ties—the Countess, Piper's Seedling, Manchester, Longfellow and Cumberland. A new Wisconsin seedling, named Jessie, is accorded high merit by the leading horticulturists of the state. Kellogg says it is the best flavored large strawberry he has ever tasted. Phœnix mentions it with pride. J. M. Smith extols it as very productive and the most promising of all the new berries. The Belmont is reputed of great excellence; the Jewel also.

Next in order is the raspberry, the earliest fruitsing of which appear upon our tables before the latest strawberries have disappeared. The soil best suited to this plant is a loose, friable loam, or a loamy clay, moderately rich, but sufficiently dry. We find the adaptable wild raspberries growing in moist lands, and also upon rocky and stony hills, but generally in the richest soils of the country, where they abound. Nearly all of the cultivated kinds do best, so far as my experience goes, in a moist and rather shaded location, as for instance, on the north side of a fence. If large fruit and fine crops are desired, the soil should be deeply trenched and well manured. I refer now especially to garden culture. The stools should be in rows at least four feet apart, and two feet in the rows. If of the black-cap varieties, I should say the rows should be six feet apart and the stools four feet apart in the rows. My practice is to mulch heavily after planting. On the approach of cold weather the improved and tender varieties are laid down and covered with earth. The black varieties, with the exception of the Gregg, need not be laid down. Early in the spring the old, dead shoots, together with the weaker new ones, should be removed, and those that remain headed back to two or three feet in height, and in some way supported. For the black caps I dispense with supports. They are trained low and branching by pinch- ing back the young canes when two to three feet in height. By doing this the fruit is increased in size and quantity.

The best approved varieties are of the Red, the Turner, Brandywine, Cutlebert, Hansel, Carolina, Supper and Marlboro; and of the Black; Gregg Sonhegan, Tyler and Onandaga.

In this connection I want to tell you that I am cultivating alongside the Gregg and Doolittle a native black-cap, that in point of hardiness, productiveness, and size and quality of fruit, is scarcely surpassed by either of the varieties I have mentioned. I found it growing wild on my little farm, and struck with the largeness of its fruit and its bearing qualities, I at once began its cultivation, and have continued it with entirely satisfactory results.

Blackberries are grown in much the same manner as raspberries. They require more room on account of their greater vigor and larger growth. Not more than two young shoots should be allowed to grow in a stool, and these stopped when four to six feet high, but allowed to branch freely. The bearing wood is cut off soon after the fruit is gathered, or any time before freezing weather sets in. By covering the spaces between the rows with decomposed manure in autumn, and incorporating it with the soil, continued fertility for five or six years will be insured.

The varieties preferred by Wisconsin growers, are Stone's Hardy, a native of this state, and the Ancient Britan.

In concluding this paper on fruit-growing in Wisconsin, I would like to write it upon your minds so as never to be wiped out, that you cannot grow fruit of any kind right along, prime in quality and in abundant supply, without feeding for it, any more than you can grow corn or wheat, hogs or cattle, of which you shall not be ashamed, without abundant nutrition. Do not think that the soil unhelped is to do everything and you are to do nothing. The soil will do all it can but it is deficient in some, perhaps in many, of the elements which combine in the production of fruit. Study, therefore, to know what your fruit trees, vines and bushes require, then feed them with food convenient for them, and in steady supply. As was said by a French priest of a field he was called upon to make productive by his blessing, so may it be said of many an orchard and garden in Wisconsin: "Prayers are of no use here—this needs manure."

Swine Husbandry.
[Geo. Wyle, Leeds, Wis.]

