

A NEW TOMATO CULTURE.

GUY ELLIOTT MITCHELL.

About the first of June is the time to stake your tomatoes, speaking generally for the United States. This article would have been more timely had it been printed a month ago, but even if it can be remembered for next year's operations in tomato growing, the writer will feel more than compensated, since for at least small tomato patches the plan here suggested has been proven by him to have several advantages.

Some years ago I attempted to grow seven acres of tomatoes in Southern Florida—Polk County—for the northern winter market. The tomatoes were planted in November. It was the winter of the great freeze, which swept Florida from stem to stern and obliterated all "frost lines"—the first occurred December 28th, just on top of a balmy Christmas Eve spent on the piazza in summer clothes. On that day, the thermometer in this "frost proof" region descended to 18F. with a biting northwest wind. Thousands of acres of tomatoes and egg-plant were cut down to the ground. Fortunately for my partner and myself we were from the region where Jack-Frost holds annual sway and we had maintained a seed bed in spite of the jeers of our neighbors. By the use of fertilizer sacks, all the bed quilts, sheets and clothing we had, and half a dozen fires to windward, we managed to save some seven or eight thousand young tomato plants, and thus when the frost king had passed on his way, we had a start over our neighbors of from eighteen to twenty-four days in growth.

A SECOND FREEZE.

We had visions of wealth. Instead of seven acres, it is true, we had plants for only about a single acre each, but we expected eight, ten or twelve dollars a crate for our tomatoes, instead of two or three dollars, because all Florida had been wiped out. Unfortunately, in this instance, the lightning struck twice, and in February, just as our plants were blossoming and beginning to form fruit, a second and equally severe freeze struck into our midst, and again the entire agricultural section of Florida, with the exception of a very small acreage on the southmost keys, was frozen to the roots. However, in this instance the Weather Bureau was on the lookout, and about nine o'clock in the evening we had information that a severe northwest blizzard was rapidly moving down the State.

Necessity, as usual, proved itself the mother of invention, and my partner, Mr. C. G. Stephenson, of Herndon, Va., and myself strapped lanterns to our left legs, and with a big cotton hoe each, tramped up and down our long rows of tomatoes and with a single dig and pull, for each plant, covered the blossoming tomatoes with nearly a square foot of the loose Florida up-land sand, in which the winter tomato is grown.

By two o'clock we had finished our task, and we thought we were somewhat tired; but this effort was nothing to the job of digging out the plants on the two succeeding days. The small of my back still creaks in remembrance of the straightening up periods at the end of each row.

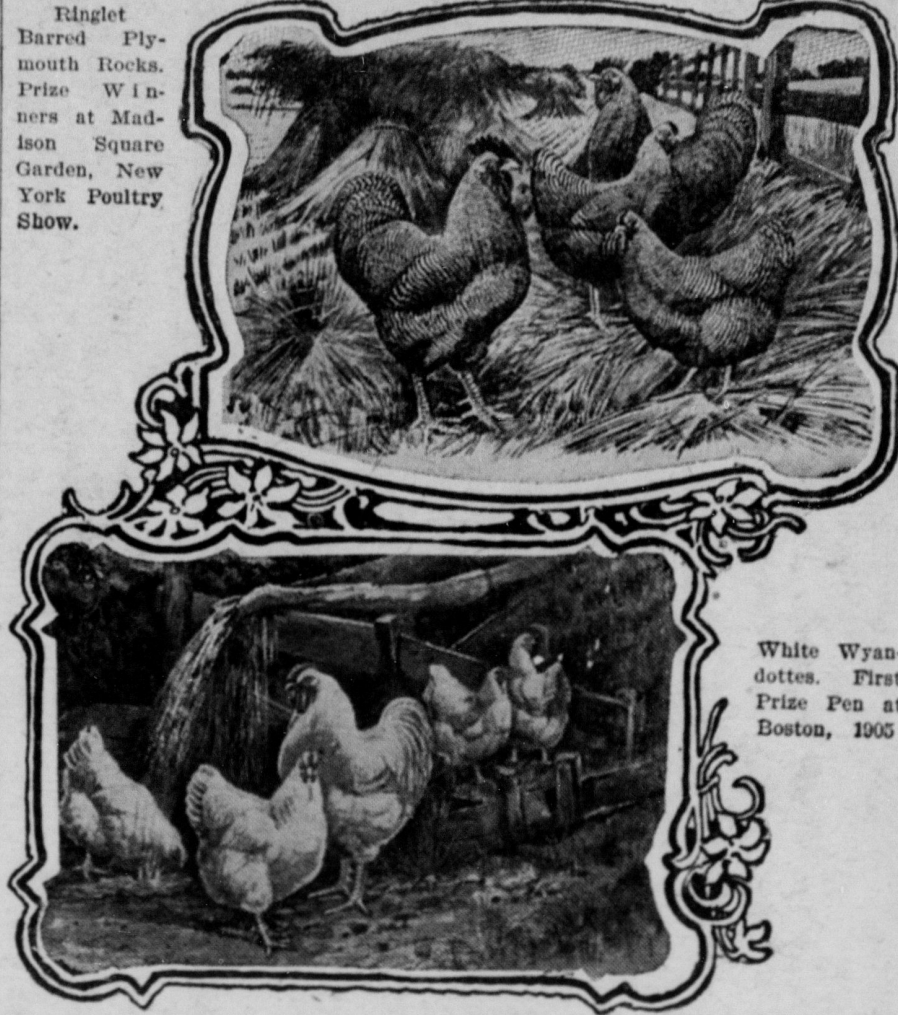
Finally, after the two freezes had done their worst, and the genial sun of Southern Florida began to warm the air, as upon a rare day in June, we each found ourselves with about 3/4 of an acre of rather dilapidated but still thrifty and little damaged tomatoes, far advanced over those of the surrounding fields.

