

RURAL AND SUBURBAN

THE BEST POTATOES AND HOW TO GROW THEM

The potato (*Solanum tuberosum*) is one of the most important articles of food obtained from the vegetable kingdom. It is a native of South America, chiefly Chili and Peru, and is generally believed to have been brought from Virginia to Ireland in 1585 or 1586 by Thomas Herriott (who accompanied Sir Walter Raleigh on several of his voyages) and to have been planted near Cork.

The Soil and Its Preparation

A good sandy loam, rather dry than otherwise, is that best suited for potatoes. Crops of good quality cannot be grown on wet, heavy, undrained land, but anyone having such can greatly improve it by draining, trenching, throwing the soil up in ridges for the frost, wind and sun to pulverize and sweeten it through the winter. Partially decayed leaf soil road grit, old potting soil, charred garden refuse, half-decayed straw stable manure, lime, etc., are all good things for improving heavy soils. Potatoes grown in very rich soil are never of such good table quality as those from one less rich, and are also more liable to disease. Ground that has been trenched and manured with a good dressing of stable manure for the previous crop is to be preferred to heavy manuring for the potato itself. Potatoes should not be grown on the same land two years running.

Seed Potatoes and Their Treatment

Trials of potatoes have shown that a frequent change of seed is necessary if the best possible crops are to be grown, and that Irish and Scotch grown seed is the best, the reason given for this being that the tubers are not so ripe, and the contents being in a more soluble condition are more readily available as plant food, which gives the plant a quicker and more vigorous start. The seed should be perfectly sound and properly prepared for planting. To do this (before they begin to grow) spread them out thinly in a cool, light shed, or, better still, place them on end in boxes, with the crown end up, and stand these in a frame or on a greenhouse shelf close to the glass, but if the least frost gets to them they will be useless. Seed potatoes should weigh about 2oz., and the shoots should be reduced to the three strongest. It is not advisable to use cut seed for early varieties, but for main crop varieties potatoes weighing about 4oz., cut so that each half has three strong shoots, yield as good a crop as, and in some cases slightly better than, whole ones.

Planting

The best time for this is from the beginning of March till the end of April. Once sown some planted the first week in June and a fair crop resulted, but this was an exceptional case. Planting should not be done if the soil is at all wet. A good guide for this is, if it clogs the boots of the planter it is too wet and should be left till a more favorable time. For early varieties the rows should be about 20 inches apart and the sets 15 inches, for second earlies 2 feet and 1 foot 6 inches, and for strong-growing main crop varieties 2 feet 6 inches, and 20 inches. The dibber should not be used, except in the lightest soils, as it cases the soil round the hole and the roots have a difficulty in breaking through it, and the sets are almost certain to be at unequal depths. The best way is to stretch a line across the ground and take out a drill from 4 inches to 6 inches deep (the heavier the soil the more shallow the drill) with a spade or a heavy hoe, give a light dusting of quick-lime, plant the sets and cover. Pick off any stones, rake out any footmarks and leave the ground tidy.

After Treatment

When the tops appear through the soil if there is any fear of frost they should have a little soil drawn over them, and when they get too high for this a little dry litter, stout paper, rubbish leaves, hay, straw, evergreen branches or anything suitable that is to hand should be used, as the tops are very tender, and if the least frost-bitten are severely checked and often ruined. If weeds appear hoe them up, and when the tops are about 6 inches high fork over the soil between the rows and mould up with a heavy draw hoe. In clay soil the ridges should be drawn up rather pointed to throw off heavy rains, but in dry soil they should be left more open to let the rain in to the roots. Moulding should be well done to keep the crop covered, as a potato exposed to the light for a length of time is spoilt for eating or show.

Lifting

For this a broad four-pronged fork is best, and great care should be exercised not to run it into the potatoes. Choose a bright day and let the crop remain on the ground a few hours to thoroughly dry. First pick up the store size, then the planting size and store separately; the small ones should always be picked up clean, as if any are left in the ground they are a great nuisance the following summer. If there is convenience to do so store potatoes should be kept for about three weeks before clamping. Burn the haulm and any diseased tubers.

