

# AGRICULTURAL

## ADVANTAGES OF ROTATIONS.

A correspondent says that while he has been engaged in farming nearly all his life, he has only recently felt any interest in what people call "scientific" farming, and that he would like to have us tell him what are the advantages of rotation. He accepts the idea that rotations do possess advantages, but he does so rather because everybody says so than because he has any well defined reason for his faith. To enumerate all the advantages of a good rotation would be a considerable task, and some of them are special, depending on particular circumstances and applicable only to particular surroundings. Among the more general advantages are those which depend on the fact that the feeding capacities of plants differ. Some require more of a given element than of another, that required being present in the soil in an available form only in limited quantities at a time, and a lapse of one or more seasons being necessary to render new supplies available. Some plants are surface feeders, others feed lower down, and still others send their roots deep into the subsoil. Some are gross feeders assimilating the elements they need in almost any shape they find them, while others are more delicate, and must have their plant food just as they want it, or they cannot assimilate it at all. The growth of different crops in succession on the same soil, therefore, prolongs the period of profitable culture by retarding exhaustion in special directions. All crops have insects and fungous enemies. If any plant is continuously grown on the same land, the insects attacking it multiply greatly in the presence of their favorite food, and the spores of fungi remain over in the soil, growing worse with every succeeding year. The Hessian fly often compels the abandonment of wheat where wheat has been continuously grown; a little scab in potatoes this year or a little smut in corn will cause more scab and more smut if the same crops are planted on the same ground next year. Again, certain crops derive all their nitrogen, phosphoric acid and potash from the soil, so far as is known, while others of the legume family derive their nitrogen from the atmosphere. The growing of clover, may, therefore, increase the nitrogen in the soil for the use of other crops; and yet it cannot be continuously grown, for the land will become "clover sick" and refuse to produce it. Growing one crop on the same land continuously leaves the soil bare at certain seasons, while variety permits it to be more continuously covered. Soils always suffer loss when lying idle. A suitable rotation also distributes labor throughout the year, giving more continuous work for men and teams. One could hardly hope to make a living by working during the year only for the brief time necessary for putting in and harvesting a wheat crop, for instance. A variety of crops, marketed at different times gives a steadier and more regular income, and is also less at the mercy of the chances of the season. Any single crop is liable to fail, but all are not likely to do so, and it is not wise to "put all one's eggs in the same basket." There is also an economy in managements and an economic use of the manure is applied to them directly; others thrive better when the manure has been applied to the preceding crop; some use most of one of the fertilizing elements, and an economic use of the manure requires that another crop should follow to use the elements less completely used by the first one. A good rotation is, moreover, helpful in keeping the soil free from weeds. If one plant was grown continuously the weeds that thrive best with it would soon take the soil—the wheat would "turn into cheat," for instance. A good rotation always includes some crop that requires close cultivation throughout the growing season, and this is one of the best means of keeping down the weeds that have sprung up in the grain crops. A rotation of crops also improves the mechanical texture of the soil, for somewhere along the line it involves the turning under of sod, which is always helpful. It is likewise necessary for the best results in live stock feeding, which requires a variety of crops, and, as all know, there can be no very successful farming without live stock. These are some of the advantages of a suitable rotation, and if our correspondent will think them over he will find in them ample reasons for faith in diversity and rotation. What constitutes a good rotation is largely a question of conditions, depending on the character of the soil the live stock kept, and the way it is to be handled, the demand for various crops, the climate, the condition of the farm, and many other considerations.

## WASHING BUTTER.

Years ago it was generally supposed that in order to make really fine butter one must not allow a drop of water to touch it. Of late years, since we began to hear so much about granular butter, we have been instructed to wash it in successive waters until this was drawn off clear, or free from milkiness. It is my opinion that neither one of those policies is the right one to follow, writes Mrs. E. R. Wood. I have tested this matter of washing butter for a number of years, and have come to the conclusion that either extreme is to be avoided. To wash it, even in granular form, until the water runs off clear, will give us a butter that will not decay or turn strong as soon as that not washed so thoroughly, but it washes out much of the flavor. On the other hand, while the flavor is enhanced by not washing, the buttermilk left in after working will tend to putrefaction; for, as we all know, there is nothing which more quickly spoils and becomes ill smelling than buttermilk. To work out all the buttermilk breaks the grain, makes the butter salty. Of course we do not want to do this, so we will wash it in granular form through two or three waters (depending upon quantity of water used and also upon temperature of the butter), work in the salt until thoroughly incorporated, and call it finished.

