

# She Makes A GROWING

*Aided by Scientific Research this  
of Heretofore Worthless Land  
Her Method of Work*



luscious berries; and over all, if you please, a slather of cream, its virgin white slowly turning to lavender as it meanders in delicate veinings out through the purple of the berry juice.

Yet this incomparable dish, the blueberry pie you and I know, will bear the same relation to the blueberry pie of the future as the old-fashioned stage-coach bears to the Spirit of St. Louis. For science, to which no tradition is sacred, has been busy with blueberry pie, with remarkable results. Unable to improve the crust which, to be at its best, must forever remain the kind mother used to make, science has been performing its miracles with the berries that are the true soul and meaning of the dish.

As a result of this inquisitive spirit of science, the blueberry of the wild, which was thought would always remain wild, has been tamed by man and made to submit to propagation and cultivation. And as always, when man thrusts himself into the affairs of Mother Nature, he has coaxed the old lady into out-

doing her best previous efforts unaided. She produces for him, not the measly little berries you and I, as boys, used to gather, in swamps and on hillsides, but berries as uniformly big as a dime, and some of them almost as big as a quarter, with a bloom like that found on grapes, and a delicate perfection of flavor like nothing else on sea or land.

The people responsible for this new development in agriculture are Dr. Frederick V. Coville, Chief Botanist of the United States Department of Agriculture, and Miss Elizabeth C. White of Whitesbog, New Jersey, whose father was the world's Cranberry King. In general, it may be said that Dr. Coville contributed the scientific foundation and Miss White the practical superstructure; although their work has dovetailed closely, and each of them possesses both a scientific and a practical spirit.

The outcome of their patient experiments, extending over many years, is the establishment of the new agricultural product, cultivated blueberries,

which sell on the market for an extraordinarily high price, since at present only a fraction of the demand can be supplied. Best of all, they can be grown on land unsuitable for practically any other crop, and offer the possibility of high returns per acre. To my mind, for the man or woman ambitious to make a living in the country, the new industry of blueberry culture, under certain conditions, is one of the most promising in the whole field of present-day agriculture.

Recently I spent a day at Whitesbog, New Jersey, where Miss



Brown Bros.

At top: Dr. Frederick V. Coville who has assisted Miss White in her blueberry culture. Note his gauge for measuring accurately the size of the berries.  
Above: The White blueberry acreage at Whitesbog, New Jersey

FOR some, the Coliseum at Rome beneath a romantic moon; for some, bold Alpine peaks glittering with snow; for some, the ancient tombs in the Valley of the Kings beside the lush green stretches of the Nile; but for me, I confess to a predilection for deep-dish blueberry pie as the most noble sight in the universe, with old-fashioned strawberry shortcake as close runner-up.

Deep-dish blueberry pie with only one crust, a crisp brown covering over the top, beneath which snuggles a juicy filling of

SHE MAKES A  
HANDSOME LIVING  
GROWING  
BLUEBERRIES

(Continued from page 40)

as a hundred pieces to a bush. These were planted under glass in carefully prepared propagating beds. But for a long time we had very poor luck with propagation; only about ten per cent of the plants lived, and even now, for reasons we do not understand, the starting of plants from cuttings is a difficult and uncertain process.

"When we had succeeded in getting an adequate number of plants started, we began the long and arduous process of selection and elimination. Over a period of twelve years we kept detailed, painstaking records of the characteristics and behavior of each plant. You see, it was not sufficient that we have large fruit; we had to consider also the color, flavor, texture and time of ripening of the berries, the productiveness of the bush, and its vigor and resistance to frost damage and winter killing.

"Finally we narrowed down to six varieties which seemed in every way suitable for commercial production, and these we named, after the pickers who had first found them, Rubel, Harding, Sam, Grover, Adams and Dunfee."

Meanwhile, during the time that these experiments were going on to bring wild varieties under cultivation, establish their characteristics, and select the finest of them for use by man, Dr. Coville was continuing his experiments in producing new varieties by cross-fertilization.