Clamping

Choose a dry piece of ground, smooth over the surface, lay a covering of straw on it, place the potatoes on this in ridges, cover with straw and then with 6 inches of soil taken out to form a trench on each side of the ridge. The straw should be pulled up in a tuft to protrude through the apex of soil at every 5 feet for ventilation. The clamp should run north to south, as then it is possible to open it at the south end without injury on a bright day during frosty weather if the potatoes are wanted.

Potatoes for Show

Choose an open space of well-drained

ground, deeply trench it in the autumn and plant about the middle of March. The soil to be used is one-half old mushroom-bed soil and one-half good leaf-soil passed through a half-inch sieve. Take out a trench 1 foot wide and 1 foot deep and in this place 6 inches of the prepared soil and plant the sets down the centre. They should have been prepared as previously advised, and disbud shoots to the strongest one. Then place over them another 6 inches of the prepared soil and over this a little of that taken from the trench. If old mushroom-bed soil is not obtainable, clean leaf-soil is nearly as good. The rows should be 3 feet 6 inches apart, and the sets 2 feet. Hoe frequently, protect from frost and mould up as soon as fit with the best soil taken out of the trench. The haulm should be kept upright by driving some stakes down on both sides of each row and running some stout string along them. As soon as they are ripe they should be lifted. Have a shallow box at hand and into this place all the best tubers as they are got up, and shade from sun and air, as the less exposed they are the fresher they will look. Store in moist soil, and the day before showing wash them with soap and water, using a soft sponge. Finish off with a little new milk and wrap separately in soft white paper. Potatoes for show should be of good shape, shallow eyed, clear skinned and all in a dish of an even size.

Potatoes in Pots and on Hot-beds

Soil—leaf-soil or old mushroom-bed soil one-half, good loam one-half. Properly prepared sets should be planted one in an 8-inch or two in a 10-inch pot. Disbud the shoots to two. Use clean, well-crooked pots, and warm the soil before using. Half fill the pot with soil, plant the set, just cover, and top-dress later. Keep plants close to the glass and never force hard. Water with care. In frames on hot-beds the chief thing is to get a steady lasting heat. Use the same soil as for pots, and well protect from frost. The distance should be about 15 inches between rows and 1 foot between sets.

Varieties

Among the best forcing and early varieties are: Yellow-fleshed—Sharpe's Victor, Early Ashleaf and Duke of York; white-fleshed—May Queen, Snowdrop and Ringleader; second early varieties—Sir J. Llewellyn, Duchess of Cornwall, Windsor Castle and Centenary; main crop varieties—Up-to-Date, The Factor, Discovery and Syon House Prolific; show varieties—Royalty, Empress—Queen, Monarch, Million-maker, Klondike, Advancer, Eldorado, Empire, Goodfellow, Snowball, Ruby Queen and Evergood.

Diseases of the Potato

Phytophthora infestans.—This is the worst scourge the potato is subject to, and first came into prominent notice in 1845. Bordeaux mixture, properly applied, reduces the risk of this disease to a minimum. As the disease seldom appears before the middle of June, the first spraying should take place about then, a second about a month later, and, in bad seasons, another in August. Early varieties will only require spraying once, and in a favorable season not at all. Recipe for Bordeaux mixture: Copper sulphate (blue stone) 10oz., quicklime 6oz., water 5 gallons. Always use wooden vessels for this mixture. Dissolve the blue stone in some boiling water, mix the lime with water, strain through some coarse sack, and add to the blue stone solution, then add enough water to make 5 gallons. Still wet and it is ready for use. Well wet the leaves both top and under sides.

Winter Rot.—Flowers of sulphur sprinkled over them at the rate of 2lb. per ton when storing will destroy this fungus.

Wireworms, Beetles, etc.—Fresh gas lime applied in November at the rate of 4oz. per square yard will clear off most of these.—Ex.

