

## FOR FARMERS AND GARDENERS.

## THE RIDDLER'S GARDEN.

- 1.—What plant is the most heavenly?
  - 2.—What plant checks manufacturing skill?
  - 3.—What tree should grow by the sea?
  - 4.—What plant is the greatest tease in summer?
  - 5.—What is the most musical plant?
  - 6.—What plant lasts an age?
  - 7.—What plant resembles a shell-fish?
  - 8.—What plant contains ships?
  - 9.—What plants are venerable?
  - 10.—Which plant blows the hardest?
  - 11.—What plant dances most?
  - 12.—What plant is in your eye?
  - 13.—What tree resembles chalk?
  - 14.—What plant makes the most money?
  - 15.—What trees deceive most?
  - 16.—Which plant sells stockings?
  - 17.—What is the cheapest plant?
  - 18.—What plant may be seen on the 5th of November?
  - 19.—Which is the quickest plant?
  - 20.—What plant is the wisest?
  - 21.—What is the most useful tree?
  - 22.—What plant may be found in the farm-yard?
  - 23.—What plant is the most sluggish?
  - 24.—What is the most economical plant?
  - 25.—What plant endures the longest?
  - 26.—What tree resembles the lamb's mother?
- [Germantown Telegraph.]

**SHADE TREES.**—Those who have not set them out, on the outside of the side walk adjoining their premises, should lose no time in doing so. But some will ask, "what kind are best for shade trees?" We would say the apple, cherry, pear, plum, and others of the more hardy fruit-bearing varieties; but these trees are not as yet propagated in sufficient quantities in this Territory to warrant this; hence, the next best thing should be done: plant the locust, which is a flowering tree, a thrifty grower and very hardy. The cottonwood has long since ceased to be valuable as a shade tree. The locust may be propagated by all who would prefer raising their own shade trees, in the following manner:—

As soon as ripe in the fall, gather the seed, shell and put them in a box of sand, which should be kept moist and exposed to the weather and, about the first or middle of May—or corn-planting time—plant the seed in rows four feet apart; each seed in a row about six inches apart. Transplant the first or second spring following.

Those who have not taken the above precautions, may yet—this spring—have an opportunity of starting some locusts for shade trees by pouring hot water on the seed, letting them soak in the water in a warm place for several days, changing it every second day. Plant the seeds as they become swollen.

It may be urged that peach trees are easily obtained by almost every one, especially in this city. The peach thrives and bears well, if properly nursed, supported and protected, and its fruit is delicious; and, wherever the locality will permit, should be cultivated; but it is not considered firm and hardy enough for advantageously growing as a shade tree.

**PLANTING PEAS.**—In its green state, as a culinary vegetable, the pea is held in high estimation in all countries. Among amateur gardeners there is generally some emulation to present at their own table the first dish of the season. We presume that most of our city readers have already planted—if not growing—a small patch of the Early June.

The Marrowfat, for later use, should also be planted. By planting small patches at an interval of eight or ten days apart, green peas may be had for table use until late in the fall.

The best method is to plant in rows about three feet apart, leaving space between the rows for cabbage or other low-growing vegetables. Spinach or any other early vegetable for greens may be planted with the peas, which will afford a seasonable dish for table, previous to gathering the peas, both of which—when removed—will give room for the vigorous growth of cabbage. If planted too close, peas are apt to mildew especially if the vines grow rank, which is prevented in a great measure by allowing more space between the rows.

Peas requiring a mellow, but not too rich soil, it will be advantageous to the cabbage plants, after removing the pea vines, to apply well-rotted manure, worked into the soil in the rows.

**SWEET POTATOES** are grown near Sacramento, California, of extraordinary size—one growing on the ranch of R. Kireheval, Grand Island, weighing 13 pounds—the aggregate weight of four being 44 pounds. They were found to the core and as valuable for home use as they were uncommon in size. The Californians flatter themselves on being able to beat the Carolinians at raising sweet potatoes.