PRUNING TOMATO VINES.

The tomatoes were beginning to throw out numbers of axillary suckers just above each leaf. It was my turn, one day, to drive the white mare to town and get a supply of grub—we were camping. By chance, I ran across an old stager who had drifted down to South Florida from the region

We tried the scheme and it repaid us well. Since my return to the North I have each year followed out this idea, although it has been applied simply to a garden plot of tomatoes. It is somewhat revolutionary, and whether it is practicable or profitable where you are raising ten or twenty acres of this

Single
Barred Plymouth
Rocks.
Prize Winners at
Madison Square
Garden, New
York Poultry
Show.



White Wyandottes. First Prize Pen at Boston, 1905

vegetable I am not prepared to say—pruning and cultivating that 3/4 of an acre in Florida kept me hustling as I had never hustled before—but as a garden proposition where you are raising from fifty to one hundred plants it has proven itself an ideal method of culture. The directions are these: simple in the extreme, but requiring rather close attention, as once well started the tomato is a rapid grower.

By the time the plant forms its first blossoms, have a slim stake six feet in length—in Florida we used pine sticks about one inch square—with a crowbar, or a heavy mallet stake your tomato firmly. Take an ordinary piece of grocer's soft cotton twine and tie the stem close to the stake. We experimented with tape and heavy cord, but found that the ordinary, five-cent ball, white twine sufficed, and that there was no danger of injuring the stem of the plant. Then go through the rows and pull off every sucker—leaving of course the blossom stems. In other words simply train the tomato vine to a single stem, and as need be tie it up close to the stake. During the season of growth three or four ties will suffice. We tried using a sharp knife to cut off the suckers in the belief that yanking them off by the fingers would injure the main stem, but eventually came back to the Crystal Springs method, where everything is done by the fingers.

SINGLE STEM PLANTS.
There will be strong temptation, should the vines get three, four or five days start, and one of the suckers or branches becomes almost as big as the main stem, to let it grow, in the belief that it will injure the vine to remove it, but such mistakes should be ruthlessly remedied. Once well started the tomato is one of the toughest and sturdiest growing vegetables—a horse can step on one without much damaging it—and there need be no fear about tearing out even the large suckers which have developed four or five

times up in the usual method, is "laid by," the gardener with a wheel hoe can pass through the rows of staked tomatoes, and with his hoe set very shallow, can keep down any weeds which may rob the plant of their full share of moisture.

Rows of tomatoes, grown in this manner, present one of the most attractive sights imaginable. Rather than a tomato patch they look like a young orchard, laden with a plethora of ripening or green fruit.

Poultry Growing North and West.

T. F. MCGREW.
The chief center of poultry growing upon the farms and by small establishments devoted exclusively to the producing of eggs and poultry for market, is located in that portion of the country now called the North and West, in which we must include Missouri, Kansas and the great Northwest.