PRUNING CLIMBING ROSES

Our climbing roses are being submitted to rigid examination, and those that have flowered are pruned, not the kind of pruning the dwarf plants are subjected to, but all old stems are removed to the base. The object in pruning climbing roses is to preserve the strong wood of the present year, which will bear an abundance of flowers in 1909, and it is this that should remain to gain in strength and ripeness through greater exposure to sun air. We were looking at a fence of roses recently which was untouched, the owner believing that all pruning of climbing roses is a mistake; but, of course, the plants were growing weaker, the flowers were not satisfactory, and in a year or two nothing would remain except a thicket of weakly, flowered twigs. A thorough pruning was recommended, and the quantity of wood removed from these ramblers was astonishing. An example of the benefit of severe thinning out of old stems occurred two years ago; the rose was Dr. Rouges, a climber with flowers of so brilliant a color that they seemed filled with sunshine. No blossoms were forthcoming, but when the worn-out stems were removed and daylight let into the centre of the plant, the rose seemed happier; the year following a brilliant display lit up the corner of the garden in which it was planted, and at the present time it is the gayest rose in a large collection. Of course, all climbers must not be pruned at the same time, owing to the difference in the season of flowering. Some are early and some are late, but all must be relieved of old and weakly shoots immediately the flowers have faded.

SAXIFRAGES AND THE BLANK WALL PROBLEM

The gardener who strives after a maximum of pleasing effect with a minimum of stereotyped conventionality usually finds his ingenu-

ity severely taxed when his operations bring him face to face with a high blank wall. For days, perhaps for weeks, he wrestles with the problem, the wall staring him out of countenance all the time, until at last, his horticultural soul crushed by the weight of the relentless masonry, he feebly plants quick-growing ivy along its base, and lets it go at that. That is better than nothing, but the spirit rebels against being encompassed round with an everlasting 6-ft. to 10-ft. barrier of unbroken ivy. There are, of course, alternatives only restricted in number by the limits of the gardener's ingenuity. I have tried many of them, the most successful being the pressing of the saxifrages into the ameliorating scheme.

In this instance the section of wall dealt with is no more than six feet high, an ancient piece of stonework, but perfectly bald from base to coping. At the time its treatment was undertaken alterations were going on in the house, and the old plaster, lime and rubble were tipped along the base of the wall to a height of about 2 feet 6 inches. A rough edging of limestone chunks of rock were fixed along the front of this long mound, other chunks of limestone scattered about it, and a layer of soil thrown on it. Three kinds of saxifrage were then planted throughout its length, here and there among the stones, while along the top of it, and against the uncovered upper portion of the wall was planted golden ivy. The result is a most gratifying combination.

All through the winter, early spring and autumn the saxifrages clothe the rocky mound with dense green cushions, closely hugging the stones and packing every interstice, and in June they present a thick undulating mass of bloom, contrasting finely with the yellow ivy against which they are set, and conspicuous from the hills a mile away.—W. Carter Platts, in The Field.

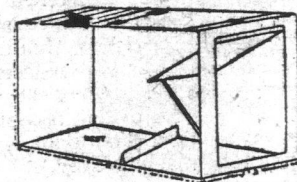
STANHOPEAS

Of the many genera of orchids cultivated in gardens for the beauty and strange form of their flowers the stanhopeas and their relations the coryanthes are by far the most strikingly grotesque. When not in bloom they are quite ordinary in appearance, a cluster of furrowed, egg-shaped pseudo-bulbs each bearing a broad plaited green leaf after the style of the leaf of an aspidistra; but when the flowers appear, their size, fragrance and remarkable structure are such that they rarely fail to give rise to speculation as to the object of so much ingenuity in a flower. No doubt it has to do with insect attraction and consequent fertilization, still one may wonder what the peculiar circumstances were which led to the development of such an exceptionally intricate design. The powerful odour attracts the insect, a moth probably, which entering in search of honey by a cleverly contrived opening picks up the pollen on the way, and passing out through another opening carries the pollen to the next flower visited, depositing it on the sticky column or stigma, which is placed just where the pollen on the insect would be likely to come in contact with it. The flowers open quickly, sometimes bursting apart with a slight report, and they are of short duration, but whilst they are on they never fail to excite feelings of wonderment. There are about a dozen species, and they are all natives of tropical America. Fifty years ago stanhopeas were more in favor with orchid fanciers than they are today. Growing naturally on trees in moist forests, and pushing their flower racemes downwards, they are not easily accommodated except in a large teak or wire basket filled with a mixture of sphagnum moss and peat, and hung from the roof of a moist tropical house where they can receive shade from bright sunshine. The best examples we have ever seen were grown in an old-fashioned tropical conservatory where they obtained plenty of water in summer and none at all in winter. Here they had formed masses a yard through and every June they flowered gloriously.—The Field.