What has Utah done towards the cultivation of this excellent root? We are confident it might be raised here with profit.

[For the Deseret News.]

## A Treatise on the present State of Horticulture in Utah.

BY E. SAYERS, HORTICULTURIST.

NO 2.

ON GROWING SEED.

## Selecting Roots and Seed.

Nothing is more important to the improvement of vegetables than a correct method of selecting roots and a pure stock for seed. As it is a given principle that like produces like, it is reasonable that we should always choose the best roots to produce seed for a future crop. This is not, however, always the case; for it is no unusual thing to see the best pods of an early pea gathered for table and the remainder saved for seed. The best onions, also, in many instances, are taken from a bed and the inferior left remaining during winter for seed. Parsneps, carrots, turnips, &c., are often culled of the best roots in the same way and the inferior left for seed. Lettuce, radish and indeed almost every other kind of vegetables are also often treated in the same way, and the poor cabbage is often deprived of its head and the stalk is planted out for seed, to produce other stalks without heads.

Now, let this system be generally followed and in a few years there will not be any vegetables worth growing.

In selecting roots for seed the rule should always be, to take the best for planting in the spring. This is quite an easy matter, as no person will have the least trouble of ascertaining a good, well-formed bulb of onion from an inferior one, or a long, handsome, tapering parsnep or carrot from one full of small, sprangling roots, of no shape or form.

Care should always be taken to plant good seed of any kind of vegetable and grain intended to produce a stock to plant another season for seed. Too little attention is paid to this important business of gardening and farming.

Weak, small, meager seed produce weakly plants; a well matured seed produces a strong, healthy plant. A seed may be thin and small and germinate freely when planted, but it never will make so good a root or vegetable as one that is well matured.

## Cleaning Seed.

Too little attention is also paid to the cleaning seed and grain for planting. Many persons will ask, "what's the use of being so particular about cleaning seed for sowing? The dirt and rubbish will not grow anyhow." Certainly not, but, by cleaning seed or grain well before a strong wind, the light seed is carried away from the heavy and, by separating the good from the bad, there is a much better chance of growing a good crop than by sowing good and bad together.

## Signs of Good Plants.

A close observer may readily discover in his crop the plants that are produced from good seed, which will have a strong, healthy appearance; while the poor seed will produce small, meager plants under the same chance and care, and the difference will be perceived through the season.

## Peas and Beans for Seed.

Peas and beans intended for seed should be assorted before sowing, by selecting those only which are true to their own variety and rejecting the small, inferior seed.—This method may also be practiced to a good advantage by the farmer, by selecting out a small portion of the ears of wheat, oats, barley, &c., and sowing in a small patch in the season for seed for the ensuing crop.

[To be Continued.]

[From Life Illustrated.]

## PRIZE ANIMALS POOR FOOD.

The flesh of animals will, for a long time to come, and largely, be used as human food. A healthy degree of fatness in an animal is evidence of good treatment, and of its healthful condition while living, and hence, also, of its wholesomeness for sustenance. This healthy degree of fatness is very distinctly removed from a condition in which lean flesh, organs, and bones make up the animal. Unless in some special cases of disease, the flesh of the animal, if used at all, should be taken in its natural admixture, the muscle or lean and the fat together. The human body is made up, and continually re-made, from the food taken into it. If the food be not healthful in its growth and substance while living, and suitably preserved and prepared for the table, those who feed upon it can not be kept in a state of vigorous and complete health. Animals are brought into a morbid or diseased state by our prevalent modes of fattening by confinement in pens, coops, stalls, etc., even if, which is not always the case, they were healthy before.

So far as we consume the flesh of such beasts or fowls, we take into our blood diseased and imperfect sustenance, and we compel our tissues, our muscles, brains, etc., to be formed out of such deteriorated, depraved, poorly organized, poorly vitalized, often positively deranged and offensive material.