## SCALDING AND SUNNING.

Scalding water is indispensable in the dairy, but it must be used at the right time and in the right way, else it were better not to use it at all. All vessels that are to be scalded should first be thoroughly washed and rinsed with cold water, and then scalded with a plenty of really steam-hot water. If the hot water be first applied, the milk remaining in any cracks, crevices or seams of the vessels is apt to be cooked into a hard paste or glue that water cannot remove. This glue will inevitably ferment and contaminate butter when afterwards used. After vessels have been washed, rinsed and scalded they should be exposed to the direct rays of the sun for several hours; all day is better. There is nothing like sunlight for killing fermenting germs, microbes, bacteria and all such.

## HOW THE WHIPPED MAN WON.

So, after they had fought for her, she married the man who got whipped, did she?

## CARE OF AND SELLING HONEY.

Nearly all light-colored honey is now stored, and as soon as the sections are nearly all capped, it should be removed, as the bees will discolor it, if left in the hive. The whiter and cleaner honey looks the easier it is to sell. Many people use it as a table ornament. Do not wait for the last sections to be capped says a writer in Country Gentleman, but rather put them back altogether in a case to be finished, but this generally is not a success, and I either extract them or sell them at a discount. Some seasons we have a great many half or three-fourth finished sections, and then I proceed as follows: I cut the combs out of the sections and put them in a two-quart crock—seven will fill a crock. This I call "scrap" honey sell it for 50 cents per crock, and realize nearly 12 cents per pound. Customers come

for it and call it a bargain. In removing honey from the hive, use a bee-escape by all means; if you do not, the bees are apt to tear open the cappings and spoil the comb by causing it to leak. Smoke very lightly, and place the escape under the case; next morning the bees have all gone below, and the sections are in the best condition for removal. The Porter escape is considered best, but the old double-wire come is much better than none. I use them both. As soon as the honey is taken off the hive, it should be stored in a clean, dry, airy bee-proof room. Never store honey in a damp place. All the propolis should be removed from the sections to make them look presentable. Now, don't rush your honey off to the commission merchant unless you are sure he has sale for it, or you are prepared to sacrifice it. When you are ready to sell, write to one or more reliable (be sure they are so) commission merchants, and ask if they have an outlet for your goods; then be governed by the replies. Better still, look after your home trade. By a little push you can sell plenty of honey right to your neighbors. I took honey along this summer when I sold raspberries and strawberries and sold as much as sixty pounds in half a day at 16-23 cents per pound. I sold some on every trip. I advertise the fact well that I have both comb and extracted honey for sale, and thus far I have found no difficulty in selling every season from 800 to 1,500 pounds to the home trade. I make it a rule to sell only a first-class article, and I often get more for my honey than the general run of honey in the stores is retailing for. If I have dark or mixed honey, I send it to the commission merchant and take what it brings, rather than spoil my home market. Sometimes the local merchant will sell quite a quantity for you, if you take goods in trade for the honey. I have had experience on both sides of this transaction, and it can be made a success if the merchant is a hustler and not a blockhead, as is sometimes the case. All this is, of course, some trouble, and work; but by managing it as described, I realize nearly twice as much for my honey as I would if I sent it all to the city market that is already overflooded with the product and has to find an outlet in country towns and the country. I also find the same practice holds good with small fruit. Freight, commission and heavy competition cut up the profits. Avoid them as much as possible.

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# FROM THE LAND O'CAKES.

## INTERESTING NEWS ITEMS FROM SCOTTISH BRAES.

### Stray Scraps of News Performed by the Heather—Happenings of a Week told in a Few Words.

The Scotch east coast herring fishing is a failure. Hundreds of boats have been returning daily without fish. The result to curers, fishermen and tradesmen on the coast town will be very serious.

