. WELLS: Yes, but what I'm thinking about is that people are willing to buy them—lots of them. And I've got land enough to set out twenty thousand young plum trees, next spring, for prunes.

LUTHER BURBANK: Where do you think you're going to get them?

MR. WELLS: I don't know. Haven't you got that many?

LUTHER BURBANK: Why, there aren't that many in the whole State of California. There hasn't been much of a demand for prunes, you know.

MR. WELLS: Well, there's going to be. Every grower I know of is trying to get trees. I was hoping you could help me out. But if you can't—well, you can't.

LUTHER BURBANK: I'd like to help you, Wells. Perhaps I can.

MR. WELLS: Can you?

LUTHER BURBANK: I'm not sure. Give me a day to think about this thing.

MR. WELLS: A day?

LUTHER BURBANK: I always like twenty-four hours to think a thing over.

MR. WELLS: Take as long as you like. If you can help me out, fine! And if you can't, I haven't lost anything.

LUTHER BURBANK: That's true. You won't lose anything—and perhaps I can help you to win something. You've given me a problem, Wells—and I'll try to solve it.

The next day, Luther Burbank agreed to deliver to Mr. Wells, twenty thousand young plum trees in nine months' time. Out of Burbank's fertile imagination and his knowledge of plant life, an idea had come to him—an idea that helped to gain him the title of "The Plant Wizard." As the first step in carrying out his promise, he visited a neighboring nursery man. . . .

NURSERY MAN: Well, Burbank, I haven't seen you for quite a while. How's everything?

LUTHER BURBANK: Pretty good. I came over today to see if you could fill an order.

NURSERY MAN: An order? I will if I can. What's on your mind?

LUTHER BURBANK: Mostly the twenty thousand almond trees that my men are beginning to plant today from selected seed. I hope most of them grow.

NURSERY MAN: From what I know about you, I'd guess that every one of them would grow. But that isn't what you came to see me about, is it?

LUTHER BURBANK: No. I was thinking that you had more plum trees than any man around here. Next April, I'll be wanting some buds—quite a lot of them.

NURSERY MAN: Plum buds. Well, I don't know what you want them for, but I can let you have as many as you need.

LUTHER BURBANK: Twenty thousand of them?

NURSERY MAN: Twenty thousand? Well, that's a lot, but you can have them. I'll just snip all the buds off about a hundred trees.

LUTHER BURBANK: Better snip half the buds off two hundred trees—if you've got that many. It will be healthier for the trees. And there's a demand for prunes right now, you know.

NURSERY MAN: That's right. But I don't see what you're going to do with twenty thousand of the buds. Of course, it's none of my business.

LUTHER BURBANK: If my plan works out, it may mean a great deal to your business.

NURSERY MAN: Now listen, Mr. Burbank. I'm not trying to pry into your affairs. But has this order for twenty thousand plum buds got anything to do with the twenty thousand almond trees your men are planting?

LUTHER BURBANK: Well, I hope it has!

The almond trees, grown from seed, came along in fine style. And the following April, the twenty thousand plum buds were delivered, according to Burbank's order. Then Burbank engaged a staff of experts to graft the plum buds on to the young almond trees. Grafting was not a new process. Apple and cherry trees had been grafted for a great many years, making it possible for two varieties of fruit to grow on the same tree. But in grafting plum buds on to young almond trees, Burbank was doing an unusual thing. Some time after the grafting operation had been finished, Burbank and two of his gardeners were inspecting the results of the plan. . . .

1ST GARDENER: What do you think of them, Mr. Burbank?

LUTHER BURBANK: Well—some of them are coming along all right.

2ND GARDENER: It was a great idea of yours, planting the almond trees, so that you could graft the plum buds on them.

LUTHER BURBANK: It seemed like a good idea. Almonds are sturdy stock, and they sprout quickly. But something else must be done, if we're going to prove our experiment and deliver those plum trees.

2ND GARDENER: That's right, Mr. Burbank. A lot of the trees don't seem to be giving much nourishment to the plum buds. And the grafting was well done, all of it.

LUTHER BURBANK: I know that. But look at this. A nice, healthy young almond tree—plenty of almond leaves. But the plum bud is withering.

1ST GARDENER: It looks as though the almonds wanted to keep all the food for themselves.

LUTHER BURBANK: We're not beaten yet. I'm going to try something. We're not going to let these almond trees have things all their own way.

2ND GARDENER: How are you going to stop them?

LUTHER BURBANK: We're going to break the tops.

1ST GARDENER: But you can't do that! Without any leaves, the trees will die.

2ND GARDENER: That's right. They're bound to.

LUTHER BURBANK: They'll have their leaves. Haven't you ever seen a tree with the top broken by the wind—but still living?

1ST GARDENER: Yes, but there's some connection between the roots and the leaves.