POULTRY CULTURE.

Since the introduction of trap-nests into the poultry yard considerable improvement in egg production has been made, and the progress in this direction continues to the apparent satisfaction of the utility poultry-keeper. To ascertain individual records of hens trap-nests, although necessitating trouble and expense, are invaluable, and by their means the best laying strains are built up. At the Utility Poultry Club's Laying Competition splendid results have been achieved, and the value of the system—which has been in operation in America for many years—fully proved. It should be explained that trap-nests are contrivances which trap the hen when she has laid an egg, and before being released the number of a pullet (placed on the leg when the bird of a pullet) is recorded on a chart. In many establishments every bird is numbered by means of the ring, and it is thus possible to ascertain the egg-producing merits each year, and by careful selection to improve the proficiency. Such records year by year mark the progress, made, and if the duty is methodically undertaken by the poultry-keeper or his attendant, the work is not as laborious as it would appear. After a little experience the best time to visit the nests will be ascertained, and trouble minimised. Care has to be exercised in handling the hen after laying, but after being taken off the nest a few times they do not object to being handled; in fact, will remain quiet, apparently awaiting release by the attendant. There are many kinds of trap-nests at present placed on the market from which a choice can be made, whilst home-made contrivances are often successfully used. In the Poultry World for April 1908, a simple trap-nest made from an ordinary grocer's box was illustrated, and for the read-

er's benefit is explained. Any box with suitable proportions can be utilized for the purpose, the best size being 2 feet long, 1 foot 2 inches wide, and 1 foot 6 inches high. Remove one end of the box, and place a strip of wood across the middle inside, about 3 inches wide; cover half the top with strips of wood, and make a flap door of front top-half—to button down—for lifting the hen out after she has laid, which can be easily seen between the strips. Nail two strips of wood 3 inches wide down the sides of front, also a strip across top and bottom, same width. A swinging flap to fall against the sides, to the top strip, from the inside, and should be properly hinged. The flap is now held up with a loose piece of stick about 6 inches long, and as the hen crosses the centre piece she lifts the flap a little with her tail, which releases the stick and the trap drops. To make it more effective, a spring catch can



A Simple Trap-Nest Easily Made

be fixed to the bottom strip, but it is not necessary. It is better to make the flap to fall about 2 inches above it.

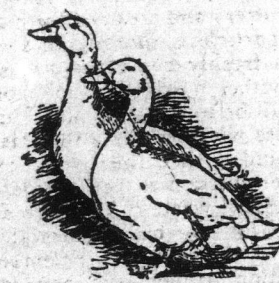
Black Leghorns continue to be popular, especially amongst town or suburban poultry-keepers, who find them excellently suited for close confinement, and when scratching sheds are improvised the egg-basket is well filled throughout the year. A reader, who failed to obtain good results from mixed breeds, was tempted to turn his attention to Black Leghorns for his back yard poultry runs, and writes that he has kept a record of the eggs laid by seven pullets and retail value from December to September last. In the ten months this small flock laid 995 eggs, value 44 9s. 9d., and they are still laying. He writes in high praise of the wonderful activity displayed by the Black Leghorns, and the small amount of food they consume, whilst the large-sized eggs laid are surprising for a small fowl. He advises all whose space is limited to give this breed a trial, as he finds that, excepting during moult, laying continues all the year. The secret of prolific laying in this breed, it may be added, is to keep the hens free from fat, but full of vigor and healthful activity.