He would take plants of the varieties selected at Whitesbog, force them in greenhouses in Washington, and when they came into bloom, transfer pollen by hand from the stamens of one variety to the pistil of another. The resultant seeds, producing a new variety with characteristics of both parents, would be planted and grown in seed-beds for a year, when they would be transferred to Whitesbog. Here, like the native varieties, they would be observed carefully over a period of years to determine whether they were worth propagating commercially.

All in all, Dr. Coville has produced over 25,000 different plants of superior parentage; and after all of these had been grown to fruiting, and comparative data had been accumulated, three out of the 25,000 were selected as being worth commercial distribution. These Coville hybrids are called Pioneer, Katharine and Cabot.

Dr. Coville has been at his often difficult and discouraging task for some twenty years; 25,000 new plants were developed by careful hand pollination; at the end of the twenty years, three were considered worthy of being placed on the market. There you have in a thumbnail picture what it means to devote your life to science.

This work of hybridizing Dr. Coville is still carrying on as tirelessly as ever. At Whitesbog I saw hundreds of new plants, all carefully numbered, their parentage recorded. Among them was one which will serve to illustrate simply Dr. Coville's methods—a cross between a low-bush blueberry (*Vaccinium pennsylvanicum*) and a high-bush berry (*V. corymbosum*). The low-bush blueberry, as it happens, produces the earliest fruit of any of the blueberries; but the fruit of the high-bush is usually much larger. This cross is made in the hope of developing an early fruit which will also be large. The bushes are just coming into bearing this season, and the experiment seems to give excellent promise.

There was something almost uncanny to me in the way Miss White went about among these thousands of plants and gave offhand the names and numbers of each by slight differences of foliage, fruit or growing habit which to me were imperceptible. Not only that; she could even name the parents from the characteristics of the



SAY "BAYER ASPIRIN" and INSIST!

Proved safe by millions and prescribed by physicians for

Colds    Headache    Neuritis    Lumbago  
Pain    Neuralgia    Toothache    Rheumatism

**DOES NOT AFFECT THE HEART**

*Safe* → Accept only "Bayer" package which contains proven directions. Handy "Bayer" boxes of 12 tablets Also bottles of 24 and 100—Druggists.

Aspirin is the trade mark of Bayer Manufacture of Monoaceticacidester of Salicylicacid

**One of the Great Marden Books  
PEACE, POWER and PLENTY**

by

Few books have been written, since the deeds of men have been recorded, that have done so much in the interest of guiding the human mind toward a higher plane of living—toward the achievement of right thinking — toward the joys of living. Peace, Power and Plenty passes its helpfulness to you through pages of most interesting reading. It has the unusual ability to entertain and teach a better order of things.

**Price \$1.85 postpaid**

Dr. Marden has written many useful books. All are being read the world over. There is not one that does not offer fascinating reading and helpful suggestion.

There is no young man or woman taking up life's responsibilities—no one now burdened with life's problems—who cannot get a wealth of sound guidance from the reading of Dr. Marden's books.

We will gladly send a complete list and descriptive matter of all of Dr. Marden's books upon request, with prices post paid.

**THE MARDEN BOOK CO.**  
SCARBOROUGH, N. Y.

# SHE MAKES A HANDSOME LIVING GROWING BLUEBERRIES

offspring of which she might be speaking. "This," she would say, "is 1452 A, a cross between Rubel and Brooks. Now notice—" and she would go on to describe the distinguishing points of 1452 A, and to tell what Dr. Coville hoped to accomplish by crossing Rubel and Brooks.

All this she told me with the keenest enthusiasm, as though she were a mother talking about the precocities of her children. She has been working for sixteen years with blueberries, and for all of her life on the great farm at Whitesbog; and her interest is as untingering now as on the day she set out along her path of plant wizardry.

From the practical standpoint, the result of Miss White's and Dr. Coville's achievement is the opening up of a new field for farmers and would-be farmers, and in spite of a natural reluctance to encourage anyone to go into something of which he or she may not make a success, I do not hesitate to say that, granted certain conditions, the growing of blueberries, in my opinion, offers splendid opportunities, especially for the person who wants to work rather intensively and on a comparatively small scale.