Mrs. Helen Robb, widow of Captain David Robb, Greenock, has died at Gourack in her hundredth year. She had also wonderful eyesight, and never wore spectacles. Her descendants numbered 118, and were made up of 10 children, 39 grandchildren, 61 great-grandchildren, and 8 great, great-grandchildren.

Dundee has just taken an important step in municipal tramway development. In this Scotch town, in spite of the fact that the tramway company's lease has still eight years to run, the town council has decided to buy out the company and to take over the car sheds, tramway plant and rolling stock at a valuation, on June 1 next year.

A very quick train run has recently been made on the Great North of Scotland Railway. The company, on hearing of the sudden illness in London of the late Lord Inverurie, ran a special train from Inverurie to Aberdeen, for the benefit of the Earl and Countess of Kintore—Lord Kintore being a director of the company. The special train accomplished the journey of sixteen miles in sixteen minutes, including starting and stopping time.

A Glasgow man has in his garden what he calls a "tree clock." For trees are planted in such positions that one of them will shade a portion of the house at every hour of sunlight. For example at nine o'clock in the morning the "nine o'clock tree" shades the dining room, while as the sunlight changes the "ten o'clock tree" shades the room above or the room adjoining it, and so on through the day. On a sunny day this "tree clock" insures a succession of shady places round the house.

The freedom of the burgh of Dumfries was recently conferred upon the Right Hon. A. J. Balfour in recognition of his distinguished services as a statesman; and at the same time Miss Jessie McKie, of the Moat House, was admitted as a burgher of the city, as a token of the respect of the townspeople and in recognition of her affection for her native burgh and an acknowledgment of her efforts for its improvement. The ceremony took place in presence of about two thousand people.

A beautiful and expensive stained glass window has been placed in Auchinleck parish church, Ayrshire, in memory of the late Lady Boswell, and will form a new reminder of the place in the parish annals which Auchinleck owes to the Boswell family. Close by the new window the old family vault encloses the remains of the famous biographer of Dr. Johnson and of his eldest son, Sir Alexander Boswell, the ill-fated author of "Jenny's Bawbee" and other well known songs, whose death in his duel with Mr. Stewart in 1822, remains one of the poetic tragedies of the century.

Seldom has the Duke of Argyll performed a pluckier feat than when he inaugurated a free library the other day at Campbelltown, the southern capital of his extensive domains. For a septuagenarian to address an open-air gathering at any time is a difficult matter, but to speak as the Duke did for three-quarters of an hour in a drenching downpour of rain to an audience huddling miserably under their umbrellas, and to dilate to them on the most abstruse problems of geology and biology, requires both physical and moral courage of a high order. The Duke carries his seventy-four years with wonderful ease.

News has been received of the death of the Rev. George Rigg, Roman Catholic priest of the parish of Dalriog, in South Uist, one of the Outer Hebrides. Father Rigg met his death owing to a devotion not less than, if not of so great a magnitude as that of the renowned Father Damien. The family of one of his parishioners, a Heridean cotter consisting of the man, his wife and child, were all attacked by typhus fever at the same time. The neighbours would not approach the cottage in which the stricken family lay ill, and for weeks, with the exception of the doctor, who paid his daily visit, the priest unassisted nursed the sick household, cooking for them and performing all the necessary and unpleasant offices attaching to his self-imposed task. As a result he contracted the fever in its worst form and died after terrible sufferings, in the presence of his sister and the priest in charge of the other South Uist parish, who had both nursed him devotedly. Father Rigg was a nephew of the Right Rev. George Rigg D.D., Bishop of Dunkeld, and was a man of singular refinement and culture.

## CHILDISH JOY.

Me an' Billy don't have to study 'bout Alaska this year. Why not? Pap's done wore th' map out o' our gogafy.

## HAD MEN ALL TO HERSELF.

Florinda McGiggie says she was the belle of the resort where she spent the summer. How did she work it? She contrived not to be introduced to any of the other girls.

## THAT WAS ALL.

You two attorneys look like brothers, said the client to the partners in a law firm. But we are not, replied one. No, added the other. We are only brothers in law.