This is not the fault of flesh-eating, nor a disproof of its propriety; it is a proof that our prevailing modes of preparing animals and poultry to be slaughtered for our own and for our purchasers' tables is disastrously and deplorably wrong.

These are, in substance, the conclusions to which we came, in a recent number of Life Illustrated, in our article on the 'Excellent Art of Deseasing Food.' Reader, which one of those conclusions is untenable? If none of them, what becomes the duty, in view of self-interest, common sense, and humanity alike, of those who have made it their business to raise and prepare animals for the food of this people?

But it may be said, 'this is all very clever, only it is theory; we are not so sure that fattened animals are thereby diseased.' Very well; Mr. Gradgrind shall have facts.

We mentioned incidentally, in our last, the asthmatic breathing, the suffocation, we might have added the great

debility, of highly fattened animals; we called attention to the fact that exercise, air, freedom, all the conditions of health, are purposely denied to animals in the fattening, so that the flesh and fat they lay on must be of a morbid character; and we alluded, faintly as we could, to the discolored, enlarged, scrofulous glands, the cutaneous eruptions, and the abscesses of joints or soft parts, none of which, certainly, can be found in a healthy animal, nor in one born vigorous, and allowed to find its subsistence by grazing in freedom through fields or forest.

But we now lay a new class of facts before our readers, for which we are indebted to the researches, and to the pamphlet containing them, of Frederick James Gant, surgeon and anatomist to the Royal Free Hospital, London. And we congratulate the world, in the outset, upon our discovery of one more physician who can prefer the public welfare to his own prospect of fees; for we assure our readers that, to the extent of our observation, the number of such is astonishingly small.

Mr. Gant, if he found out that high-fattened cattle were unwholesome, and that by eating of them he would lessen his working abilities and shorten his life, could have sought out the healthier specimens for his own table, and left the community to sicken as they might, and fee him for attending them, as he well knew some of them would. At all events, this is the general rule with the medical profession.

That is another fact, Mr. Gradgrind; we can not mince it as easily as you are left to mince your scrofulous porkers and beeves; and so we give you a chance to make a note of it for future use.

Mr. (we should in this country say Dr.) Gant, had long suspected that the English method of feeding cattle was based on a vicious principle. To test this question he determined to call to his aid the microscope. The appearances of healthy tissues, especially of healthy muscle, are well known; and the microscope would show whether the specimens brought under their keen eye were healthy or diseased. It would give the minute anatomy of the part examined and show whether it were a sample of physiology or of pathology.

Mr. Gant's pamphlet, on 'The Evil Results of Over-feeding Cattle,' and from which we purpose to extract freely, and sometimes without quotation, is addressed 'more especially to breeders, feeders, judges, and exhibitors of cattle,' and then to the general public. His object is to set forth the diseased conditions which he has found to characterize animals killed in supposed health and used for food.

It seems that the question of the best method of rearing cattle for food has long been agitated in England, and that a society was expressly organized to look after this matter so long ago as 1798. This society, the Smithfield Cattle Club, is made up of gentlemen of means and intelligence, some of them high in official station, who have animals raised and fattened on their estates; and yearly, at least, exhibit the 'best' of these for competition.

The exhibition of 1857 is that to which Mr. Gant gave his attention. At the bazaar, he discovered but slight external signs of disease. One cow looked very ill, and laid her neck flat upon the ground. An attendant, in answer to an inquiry, said, 'I know nothing of them beasts in p'ticular, but it's the case with many on 'em; I know that.'

Three pigs in a pen, the property of Prince Albert, lay helplessly on their sides, with their noses propped up against each other's backs, as if to breathe more easily; but their respiration was loud, slow, and suffocating. There was, at the end of each breath, 'a short, catching snore,' that shook the whole body of the animal. Mr. Morland's 'gold medal pigs,' 12 months 10 days old, 'improved Chilton breed,' snored and actually gasped for breath.