It is fair to assume that for many years to come the demand for cultivated blueberries will not be anywhere nearly supplied; and as long as this condition holds, the price will be high. Miss White, who is at present the only extensive producer in the United States, markets all of her berries through one commission merchant in New York. They go only to the highest class of retail and consumer trade; and the wholesale dealer reports that, far from having to push sales, he is forced to keep the berries in the back of his warehouse, out of sight, to reduce the demand that develops as soon as they are shown.

Besides Miss White, there are only a handful of producers with commercial crops, and their plantations are only beginning to come into bearing. It would seem, therefore, that, whatever may happen eventually, for some time at least the field will not be crowded.

Furthermore, the new grower can have at once the full benefit of a cooperative association which will see to it that, so long as he lives up to grading, packing and other rules, his berries will find a market, no matter where in the United States he may be located.

Miss White is a strong believer in cooperative marketing; you might say it is in her blood, since her father was for many years at the head of the Growers' Cranberry Company, the oldest farmers' cooperative association in the United States. She has been largely instrumental in forming the new Blueberry Cooperative Association, of which Harold B. Scammell is president, Stanley Coville (son of Dr. Coville) is vice-president, and S. B. Hutton (who was for eight years associated with Miss White in her experiments, and now has an independent blueberry plantation) is secretary and treasurer. This association has so far about a dozen members. It is rarely that a new industry, especially in farming, has an active association formed to aid it so early in the game.

The spirit of the members may be seen from the fact that Miss White has voluntarily abandoned her own trade name, with all the

prestige and personal advantages attached to it, and will hereafter market her berries solely under the association label, on which no individual names appear. This means that she is giving to a handful of beginning growers, the most important of whom does not as yet produce more than twenty per cent as much as she, all the benefit of her pioneer work in marketing and building up a reputation.

At present prices, and even at lower prices, blueberries, I believe, can be a more than usually profitable crop. Miss White gives the following as approximate costs of production:

|                               |       |
|-------------------------------|-------|
| Land, per acre.....           | \$100 |
| Clearing land, per acre.....  | 100   |
| Cost of plants, per acre..... | 700   |

|  |       |
|--|-------|
| Total investment.....  | \$900 |
| Cultivating and hoeing (per acre per year).....                        | \$ 20 |
| Fertilizer, ditto.....   | 20    |
| Pruning, ditto.....  | 25    |
| Picking and packing (\$3.05 per 32-qt. crate—100 crates per acre)..... | 305   |

Total operating expense..... \$370

Blueberries are still too new a crop to give exact figures as to the possible production per acre, but a good plant in full bearing will produce four quarts, and indications are that the figure of 100 32-quart crates per acre is conservative. The wholesale price at Whitesbog from the very beginning has averaged well over \$10 per crate for all grades, after deducting commission and express charges. This gives us the following figures:

|  |        |
|--|--------|
| Receipts, per acre (100 crates at \$10)..... | \$1000 |
| Costs, per acre.....                         | 424    |
| Interest on investment.....                  | 54     |
| Operating expense.....                       | 370    |

Net return per acre..... \$ 576

The above figures are an approximation, and do not include taxes or interest and depreciation on equipment. In the case of blueberries, the latter item is not high. For a small plantation (up to, say, 20 acres), an inexpensive packing shed, a small wheel tractor with cultivator attachment, and hand tools, are all that will be needed.

Blueberries can be grown on land too poor to produce any other crop. There are to date no serious insect pests or fungous diseases, so that spraying is unnecessary. Compared with many other fruit and vegetable crops, the fertilizer requirements are low; and the care of the plants is not difficult, the most exacting task being pruning, which must be done with considerable attention to detail if heavy crops are to be produced.

I submit that there are today few farm crops which will give a net return of \$500 per acre for the same amount of labor as blueberries.