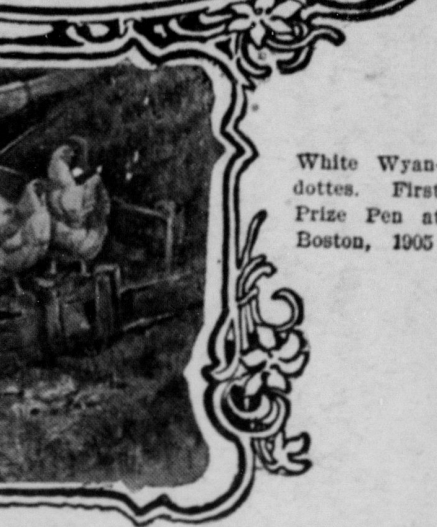
It is not usually known that Missouri, Iowa and Kansas are the greatest producers of poultry of all kinds, including waterfowl, and that Michigan and Wisconsin are becoming the greatest of all goose-producing sections of the country.

Upon the vast wheat fields of the Northwest are grown thousands upon thousands of young fowls that are hatched and cared for with reference to having them of the proper size for ranging over the wheat fields as soon as the harvest is in, and are later gathered up by the purshers of the great poultry-killing establishments of Kansas City and other centers. These young fowls are taken away and shipped to the killing places prior to the beginning of the cold rigid weather of the North, only leaving for the care of the farmers during the winter months a sufficient number to produce eggs for the next summer's crop.

Wisconsin and Michigan produce large numbers of geese, grown for their feathers, and then shipped away to the Eastern States, where they are fattened and sold to the City markets. Missouri and Kansas have become great egg-producing centers of the West. It is claimed that more eggs and more dressed poultry are shipped from some of the gathering stations of Missouri than from any other locality in this country. Iowa has for many years ranked among the foremost states in the producing of both eggs and market poultry of all kinds.

The last census figures for Iowa are a surprise to many of those best informed on poultry matters. More ducks were reported as being grown and shipped to market out of that State alone than had been credited to

moisture and sustenance which the roots collect, instead of producing ten or twelve pounds of useless growth will go largely into the formation of fruit. Clusters of tomatoes will hang thickly against the stake; they will secure the full benefit of the sun's genial warmth; there will be no rotting; the ripe fruit can be seen at a glance; the tomatoes will be larger, and there will be few, if any, very small ones; the yield per vine will be as heavy or heavier, while if the planting is made with this in view, the vines can be set considerably closer, as the moisture requirement will be far less than under the usual method



where a great amount of leaf is produced. If the ground is rich and the plant grows luxuriantly, its entire strength can be thrown into the fruit by pinching out the top bud after the vine has reached the height of the stake.

Another advantage of this method of culture is that for a couple of weeks after the ordinary tomato crop, even if



SHIPMENT OF CHICAGO PLYMOUTH ROCKS AS RECEIVED AT SYDNEY, AUSTRALIA.

as to make them prime favorites, and an excellent selection for all purposes for which fowls are kept upon the farm.

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You can free a moth-infested closet of the "creatures," larvae and eggs, by pouring hot vinegar into a red-hot iron or tin pan set upon hot bricks in the closet. Shut the door as soon as the vinegar hisses upon the heated surface of the pan, and don't open again that day.

the whole West. People imagined that the great duck farms of Long Island, New Jersey and Pennsylvania had produced the duck supply of the country. The future census will be closely scanned at its finish for a more careful study of these conditions. So far as can be learned at present, the increase in poultry culture through these states has almost doubled in the last six years.

The West is more largely interested in the Plymouth Rock and Wyandotte breeds than in any other. The Eastern States seem to be more given to the cultivation of Leghorns than are any of the Western localities. The eggs having the brown shells seem best suited to the West. The brown-shelled eggs stand shipment better, from the fact that the shells are heavier and stronger than those laid by the Mediterranean breeds.

The Brahma and Langshan fowls were formerly most popular in these sections. The Plymouth Rocks and the Wyandottes being smooth, that is unfeathered, on the shanks, move about and forage for their own sustenance much better than the feathered varieties. The original Asiatics—the Brahmas and the Langshans—produce the eggs having the darkest and heaviest shells. The Plymouth Rocks and Wyandottes having a considerable per cent. of Asiatic blood in their veins, produce a strong shelled egg, stronger than the white shells, assuring safer carriage a long distance to market. This is the real reason why so many of the eggs that are shipped in from Western parts have the former kind of shells. There is no difference whatever in the quality of the eggs themselves, no matter what may be the color of the exterior, yet it is a well-known fact that the white ones have the preference in New York City. To produce these, they must be grown nearer to the Metropolis to lessen the danger of cracking from long shipments.