Such animals, says the writer, 'the judges highly commend.' The animals were all of great or even monstrous size, compared with their ages. To produce all this flesh and fat in so short a space must have required a 'high-pressure work against time,' that would unavoidably over-tax stomach, lungs, liver, heart, kidneys, etc.

Mr. Gant had particular animals marked and followed to the slaughter houses; and there he removed the organs and the specimens of muscle, which were examined immediately after their being butchered, confining himself to those animals to which the judges had awarded the highest prizes, as specimens of healthy rearing and feeding, viz., the gold and silver medal prize bullocks, heifers, pigs, and sheep. Of such parts as were of interest, after dissection, he had drawings made, under the microscope when necessary, and on the spot.

Let it be premised that the true flesh (muscle, or lean) of the animal is that which undoubtedly furnishes by far the larger part of the nutriment proper obtained from the entire flesh. It would be poor economy in nature to make the fat of our food over into lean in our bodies, and vice versa; so that each part doubtless goes to kindred uses, after digestion. The strength and brawn-giving portions can not be spared; and hence the nutritive and working value of a sample of any meat will be impaired in just the proportion that the actual muscle or fiber is wanting, or converted into something else.

Muscle is known by its red color on cutting up. This grows darker by exposure to the air, and the fiber becomes relaxed and softened at a certain period after death, but long before any thing like active decomposition has set in. The muscle is made up of bundles of fibers, easily separated by picking apart with a needle, especially in flesh that has been boiled quite tender. The fibers themselves are bundles of smaller filaments, called fibrillae, or fibrils, and these are crossed by numerous fine dark lines. Each fiber is enveloped in a thin sheath of membrane; and in healthy fat is never found inside these sheaths, nor among the fibrillae; although, along with small blood-vessels and nerves, it is found between the fibers, and in greater or less quantity, according to the condition of the animal.

But in over-fattened animals, while the fat between the fibers of the muscles is much more abundant, a still more morbid change is shown by the fact that the fibrillae themselves in many cases shrink and disappear, or where they are still visible, their make and appearance is wholly changed; the alternating light and dark lines are less distinct, and the fibril itself is speckled or dotted along with little shining fat globules that have been deposited within it, and where, in health, fat is never found.

This state is a stage of what physicians call fatty de-

generation. In it the muscle is very weak, and liable to rupture. As this condition usually affects the heart very early, the circulation must be feeble; hence another reason why the operations of life are imperfectly performed, and the blood and flesh more disordered; while by rupture of the heart, sudden death may at any time intervene.

In his examinations, Mr. Gant found, in the 'best' fat wether sheep, the heart much enlarged, its external and internal surfaces 'very soft, greasy, and of a dirty brownish yellow color, with here and there yellow spots of fat' imbedded in the organ. The microscope showed the substitution of fat for muscle to have gone on largely.

Of a prize South Down wether, the heart was found in a similar condition, and the liver, which was enlarged, was congested with blood and mottled with dark spots where the stagnation of blood was greatest. In the 'best' long-wooled wether—Lord Berners'—the heart and liver were in the same state, while the lungs were full of knots of the size of a bean, containing worms (filaria) in various stages of development, and also tubercles.

In the 'best' pig of any breed—Mr. Morland's—the heart was enlarged, but its cavity contracted, so as to interfere with circulation; the liver dark and congested, with some ruptured vessels. In his Royal Highness' 'best' heifer, the exchange of muscle for fat had gone on largely.

Of a short-horned ox exhibited by Mr. Wortley, 'the best of any class,' the heart weighed 7lbs. 13oz., and the owner esteemed it such a prize that he charged for it the sum of half a guinea. In this heart all the appearances already noticed were found, with the addition that the fibers were wholly gone in many parts, and in one a rupture had already gone completely through the heart, save only the thin inner lining membrane, this alone having saved the animal from previous sudden death! 'This animal, under three years of age, weighed upward of 2,500lbs., and was eating 21lbs. of oil cake a day, besides other food.' Scrofulous deposit was found on the intestines of one of the animals examined.