# MALAY FORESTS.

## They Are Among the Wonderful Things of the Earth.

These forests are among the wonderful things of the earth. They are immense in extent, and the trees which form them grow so close together that they tread on one another's toes. All are lashed and bound and relashed into one huge, magnificent, tangled net by the thickest underwood and the most marvelous parasitic growth that nature has ever devised. No human being can force his way through this maze of trees and shrubs and thorns and plants and creepers, and even the great beasts which dwell in the jungle find their strength unequal to the task, and have to follow game paths, beaten out by the passage of innumerable animals through the thickest and deepest parts of the forest. The branches cross and recross, and are bound together by countless parasitic creepers, forming a green canopy overhead through which the fierce sunlight only forces a partial passage, the struggling rays flocking the trees on which they fall with little splashes of light and color. The air hangs heavy as remembered sin, and the gloom of a great cathedral is on every side. Everything is damp and moist, and oppressive. The soil and the cool dead leaves under foot are dank with decay and sodden to the touch. Enormous fungus growth, flourishing luxuriantly, and over all, during the long, hot hours of the day, hangs a silence as of the graveyard. Though these jungles teem with life, no living thing is to be seen, save the busy ants, a few brilliantly colored butterflies and insects and an occasional nest of bees, high up in the treetops. A little stream ripples its way over the pebbles of its bed, and makes a humming murmur in the distance, a faint breeze, sweeping over the forest, gently sways the upper branches of a few of the tallest trees; but for the rest, all is melancholy, silent and motionless.

## BELTS AND GIRDLES.

In width the belt for next season's wear shows a decided increase. The narrowest shown are two generous inches in width, while the widest are deep girdles reaching half the distance between the arms and the waist line. Materials for belts are more varied than ever before. All sorts and colors of leather will be used, while the fabric belts will include even those of velvet. Velvet belts are, as a rule, several inches in width, and fastened by leather straps and leather-covered buckles. They are not particularly elegant and certainly add to, rather than take from, the size of the waist. That one quality is considered by the dealers sufficient to prevent their wide popularity, though they are among the very latest things in belts.

In brown black and the many shades of leather promise to almost supersede the many bright shades of green, blue and red so popular during the last two seasons. The buckles of these belts are likewise much less conspicuous. The harness buckle in glaring silver or gilt will not be used, and when not leather-covered to match the material of the belt, the buckle will be of metal and almost as inconspicuous.

Jewelled buckles in silver, polished or rough finished, in silver, gilt or solid gold, will be used only with silk or satin beltings. These new buckles all call for belts two inches and upward in width. They are made in many new designs. There are buckles for the bicycle girl, the athletic girl, the yachting girl, the skating girl, the golf girl, the horsey girl, the military girl, the dancing girl, and even the old-fashioned girl, who is supposed to like things plain but elegant. Metal buckles will be as much used as ever. The newest designs are all made wider, though not sufficiently so to be uncomfortable or clumsy looking. Many of them show a profusion of jewels and the most stylish ones are very ornate. An especially pretty belt of this kind has a succession of silver shells enamelled in natural colors and connected by tiny silver links made to resemble bits of seaweed. Another was a string of English daisies with jewelled centres and petals of polished silver. The connecting links were of silver, green enamelled, giving just a suggestion of foliage.

For fancy girdles, satin and taffeta silk are the favorite materials. They are made with points, either before or behind, or both, while some are plain, fastening in front, just a little to the left, with a large upstanding bow. Other girdles, so deep as to only need the addition of shoulder straps to serve as bodices, are made of bias silk or satin, fit as snugly to the waist as possible, and are closed at the seam under the arm. These deep girdles are becoming to slender women, and especially those lacking in well-developed busts. Stouter women will stick to the two-inch belt narrow under the arms and widening to a point in front and behind.

## THE WOMEN OF THIBET.

Miss Taylor, a young English woman, who recently returned from Thibet, and is now gathering missionary recruits for that mysterious country, says that men and women who understand medicine will be most successful in that field. The knowledge of drugs, she adds, among the natives is almost equal to that of the English themselves. The position of women, according to Miss Taylor, is higher in Thibet, than in any other country of the orient, save perhaps in Mongolia. In place of polygamy, so common among the Mahometans, polyandry rules in Thibet, a woman being married as a rule to all the brothers of a family. In consequence of the nomadic characters of the people, usually one of the husbands is at home at a time the others being absent in more or less distant parts, selling the products of their land. Women in Thibet, Miss Taylor asserts, are never punished—a fact to which she attributes the savior of her life on several occasions.