The general purpose fowls, the Plymouth Rock and the Wyandotte, have become a blessing to the poultry growers of the West and Northwest. They are strong and sturdy, with great ability to undergo more or less hardships and yet thrive. There is no question but that there are more Barred Plymouth Rocks grown throughout the Western country than all other kinds of standard-bred poultry combined. In France, the Honan and the Dorking; but throughout the Great West the Plymouth Rocks seem to be accepted as the standard of quality for market poultry. In addition, they are such thoroughly good egg-producers during the entire year

as to make them prime favorites, and an excellent selection for all purposes for which fowls are kept upon the farm.

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OPPORTUNITIES.

For Young Men—Through Intensive Farming.

The Winona Agricultural Institute is located at Winona Lake, Ind. It is one of the most promising signs of the era of a better agriculture; it was founded by the Winona Assembly, which is commonly known as the Western Chautauqua. The Agricultural Institute, however, is only one of the several educational institutions that has been organized by this Assembly. There is also a Technical or Trade School at Indianapolis; a Training School for Bible teachers in New York;

and the Winona Park School for girls, all of which are in a flourishing condition and the product of the efforts of benevolent men and women. The Winona Agricultural Institute differs from many other institutions of the kind in that it believes in training the hand in the pursuit of the practical work of preparing the soil, planting and raising crops, caring for animals and the study of the kinds, and in fact embracing and combining the practical and scientific towards the advancement of this important industry. Moreover its object is to train and prepare young men to gain a good livelihood from a small tract of land, placing the value in the boy rather than in the land. In other words, the student is trained to get the most out of a small acreage, as he is most likely to be forced from circumstances to start on a small farm, which may be increased in scope or the small farm exchanged for a larger one. Thus it will be seen that this plan offers a much larger per cent. of success to the student than if his training was all based on the obtaining of a farm consisting of from forty to one hundred acres.

The class room and practical work is in charge of practical men, who have had exceptional training for this work. The Dean of the Institute, E. J. Hollister, is a soil expert with a national reputation and his past year's work at Winona Lake has been most interesting. The students realized from their farm and garden crops on forty acres of land last year \$1,800.00, and this work was all performed by the students themselves with the exception of the employment of two extra men and the engaging of the services of eight students to remain and look after the crops and do the marketing during the holiday season. Even this business was all carried on by the students under the direction of one of the professors. That is to say, the boys raised the crops, marketed them, handled the money, and the success of the venture, both from a financial standpoint as well as the training the boys got, is being used as a basis for enlarged operations this season, all with the view to bring the students in closer touch with all the agricultural processes, supplementing the practical work with a course of lectures and studies that will simplify the science of agriculture.

The Dean has been engaged in expert practical work with soils and plants, the transporting and marketing of crops over a wide range of climate with a variety of soils, embracing many portions of that area which lies between the foot hills of the Rocky Mountains and Long Island in New York State, and from the central part of Canada to the Everglades in Florida, and is now in addition to his work at Winona directing the reclamation of a large tract of tidal lands on the Connecticut Coast. He imparts to his experience to the students, and is anxious to prepare young men to take up this expert work and intensive farming. He is a thorough believer in the extension of our prosperity and the increase of the strength of the nation through the development of our agricultural resources, and deals with the problem from a practical point of view. He is anxious to inaugurate a movement that will begin with the improvement of the abandoned farms in the East, continuing westward even to taking up those parts of the semi-arid west where farming is carried on under irrigation, training young men to get a living on a small acreage, demonstrating that ten acres may be made to produce a greater income than a twelve hundred dollar salary in the city.

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TOMATOES TRAINED TO SINGLE STEMS. (After Photograph.)

of Crystal Springs, Miss. He told me of the methods in that vicinity, by which tomatoes were not only advanced in ripening from five to seven days, but increased in yield. Much more labor was required, but the results were more than commensurate. The plan consisted simply in staking and pruning each plant.

leaves, and even incipient blossom clusters. However, it is of course better to keep the vines pruned down closer. ADVANTAGES OF THE METHOD. The result will be that the vine will grow up to the top of the stake, stocky and strong. The single leaves will develop hugely, and a great amount of