Many poultry-keepers overlook the important part which lime plays as a necessary ingredient in fowls' food, and need to be reminded that laying hens and growing chicks must be supplied with lime in some form. When it is considered that the egg shell is very largely composed of lime, all of which is taken from the hen's organism, and that in 500 eggs it is estimated about 7lb. of lime is used, the absolute importance is apparent. Whilst if not provided in sufficient quantities soft-shelled eggs and hens eating eggs to obtain lime for shell-making will be the inevitable result. One-tenth the weight of a fowl is composed of mineral matter, of which phosphate of lime forms a considerable portion. When hens are moulting almost half of this is required in the feathering, which is naturally a drain on the system. Grain and other foods supply lime and mineral matter, but not sufficient for the hen's requirements when prolific egg production is the desideratum. Further, growing chickens demand lime to perfect the frame and feathers, whilst leg weakness is often the result of insufficient lime being supplied. Oyster-shells—calcined—are rich in lime, and easy to obtain. Most poultry food dealers supply it at 3s. per cwt., which is a good investment where any large number of fowls are kept. Bones contain a large proportion of phosphate of lime and phosphoric acid, and green cut bone, dry bone dust, or bone in beef scraps is excellent for this purpose. Clover hay is rich in lime, whilst grass supplies a moderate percentage. Many experienced breeders make a practice of liming the corn, and any grain can be so treated and will be found to destroy parasites, prevent fowl cholera, and is no wise injurious to health. The method adopted is simple: Pile the corn in a conical-shaped heap, and pour a mixture of lime and water on it, stirring well with a stick, until each grain is coated, when it can be left to dry and used as required. Poultry in confinement must always have a supply of lime and a small box filled with calcined oyster shells, nailed to the side of the house, about a foot from the ground, also a second box in the same position, filled with sharp flint grit. Such essentials are as important as food to hens to enable the birds to become successful laying machines.

A Bedford reader is advised that on many up-to-date establishments ducks are mated up in the autumn, so as to incubate (by artificial means) eggs in November, and by this means ducklings can be got ready for killing early in the new year, which brings in good returns, providing they are of the right stock. It is regretted that farmers and others with housing accommodation do not give this matter attention in the fall of the year, instead of waiting until the spring. In mating up such massive breeds as Aylesbury, Pekin Rouens, three ducks to a drake is sufficient, and it is important both male and female should be well matured and in their second season. Good housing is necessary, although any farm building dry and well ventilated, and well bedded with

straw, will answer for duck breeding. The stock birds may be given plenty of liberty to improve egg-supply, whilst water to swim in will ensure fertility. Although smaller breeds, such as Indian Runners, Khaki or Buff Orpington ducks, require less water, still a brook is advisable for all breeds of water fowl. Judicious feeding is of greatest importance, otherwise unfruitful eggs will result, whilst shell-making materials must not be neglected. Soft foods of a fattening nature must now be sparingly given, and Indian meal, barley meal, and potatoes, also maize, be avoided altogether for the breeding ducks. Oats will be found best of all grain supplied, and may be steeped in water, or rolled, whilst cracked peas and beans are good. Animal food must be given. Beef scraps are excellent. Grit and coarse sand must be regularly supplied to promote digestion.

Apropos the advantages of collecting deposits and co-operation in poultry-keeping, especially in country districts, interesting particulars have been received from the Street and District Collecting Depot, Limited, near Glastonbury, Somerset, which is affiliated with the National Poultry Organization Society, 12 Hanover Square, W., and is most successfully carried on under the superintendence of an experienced manager, Mr. W. Reynolds, whose ability in aviculture matters was conspicuous last winter in carrying out one of the most instructive laying competitions yet arranged. The objects of the branch are deserving of notice: Collection and disposal of eggs and poultry, incubation of eggs, rearing and fattening of poultry, and also breeding of same, to hire and purchase land, buildings, poultry-houses, and all essentials for such work, and to enter into contracts on behalf of the depot. The Street Depot has about 150 poultry-keepers and sympathisers, and good work has been accomplished, even in the first few years of its existence, whilst with the gradual increase in prices of home-produced eggs, together with the careful packing and grading, considerable benefits are confidently looked for in the future, especially when the advantages of co-operation were fully recognized. The Depot sold £2,040 worth of eggs during 1908, or an average of 1s. 1d. per dozen. Mr. Reynolds has issued instructive advice to inquirers, who are advised in the first instance to apply to Mr. Edward Brown, government adviser, of the Agricultural Organization Society, Regent House, Regent street, for information and leaflets how to start a branch depot. In cases where conditions are not at present favorable it is suggested that a small society should be formed to stimulate interest in the industry, and arrange for lectures, also the distribution of leaflets on poultry subjects (supplied free from the Board of Agriculture, 4 Whitehall Place, S.W.). It is further advised that aspirants to poultry-keeping should not start before realizing that it is a highly technical in-