With the experience of the past year no one but a dyed-in-the-wool enthusiast on swine matters could possibly face an audience on such a subject. But notwithstanding the ravages of dis-
ease, the manipulation of the market by speculators or the strikes of "pig-stickers" our hog is still there, and for obvious reasons will always hold a front rank and be a conspicuous figure of the in the great corn-growing belt of the West. Corn being, one year with another, one of our safest and surest crops, and a good breed of hogs the best machine for concentrating the bulk of that crop for shipment, and whether the transformation from corn into pork is made at a profit or a loss depends largely (like the success of Institutes) on the man who runs the machine. Although there may be subjects more "taking" for a paper than the hog but few are of more importance to the farmer, viewed from the standpoint of quick returns for money invested, none of our domestic animals give larger returns for a little judicious management and good care, yet none are so systematically neglected and allowed to shift for themselves on the "root-hog-or-die" principle. Perhaps the universal neglect with which the hog is treated may be accounted for in part by the fact that mankind in general do not like to see too strong a reflection of themselves, for deny it as we will, there are many traits in the hog that very closely resemble prominent traits in some of their human owners. But after all the abuse he has received at our hands, he has in days gone by rooted the mortgage off many a farm when every thing else failed, and has succeeded in placing himself very near the top in our list of foreign exports. And I must not omit to mention his last achievement, looking toward supplying the million with gilt-edged creamery butter, a movement that has shoked the dairy world from center to circumference.

While the profits of the past year have not been remarkable, viewed from a swine-breeder's standpoint, we have plenty of consolation in a talk with our neighbor the cattle feeder, the grain grower, or the aristocrat of a short time ago, the "Tobacco Man."

Although the past year's crop of pork was sold at prices that left little or no profit. Farmers should bear in mind that the world must be fed, and that a staple article like pork cannot long remain below the cost of production. They should also bear in mind that corn and pork are about the only things that American farmers have left of which they can say they have a monopoly. Russia, India and Australia, with their wheat are crowding us in the European markets, but corn still holds its own, and we can supply the world with pork laid down at their doors cheaper than they can raise the feed to make it.

Notwithstanding the low ebb of the swine industry at the present time farmers may, if they will, turn it to good account. There never was a better opportunity offered for the general improvement of the swine throughout the country. First-class animals of any of the improved breeds can be bought now cheaper than ever before, and there is no excuse for anyone keeping poor hogs when good ones can be bought at almost pork prices. And here let me say that the generality of farmers are slow to take advantage of their opportunities. And many of them do not farm as well as they know how. This is true both as regards live stock and all other operations on the farm. They will admit that good stock pays, but while making that admission make no effort to obtain it. Or if they do make an investment in a pure-bred pig or other animal. They appear to think that they have done their whole duty and that their stock must now stand in the front rank forever. Yet these same men can talk political economy by the hour with as much earnestness as if their bread and butter depended on that, instead of on the stock aforesaid.

If you ever make an investment in pure-bred stock of any kind you must keep at it. Don't think that when you have got your hogs towards perfection that they will stay there of themselves. There is but one safe course for you to pursue in seeking to maintain the improved condition of your swine, that is to adhere closely to the same means to which you resorted to bring about the improvement in the first instance. It should be borne in mind that there is no kind of stock that can be so rapidly improved by judicious selection and crossing as swine; also that there is nothing that will degenerate so rapidly under neglect. Even the best breeds we have will degenerate into worthless scraps in a few years if care is not exercised in the selection of stock and the infusion of fresh blood each year. Breeding in and in tells with fearful effect on a herd, and the lack of care in the way of food and
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suckling she will be able to profitably nourish her litter, without reducing her strength to a point of danger, as is done in the case of the young sow. Although we want our breeding stock rangey, we do not want them of the coarse-boned, slab-sided, hard-feeding sort, that never get fat. There is not so much danger, however, in getting them too coarse as there is in breeding them too fine. The very fine-boned, fancy kind, with constitution and vigor all bred out of them, are not a profitable kind to raise; yet many of our farmers and professional breeders, too, are sacrificing constitution and substance to a gilt-edged pedigree or a fine-tipped ear; or, perhaps, the sire or dam took a first-prize at some recent state or county fair, and for that reason the stock must be good. Here is where the custom of giving prizes to the fattest animals, as is usually done at fairs, work a positive injury. A first-class breeding animal once fatted and finished up for show, with the assimilating powers taxed to the utmost, is never so reliable for breeding afterwards. No prize ever awarded ever added anything to the merits of the animal. I would rather have the opinion of one fair-minded expert, who understands his business, than the average scrambled-up, fair-ground committee of three, who frequently don't know one breed from another. In the hands of some men the best hogs of the best breed in the world will degenerate into worthless scrubs in a few years. While others with rather indifferent stock for a foundation, will, by selection and judgment in breeding, in a few years have a herd that for all practical purposes will equal the best. Swine increase so rapidly and reach maturity so quickly that the intelligent breeder can rectify mistakes and breed out faults several times with several generations of hogs, while the horse or cattle breeder is waiting through years of patience to see the result of a single cross, this being the case, swine breeders, having the practical results of certain crosses so frequently brought to their notice, ought to be "Masters" of their profession. And we are not sure but some of them could tell the horse or cattle breeder, the best cross to make in certain cases without consulting the pedigrees. For no one knows better than he that a limited amount of feed and plenty of exer-
cise will develop "the trotting instinct."