The most common results thus found were two that would naturally go together, the change of muscle more or less completely into fat, and a stagnation of blood in certain internal organs. The entrance of fat largely into the fibrils at once evidenced a diseased condition, of which it was the effect, namely, the overloading of the system, or filling it with more material than it could conjointly use and expel, as with a due allowance of food it would have done; and secondly, a new cause of the diseased condition, by further interfering with the vigorous character of the circulation, so necessary to keep the blood and flesh of even a well-fed animal in a pure condition. Yet even the flesh of these morbid creatures can hardly be distinguished by the eye; and a muscle far degenerated may wear its usual appearance.

A blood-stained appearance of the meat after death; a mottled or unusually dark look of the lungs or liver; knots or tubercles; a very fat, enlarged, flabby, or discolored heart, may be taken as indications of disease. A stupid, heavy condition of the animal while living, loud snoring, panting, gasping, etc., are not very dubious signs. If the solid excretions be found to contain undigested food, or the liquid excretions to be heavy, turbid, or discolored, the feeding may be considered too high for healthfulness.

'Were a man,' says Mr. Gant, 'in this condition (that of some of these animals) to present himself at an assurance office, it would refuse to insure his life at any premium. Yet, under similar circumstances a sheep is awarded gold and silver medals, and its feeder a prize of £200! And we may add, its flesh is eagerly bought up at enormous prices, to supply a notable dainty for the tables of epicures, and of families of wealth or taste, or of pride, which apes both. Witness the fabulous sums paid for steaks and roasting pieces from a 'Henry Clay ox,' or any other similar mountain of morbid animal substance.'

Prize animals, then, are about as far removed as possible from perfect animals. How can it be otherwise? Is the 'fat woman' or the 'fat boy' a model human being, and a paragon of health? Far from it; and just as far as these depart from the perfection of humanity, your over-fattened beeves and hogs—the delight of sapient committee-men—depart hopelessly from health and wholesomeness. And just as far as your beeves and hogs depart from wholesomeness, and you who 'live by eating' still consume their flesh as food, your own tissues must become made up of deteriorated, poorly vital, and diseased material—just so far you must pre-occupy and over-task the vitality you have left, diminish working power, and shorten life!

And yet, over-fattening is not the only evil influence to which the flesh of animals is subject. Over-work, diseases contracted by exposure, and unnatural treatment; crowding, tiring, overheating, etc., in transferring from country to city—all these are causes that interfere with the wholesomeness of animal feed as we now obtain it. If conscience and benevolence, instead of the most rampant avarice, could but rule the market and the raisers and the fatteners of stock, all these mischiefs could, and would, soon be entirely done away.

Let the stock owner charitably knock upon the head, or brand as leprous, and turn out to shift for itself and die, the animal that ill treatment or contagion has rendered actually diseased.

If the health of an animal suffer, let him give it air, pasture, freedom, and time to recover a natural tone and condition, instead of hurrying it into the stall and crowding fat upon it, in the fear that he may lose its head, or perhaps only a few months' earlier use of the cash it will bring.

If an animal in fair condition is to be fattened for the table or the market, let that animal forthwith and permanently have all the freedom and range it desires, consistent with the owner's extent of pasturage; let it breathe, and run, and purify its blood and flesh, and lay on healthy muscle and a natural amount of healthy fat, instead of being crammed perpetually to surfeiting, losing in a degree its muscle, and becoming filled up with morbidity and grease. And let drovers then take to themselves human hearts and understandings, and convey their animals with care, and without excitement or harm, to our markets.

Alas! how much innocent white paper we have spoiled! Immediate self interest now rules the world at large. Farmers will still fatten, and committees will still commend, and thoughtless young men and women will still chuckle over, and we who partake of flesh will still eat