So much for the advantages. It is only fair now to mention the drawbacks. Of these, the chief is the high cost per acre of establishing a plantation; plants are necessarily expensive because so far they have been very expensive to propagate. The second drawback is that it takes three years to get the first crop, and four or five years before the plants are in full bearing. In this, blueberries are comparable to asparagus or apples, and cash crops must be grown to supplement them if an income is necessary during the early years. On the other hand, there seems reason to believe that a blueberry plantation will be good for fifty years.

In spite of the work that has been done with blueberries, it must be recognized that they are still in a sense in an experimental stage. To give only one example of the questions yet to be answered: it is not known on how wide a variety and range of soils they can be profitably grown, although it is fair to assume that wherever the high-bush blueberry flourishes in the wild state, the cultivated varieties will do well also. In general, a peaty, acid soil seems to be necessary, with adequate moisture, and yet lightness enough so that the roots will get

plenty of air. But it is probably not at all necessary to duplicate the soil at Whitesbog.

The beginning grower, I should say, would do well to try out plants on a small scale under local conditions before going into the game extensively. There is room for plenty of experimentation. Indeed, for the man or woman who likes to "fool around" experimenting with plants, I know of no more interesting or promising field than this. There are ample opportunities for the budding Burbank to make valuable contributions to this newest of agricultural industries.

The few pioneers in this new industry represent a very fine type of men. While I was at Whitesbog I visited the farm of one of them, Dr. Coville's son Stanley, who is a big, husky young fellow, six feet tall, deep-chested and large-boned, almost indecently healthy-looking, with clear, steady eyes. He was in charge of W. Atlee Burpee's Fordhook Farm at Doylestown, Pennsylvania, where Burpee's seeds are produced, but gave it up because he believed that blueberries offered him a bigger future.

He has a farm of eighteen acres at New Lisbon, New Jersey, with a soil very similar to that of Whitesbog. Nine acres have so far been planted to blueberries; and a cleaner, finer layout you never saw. There is not a weed on the place, practically every plant is perfect, and it is not an exaggeration to say that Stanley Coville knows the characteristics of every plant on the nine acres. He is gradually extending his plantings to cover the entire eighteen acres.

"I hire only one man," he told me, "and he devotes most of his time to hoeing. The cultivating I do myself with a small wheel tractor, and during the winter I do the pruning. This year I shall probably need twenty pickers for a period of four to six weeks.

"I expect the 1927 crop to total about 400 crates. My first year I produced 26 crates, the second 60, the third 160, and the fourth 260.

"Yes, I expect to make my entire living from these eighteen acres of blueberries. To my mind, it is a promising enterprise; but I would caution anyone who goes into it that it requires a genuine liking for intensive work and experimentation if you are to succeed. You can't simply put in the berries and then sit back and expect them to make your fortune. You have to work and live with blueberries if you want them to work for you.

"But it is true that one man can cover more ground with blueberries than he can with a good many other crops. To care for a nine-acre market garden, for instance, would require seven or eight men instead of two; and the gross returns per acre would probably be no larger than with blueberries. With the present cost of labor, that alone gives the blueberry grower a big advantage."

Another grower I met was Harold G. Huntington, whose place adjoins that of Stanley Coville. He has so far planted two acres. He is a younger man, and he too expects to make his living entirely from blueberries. Mr. Huntington is the son of F. W. Huntington, who is President of the Brooklyn Academy of Music. Miss White relates that she once gave a talk on blueberries at the Academy, and shortly afterward young Huntington and his father appeared at Whitesbog eager to get further information. That first interest developed into an abiding enthusiasm which made the son determine to make the growing of blueberries his life work.

If these two are typical, the man who goes into blueberry growing will have good company. He will have absorbing work. He should be able, under the right conditions, to make a good living, and he too will be a pioneer in an industry destined in the future, I think, to be a very large one. Almost everyone likes, and buys, blueberries; and the cultivated product is so infinitely superior to the wild that the day will come when none of us will want anything else.

## Hornblowers I Have Met!

AND you've met them, too, the folks who blow their own horn. Watch for this amusing feature in the November issue of this magazine.