While swine raising can profitably be made a leading feature on nearly all of our farms the man who undertakes to make it a specialty to the exclusion of everything else will find in time that he is impoverishing his farm in the operation. The reason for this is plain. The hog assimilates more of the food consumed than almost any other animal. And the manure made is so little that it practically cuts no figure in keeping up the land necessary to raise crops for their consumption. In conclusion I have no iron-clad rules to offer in regard to swine breeding, but the man who keeps his herd up to the standard by the use of the best breeding stock obtainable, who uses judgment and common sense in the management and care of them, need have no fears but they will repay him one year with another better than any living thing on the farm.

What Shall We Do With The Boy?

This is not a new lecture. This audience is perfectly safe. Last winter I tried it on forty different Ohio audiences and it didn't kill off a single one, a single audience I mean, it may have finished an individual here and there. Still further, the lecture was sixty minutes long then, but here under the imperious mandate of Supt. Morrison, it has been squeezed down to twenty. If you can't stand twenty minutes when they stood sixty, it proves that the Ohio audiences are three times as tough as those in Wisconsin, unless, perhaps, lectures are like lemons, when squeezed to one-third the size they lose all their juice.

Seriously, the noblest crop or product of our farmers and homes is the crop of boys and girls; worth more than all the rest; for which all other crops are raised. As a farmer I have, therefore, always resented the common remark that "farmers think more of their corn and calves and cattle than of their sons; and of their wives, more of their pickles, preserves and tidy houses than of their daughter's training."

This serious charge is not true of any parent worthy of the name. Less true is it of farmers. I believe, than of parents in most other callings. The companionship between father and son, mother and daughter is closer in farming than in almost any other calling, and this companionship increases the confidence and love and strong desire to promote the children's welfare. These parents here before me know that more than all things else on earth you desire the truest and best growth of your children, physically, mentally and morally. How then shall we train them, whether in city or country. How shall we best supply their needs, and guard them from the evils that surround them in both places.

Of the two, the average country boy, in my opinion, has a better chance than the average city boy to become a pure and strong and self-reliant man; and the statistics show an immense preponderance of fact to sustain this opinion. There are three reasons for the opinion and the fact, that country boys, as a rule, make stronger, purer, better men.

First, they form on the farm, from necessity, habits of promptness, efficiency, steady industry for steadily earned reward. They learn the cost and value of money. They know just how much sweat and back-ache there is in a dollar bill.

Second, they acquire quickness of eye, dexterity and knack of hand and body, learn the use of tools, learn how to adapt means to ends, how to extricate one's self from difficulty, and this gives them self-reliance, originality, independence and gumption.

Third, in the bright sunshine and air of the country he develops a clean heart and a robust constitution, than which there is no better foundation for, or greater aid to, mental or moral greatness.

The country boy learns habits of steady industry. Sometimes it is too steady. Do you know anything steadier than riding horse to plow corn all day long? Such a slow, poky horse. Such a mean, little, thin, sweaty blanket. Such a sharp backbone. No wonder country boys have longer legs than city boys. Such long rows; such a dreadfully long day, relieved only by watching the woodchuck in the clover lot near the pond, and laying plans to get a "stint" at hoeing and "drown him aint." Didn't the boys do it too. He and his big brother,—plug up one end of the hole, and lug about forty barrels of water, while they were rest-