Pair of Aylesbury Ducks

dustry, and therefore as a means of livelihood should never be undertaken except after years of experience, whilst Mr. Reynolds further states that even those with only a back yard need not be discouraged. It is bad policy to overcrowd a house or run; a grass run should have thirty square yards per fowl allowed, and when only a covered run is possible ten square feet of floor per bird should be given, and fully six inches of dry litter provided, in which grain should be scattered twice daily. Those with limited accommodation will find it better to buy than rear their stock birds. It is to country dwellers that Great Britain must mainly look for the increase of the industry; farmers have immense opportunities which are poorly realized; ten to twenty fowls per acre on pastures improves the ground without interfering in any way with other stock, and such birds will pick up at least one-third of their own living.

POULTRY CULTURE

(London Daily Telegraph)

Information is solicited as to the treatment and characteristics of one of the prettiest and most attractive of ornamental breeds of poultry, known as the Poland. Its chief feature is its handsome crest, which may be described as a large bushy mass of feathers, inclining backwards, and the breed is unique as regards the shape of the head or skull, which has a spherical protuberance on the top portion, seen in no other breed of poultry. There are several varieties bred and exhibited, and it will be found that while white-crested, black silver or golden spangled, are all deserving of attention, probably the silver-spangled is the most attractive. As shown in the accompanying illustration, the marking and general plumage make them worthy objects of admiration, and it is surprising that fanciers do not breed them in larger numbers and endeavour to improve the breed's prolificacy, which is at present far from satisfactory. The crest of the silver-spangled is extra long, and the feathers fall over the head in abundance, almost hiding the face, each feather being regularly tipped at the end. An additional attraction is the

thick spangled beard, which is decidedly handsome and nicely marked with silver and distinctly laced with black and sickle feathers, which splashed at the ends, and the better. The legs are rather short. To breed crest-cutting must be adopted, breeding pen the crests of regularly clipped to ensure eggs. Hatching is best carried out, even their crests kept dry, until the autumn by this means can the birds be in condition. It is to keep Polands unless the fancies three essentials—dry run, and plenty of patience will be rewarded by having the fowls of poultrydom hobby.

Prospective winter lards a source of anxiety, lited as to the best method of fattening, and the problem of security only be solved by a conscientious rearing, and proper feeding, keepers are overfeeding the feeding too generously of starchy foods, forgetting the flesh, frame and muscle to ensure the necessary surplus production. Barley meal, or potatoes should be excluded for growing pullets, foods, including meat, such as surprising bone makes Attention has lately been for ideal poultry meal, the oldest mills in this country, Standlake, Oxford, establish this meal is giving excellent results, it is a perfectly balanced ration of meal, linseed, clover meal, and dried off with it makes a capital food for laying hens, and may be used by breeders. As over-fattened crows in the autumn months to mention that oats is the ing hens, inasmuch as, more fat (oil) than other such a nature, and so eat fowls fed on oats can never recommended by the writer (splendid results), especially scarce. Clover is rich in protein and 3 pounds of heat and energy produced including lime. It should (in a chaff cutter) and the it resembles freshly cut mixed with other meals third, and will be found to have properties with healthers are reminded that it (when egg-production is to repair constant waste—sustenance for the bird production, for it must the composition of hen. Before concluding this, are reminded of the advantage depth the scratching and even poultry house now so plentiful in tow leaves are splendid for the necessary exercise wags in health and vigor scattered in such little hens busily employed in Those who can store do to do so without delay scratching shed such manure for gardens.

Fattening turkeys wobbles demand attention South Norwood Hill, is advised that they should easily digested food. ground oats, barley meal equal quantities make a with skim milk, and to weeks a little mutton fat juicy flesh of good color quality flesh this diet of pepper and salt to given every other day mashed potatoes may parts with one part ground barley meal; whilst for mashed potatoes, one meal, and one cooked skim milk, is an excellent recently made proved confined for twenty-one average of four and a first ten days on a m parts each of boiled barley meal, maize meal (all prepared given in the morning, a maize, oats and barley, fed in V-shaped trough inches from the ground twenty birds. Only six to be eaten at one meal should be placed in the on the ground, as turn mouthful rather than separately. Cleanliness the greatest importance may be varied by adding tops, and green cut barley meal will be found birds should be kept