

THE AMERICAN BREEDERS MAGAZINE

"The character of a nation is determined by the character of the people living in it. The character of the people is determined by their heredity—the kind of blood that runs in their veins."

—DAVID STARR JORDAN.

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MARTIN HOPE SUTTON, 1815-1901

WALTER F. GILES

Reading, England

Martin Hope Sutton was born at Reading, England, the son of a corn factor and miller. From very early days he found his recreation in studying works on botany, and before the development of the railroads spent much of his leisure time in walking tours to visit famous gardens and nursery grounds within reach of his home. Later on he was able to extend these visits to greater distances, finally visiting some of the most interesting gardens on the continent of Europe.

His parents hoped he would adopt a profession, but his inclinations were strongly in favor of a business career, and being keenly interested in the improvement of plants, the knowledge he had gained in his travels inspired the idea of starting an experimental ground at Reading. Consequently at the age of twenty-two he commenced practical work in plant improvement, joining his father's old established business, and added to it the branch which was afterwards destined to play so important a part in the development of agriculture and horticulture.

The disastrous Irish potato famine in 1847 was one of the first means of focussing attention on the improvements which he had effected in selecting and adapting vegetables and plants for food. Public men of the day realized the value of his labors and the substitutes he suggested for the devastated potato crop, which by their quick growth would mitigate the severity of the famine, were at once accepted by the government.

The study of grasses under their natural conditions possessed a strong fascination for Mr. Sutton, and when, owing to agricultural depression, many thousands of acres were laid down to grass in England, he was able to apply his knowledge in recommending prescriptions which would be suitable for all kinds of soils. Previously

the only grass seeds generally procurable were the sweepings of hay lofts, usually consisting of worthless grasses, weeds, and the immature seeds of good varieties. In 1861 he contributed to the *Journal of the Royal Agricultural Society of England* an article on "Permanent Pastures." This was reprinted by desire, and since its enlargement by his eldest son, Mr. Martin J. Sutton, has passed through several editions, and is now one of the standard works on grasses.

Martin Hope Sutton had five sons, three of whom joined their father in his work of plant improvement. Upon the foundation already laid they were able to greatly extend the work, with the result that they have brought into commerce many new and improved types of roots, vegetables, and flowers, and their achievements are known practically throughout the world.

The Golden Tankard mangel, so highly esteemed by almost all dairy farmers, was introduced in 1872, and because of its high feeding value it was awarded a gold medal by the Highland Agricultural Society in 1873. In 1876 the Magnum Bonum potato was brought out, so well known as the pioneer of all the disease-resisting varieties of the present day. For combining the very important factor of earliness with the large podded types, the name of the Marrowfat peas stands in the front rank.

Many new types of flowers had their origin in experiments carried out by the Suttons. The pure white Gloxinia "Her Majesty" was produced by selection and reselection, the elimination of the pink shades in the type worked upon taking some fourteen or fifteen years. The "Duchess" type of Primula was a distinct break, resulting from a cross between a dark crimson flower and a blush type. It is acknowledged to be the most distinct *Primula sinensis* yet introduced, and was given an award of merit by the Royal Horticultural Society. The origin of the single tuberous rooted Begonia (Reading Beauty strain) dates from 1878. Begonia Pearcei (yellow) was crossed with Moonshine (small white). By crossing the hybrids, scarlet, coral, rose, bronze, cream, white, and many other shades of blooms have been produced; but whereas in 1880 the flowers averaged only 3 to 4 inches across, by continued selection they have been so improved as to attain to 6 or 8 inches in diameter.

Mr. Sutton's work was on many occasions recognized by the royal family. Her Majesty Queen Victoria was always very gracious to him, and at the annual shows, in which the Prince Consort was specially interested, Mr. Sutton was one of those appointed to accompany the Queen and explain the most interesting exhibits. He also had

the honor of personally receiving at Reading the late King Edward VII, when Prince of Wales, who sent kindest congratulations to him on the attainment of his eighty-second birthday.

Mr. Sutton took a great interest in religious and philanthropic work, and many societies besides those in his native town benefited by his advice and generosity.

He was in his eighty-seventh year when he died, and the work which he commenced, and which has for many years been continued by his sons, is now carried on by his sons and grandsons, each of whom specializes in a particular branch of the business.

CONSTRUCTIVE EUGENICS

WILLET M. HAYS

Washington, D. C.

Science and practical experience are rapidly evolving plans of so breeding plants and animals as to discard the undesirable and perpetuate only the desirable. Much of this work consists simply of selecting the best species nature has provided, and of selecting within these species so as to secure and perpetuate as useful varieties those types into which nature has divided the species. In many cases this means that marked economic mutations are discovered, the progeny of which are so far superior that the old stocks are entirely discarded for the new. Again, the best native and improved stocks each of which has specially desirable characters are cross-bred and from the resultant hybrids those in which occur recombinations of the highest value are secured by selective breeding and are multiplied. And again, from among those recombined stocks, mutations are sought and these are multiplied into varieties, again placing the values higher than before. Thus by these processes, step by step, controlled evolution produces types better fitted to the needs of man in the production of his food and clothing. And each year the genetic scientists and the breeders of plants and animals add new facts, clarify their philosophy, and create new bases in the forms of better foundation varieties and breeds upon which to build the next story in the achievements of breeding.

The truth is being developed that the facts and technique, the sensible philosophy and practice which all this work is bringing forward, have a relation to the heredity of man. And while the problem of the improvement of heredity in the human species seems radically