



Harmful Hero-Worship

➤ LUTHER BURBANK worked hard and productively for half a century, breeding and distributing new plant hybrids through an astonishingly large range of varieties—all the way from potatoes to plums. He was extravagantly admired by the public at large, and he amassed a moderate fortune. One thing, however, was wanting: most scientists withheld the recognition which he craved from them. Their chilly attitude toward him was a source of much distress and bitterness, especially in his later years.

Most of this grief was unnecessary, and resulted not from anything Burbank himself did or said, but partly from the intemperate reaction to criticism of their idol on the part of his all-out admirers, partly from extravagant claims made for some of his productions by commercial firms and promoters who exploited his popular reputation for their own profit. This at least is the thesis of Burbank's newest biographer, Dr. Walter L. Howard, emeritus professor of pomology at the University of California, whose book, *Luther Burbank, a Victim of Hero Worship*, has just been published by the Chronica Botanica Company.

Burbank, his sympathetic interpreter admits, had some qualities that by themselves made him a bit difficult to get on with. He was a good deal of an egoist, believing intensely in himself and his work, he was unsystematic about keeping records and he was very stubborn in the face of efforts to induce him to change any of his methods. The latter two things were mainly responsible for the failure of the Carnegie Institution's effort to make a collaborator of him.

Two especially unfortunate cases of

reckless exploitation of the Burbank reputation by unscrupulous promoters were the spineless cactus craze and the affair of the Wonderberry. Burbank really did originate a hybrid cactus without spines, or practically so, Dr. Howard has decided after reviewing the evidence. But the men who undertook to market it used such "blue-sky" methods, and were so greedy in the matter of price, that the plant never got a chance to take its proper (and rather modest) niche in dry-land agriculture. The Wonderberry was a hybrid belonging to the nightshade family. Of moderately good qualities, it was puffed beyond its merits by the promoters, with inevitably disillusioning results.

Of the thousand or so hybrids which Burbank probably made, Dr. Howard selects as lasting monuments only a few. His first achievement, the Burbank potato, is still cultivated after 70 years. The Burbank hybrid plums (including prunes) are now grown on a large scale in California. His winter rhubarb is still good in regions with mild winter climates. Of his flowers, probably the Shasta daisy is best known, though he also scored successes with lilies, gladioli, amaryllis and several others.

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INVENTION

Wine-Making Put on Mass-Production Basis

➤ WINE-MAKERS of ancient lands, "trampling out the vintage" with purple-stained feet, would stare in gaping amazement at a grape-processing machine on which U. S. patent 2,398,440 has been issued to Georges Monnet of New York. Its massive mechanism puts on a mass-production basis one of the most ancient of the arts—attributed, indeed, to no less a worthy than Noah.

Grapes brought in boxes from the vineyard to the Monnet machine are dumped upon a copper-screen conveyor and given a thorough washing with jets of water, then passed on through a warm-air drier. From this they go down a second conveyor and through three successive sets of rubber rollers.

The first merely cracks their skins and lets the prime juice trickle out. It is collected in a funnel-like trough, which directs its flow over a chilling coil, to precipitate out impurities, leaving the juice ready either for fermentation or for bottling unfermented. The second and third sets of rollers, set a little tighter, squeeze out second and third grades of juice. The

squeezed-out grapes are freed of stems, seeds and skins by mincing with a battery of knives and subsequent centrifuging, which leaves the pulp in condition for marmalade-making or other uses.

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ENGINEERING

Carbon Black Qualities Without Discoloration

➤ A NEW material will give rubber the same qualities as carbon black without discoloration, but finding a name for the substance is proving a headache to B. F. Goodrich engineers.

It could be called "white carbon black" or "carbon white," except that it isn't made of carbon. Produced by a series of chemical reactions on sand, "fumed silica" is the most accurate name, according to chemists.

Still many months away from commercial use, the new process will mean not only superior white sidewall tires, but tires and rubber products of all sorts of any color.

Science News Letter, May 18, 1946



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MUELLER BRIDGE Measures Many Lab Temperatures At Top Accuracy

For making rapid, high-precision temperature measurements, an excellent choice is the Type G-2 Mueller Bridge shown in use above. Unaffected by ambient temperature, it is capable of greater accuracy, between -190 and $+500^{\circ}\text{C}$, than any other means available; its limit of error being only a few hundred-thousandths of an ohm, or a few parts per million, whichever is greater.

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