LUTHER BURBANK: And there will be here, too. We'll snap the tops of these little almond trees and leave them hanging. The leaves will serve their purpose, but there won't be too many sprouts at the top, to wolf all the food. Then the plum buds will get some nourishment.

2ND GARDENER: I wonder if it will work!

LUTHER BURBANK: I think it will. And when the plum buds really get started growing they'll starve the broken almond tops.

2ND GARDENER: Then the almond trees will be-

come plum trees—and they'll produce plenty of good, healthy prunes!

LUTHER BURBANK: And we will have proved something.

1ST GARDENER: Is that an order, Mr. Burbank—to break the tops of all these young almond trees?

LUTHER BURBANK: It is. Call the men together, and let's get started with the job.

Months passed—the sun and the rain did their part of the work. And one day, Mr. Wells, who wanted the twenty thousand plum trees, came back to see Luther Burbank again. Burbank was reading the reports on his plum trees. . . .

LUTHER BURBANK: Sit down, Mr. Wells. I've been reading the reports on those plum trees.

MR. WELLS: My plum trees, Burbank?

LUTHER BURBANK: Why, yes. You're the man who ordered them, aren't you? You know, I've been so interested in working out the experiment that I'd almost forgotten who wanted them.

MR. WELLS: I was hoping that you'd have some for me. Those trees will make me a fortune—if you've got enough of them. The demand for prunes is getting bigger every day. I want to buy every plum tree I can find.

LUTHER BURBANK: Well, you ordered twenty thousand from me.

MR. WELLS: Nine months ago. How many can I have?

LUTHER BURBANK: Let's see. Here's the total—nineteen thousand and—call it nineteen thousand, five hundred.

MR. WELLS: Burbank, I can hardly believe you!

LUTHER BURBANK: That's strange. Most people believe what they want to believe. Tell me, Wells—do you know a plum tree when you see one, a plum tree that will make good prunes?

MR. WELLS: I ought to.

LUTHER BURBANK: Then look down the road—that way. You'll see a whole forest of plum trees, twelve inches high. And they're all yours, if you want them.

MR. WELLS: Burbank! How can I ever thank you? Why—it's a miracle!

LUTHER BURBANK: No—not a miracle. Just the working out of a couple of ideas. And of course, nature did her share.

The successful result of the experiment with the plum trees gave Luther Burbank another idea. It proved to him the advantages of growing trees and plants on a large scale. The more seeds he planted, the more good plants he could produce. Burbank's uncanny instinct and his genius for selection told him which were good and which were inferior. One sunny afternoon, he was working in his plum or-

chard, with a crew of his men, when a visitor approached. . . .

LUTHER BURBANK: Why, it's the Judge! Hello, Judge—how are you?

JUDGE: Fine, thanks, Burbank. But what are you doing, striding through your orchard like this?

LUTHER BURBANK: Oh, I'm just looking things over—picking out the good trees and marking them. That's what these strips of white cloth are for. I drop one on every tree I like.

JUDGE: But those men behind you—they're uprooting dozens of these little trees.

LUTHER BURBANK: That's why they're following me. Every tree that isn't marked with a white cloth is uprooted and burned.

JUDGE: Do you mean to tell me that you're destroying more than half of these fine little plum trees?

LUTHER BURBANK: At least half. You see, more than half of them aren't fine, at all. The more inferior ones we destroy, the more room we have for better ones. And the more nourishment the good ones get from the soil.

JUDGE: Do you think you can select the better trees, jogging through this orchard almost at a trot, dropping strips of white cloth behind you?

LUTHER BURBANK: I know I can.

JUDGE: But I don't see how you can tell.

LUTHER BURBANK: Judge, I'll prove to you that my intuition is right. You take home these five trees I've left to be destroyed, and plant them.

JUDGE: But what will that prove?

LUTHER BURBANK: Along with them, take any five that I've marked for saving. Plant—and mark them. Five years from now, all ten of them will be bearing fruit. Compare the fruit from the different trees—and then you'll see that I was right!

JUDGE: I'll try it. But I still don't understand how you do it.

LUTHER BURBANK: Judge, when they bring a prisoner before you, can't you often tell by looking at him whether he's guilty or not?

JUDGE: Why—yes.

LUTHER BURBANK: Well, I can do the same thing with trees and plants and seeds.

From experience, aided by some inner sense which must be called genius, Luther Burbank could distinguish better plants from inferior ones. And by his patient conscientious work and perseverance, he gave the world many new and useful varieties of vegetables, berries and fruits. Among other creations, he produced a rustless wheat, a spineless cactus which cattle could eat, and roses without thorns. He once said, "I shall be content if because of me there shall be better fruit and fairer flowers." Truly, he accomplished his aim in life.