# THE FUTURE OF RUSSIA.

## Napoleon's Remarkable Prediction Made at Moscow in 1812.

The alliance—or, to speak more in conformity with the scruples of the protocols, the Franco-Russian entente—is not a "historical improvisation." It was born, as our historians have copiously demonstrated, not only from the community of interests and the similarity of certain views of the future, but from an affinity of sentiments which are instinctive, sympathetic and ancient, and on the subject of which the past throws a most interesting light. This dramatic past will be invoked many times during these days of excitement, and it will be recalled that, in spite of the tragic circumstances which set the armies of the two countries against one another for nearly a hundred years, the reciprocal tie was never really broken between them, but has been insensibly transformed into a tie of confidence and affection.

In this respect Napoleon spoke words and formulated judgments which were imbued with

## A STRANGE ACTUALITY

and which showed to what a height the Emperor's views were carried in appreciation of the conduct and valor of his enemies. It is well known that Napoleon professed a great respect for the memory of Peter the Great. Villemau relates the following anecdote:—

"It was at Moscow, on the evening of the 15th of October, 1812, in the salon where his warrior nobility and Ministers were assembled. Napoleon was speaking of the decree which had been signed that morning—the famous decree relating to the Comedie Francaise. The salon in the Kremlin which was occupied by the Emperor was immediately under the state chambers of the Czars and was lighted by immense chandeliers. The Emperor was walking rapidly back and forth, decanting on the tragedies of history. Stopping before the portrait of Peter the Great, he exclaimed:—

"Russia can only be attacked three or four months, or so to speak, during a quarter of the year, while she has a whole year to act against any invading power. One cannot but shudder at the thought of this great mass of human beings, who cannot be attacked on their sides, nor from behind, who can rush out upon us, overwhelming everything if they are triumphant, or, if defeated, retire into a desolation of ice and death. Is it not in reality the hydra-headed monster of the table? But where is the Hercules to be found?"

## A QUEEN'S TACT.

Of all the qualities once essential to a sovereign, the one most useful now is tact. Queen Margherita of Italy, who belongs to a house trained to kingcraft for more than a thousand years, is said to be wonderfully skillful in dealing with social difficulties. An incident which occurred at one of her drawing rooms illustrates her readiness and delicacy. The persons who are to be presented at the Roman court are arranged in a large semi-circle in the throne-room. The queen, enters and passes around the line, attended by a chamberlain, who names each person, adding usually a word or two to give the queen some idea of their claim to notice. She asks a question or makes a remark to each and passes on.

On this occasion there was in the line a young man from South America whose embarrassment showed itself in pale cheeks and terrified glances as the queen drew nearer. At last she reached him and stopped. He heard his name, saw her smile. There was a roaring in his ears; his knees shook. Every eye was bent upon him with amused interest, his terror was so perceptible.

"From Brazil?" she asked. "And what town in Brazil is your home, Signor?"

"—your majesty—I don't know!" he gasped. The whole crowd smiled, but the queen's face was calm as marble. "You mean that our beautiful Italy has already made you forget your home? Ah, signor, you are a skillful courtier! You flatter us too much!" and playfully shaking her fan at him she passed on, leaving him wondering how she came to make so brilliant a response, while the crowd looked at him, respectfully bewildered, also.

## BEE'S NIGHT WORK.

Bees work at night in the hive, building their combs as perfectly as if an electric light shone there all the time. The existence of the young depends on the repidity of the saccharine food presented to them, and if light were allowed access to this it would in all probability prove fatal to the inmates of the hive.

## QUEEN VICTORIA'S NEW YACHT.

Queen Victoria is to have a new yacht within two years. It will cost \$1,500,000 and will be the most luxurious craft afloat. Other European sovereigns use war vessels for pleasure trips. Queen Victoria's yacht, will be built after designs, submitted to her, and will have guns only for firing salutes.

## OLD TIMERS.

Some of the oldest trees in the world are to be found in Great Britain. The tree called William the Conqueror's Oak, in Windsor Park, is supposed to be 1,200 years old. The famous Bentley and Winfarthing oaks are at least two centuries older.