

Increase Yields by Crop Rotation

Experiments at the Huntley Field Station Show Value of Alfalfa.

(Prepared by the United States Department of Agriculture.)

Results of crop rotation experiments extending over the last 18 years with irrigated crops in southern Montana, are reported by the United States Department of Agriculture in Technical Bulletin 144-T, "Irrigated Crop Rotations in Southern Montana," just issued by the department. The experiments were conducted at the Huntley field station, in southeastern Montana, to find out what rotations and methods would give the highest yields on the irrigated soils representative of the area.

Value of Alfalfa Shown.

The experiments demonstrated very clearly the value of alfalfa in the rotation and of the application of stable manure. Where one application of stable manure was made in a six-year rotation which included alfalfa, the yield of oats was 39 per cent greater, the yield of sugar beets was 43 per cent greater, and the yield of potatoes was 48 per cent greater than where stable manure was not added.

In respect to oats, the highest yields were produced in those rotations in which alfalfa was used, the next best yields were in those rotations in which stable manure was applied, and the lowest yields were on the plots cropped continuously.

Manure Effective.

As to sugar beets, in two-year and three-year rotations stable manure was more effective than alfalfa in increasing yields. All of the treated rotations showed a marked tendency to increase in yield the longer these rotations were continued. Comparatively low yields resulted from plots continuously cropped, and not better averaged yields resulted from the two-year rotations as where beets follow wheat and oats.

An application of manure in two-year and three-year rotations is well justified, the experiments indicated. The incorporation of alfalfa in a well-planned rotation brought a return second only to that when manure was used. As a rule, it appeared to be the better practice to leave alfalfa for a period of at least three years. Adding manure to a six-year rotation which included three years of alfalfa, much more than paid for the cost of application.

Copies of the bulletin may be obtained free from the Office of Information, Department of Agriculture, Washington, D. C., as long as there is a supply available for free distribution.

Sanitation Regarded as Big Aid to Health

As a general rule the farmer should do all that he reasonably can to maintain the health of his herd through breeding, feeding, and sanitary measures, and apply the immunization treatment as a resource measure when danger of cholera threatens. Of course, it is realized that there are densely hog-populated sections of the country where hog cholera appears every year, which makes it necessary to apply the immunization treatment systematically each year.

Liming Garden Soil

Too few home gardeners use enough lime. Many gardens are not yielding up to their capacity because of soil acidity. Where lime is greatly needed the application of artificial fertilizers is not, as a rule, economical. The acidity should be corrected first in most cases. Lime also helps convert a clay soil into one of light and porous consistency. Vegetable crops differ widely in their soil requirements. Certain of them may be injured by lime.

Profitable Pork

Good management is always an important factor in reducing the cost of producing pork. This means using only well balanced rations, keeping the pigs healthy, and saving large litters. A very small amount of hay with a little milk or tankage as a supplement to the grain ration is very valuable, but the substitution of even the best quality of legume hay for a considerable portion of the grain does not lower the cost of the pork produced.

Uses for Combine

Probably the most interesting development in combine history of the last two or three years has been that it seems adapted to the harvesting of almost any crop. The University of Illinois has harvested corn with a combine; they have been used successfully in the rice fields of Louisiana, in flax fields of North Dakota and western Kansas; and growers of soy beans have almost reached the point where a combine is a standard piece of equipment with them.

Pullets for Layers

Pullets with small bodies rarely have a strong enough constitution to make a high egg record. Try to build a large body before egg production begins. The growing mash may be diluted with cornmeal to hold back sexual maturity, and at the same time to bring on body flesh. Early hatched birds may be held back by diluting the growing mash with 50 per cent cornmeal.

Manure Value Does Not Waste in Field

Best Plan to Haul Directly to Open and Spread.

To double the fertilizing value of farm manure add 40 to 50 pounds of superphosphate to the ton, says Professor E. L. Worthen of Cornell University at Ithaca.

Since manure loses value rapidly when exposed to the weather it should be stored in a watertight pit or a covered manure shed. Where it must be stored out-of-doors, it is best to haul it directly to the field and spread at once.

Winter manure can be spread to good advantage on all old sod to be plowed under for corn, beans or cabbage, and the older the sod the more important it is to manure it. Whether plowed down or applied after plowing, manure should be applied to areas to be used for cultivated crops next year, the one exception being good alfalfa or clover sod.

A poor clover seeding, the thin spots in the alfalfa, and the poor wheat field will all be helped by top-dressing. New York pastures have not received enough fertilizer in the past, and manure is suited for all permanent pastures in the state irrespective of the kind of grass.

Heavy applications of from 15 to 20 tons have been shown to be wasteful. Better returns come from frequent and light applications rather than from one heavy one, according to Professor Worthen.

Fertilizing Orchards

Quite-Important Task

One of the aims of the orchardist is to so handle his fruit that it will reach the consumer in perfect condition. This means care from the beginning of the season until it leaves his hands. Any practice that reduces the keeping quality must be avoided if the cause is known.

Experiments at the station have sought to determine whether the normal application of nitrogenous fertilizer commonly used in Ohio results in a reduced keeping quality, as some have suggested. Chemical determinations have shown that more total nitrogen is found in the flesh of the apple when fertilizer is applied and large applications result in somewhat proportionately larger amounts of nitrogen in the fruit. Other methods of determining this matter are positive. However, the storage tests with Stayman Winesap during the past three years have shown no breakdown in the flesh as a result of the fertilizer treatments. While the work is not completed it is suggested that the present method of fertilization be continued, using nitrate of soda or sulphate of ammonia beneath the branches at the approximate rate of quarter pound of nitrate for each year of the trees' age. Superphosphate between the tree rows at the rate of 250 pounds per acre should also be applied each year.—J. H. Gourley, in Ohio Farmer.

After Once Opened Keep on Feeding From Silo

After the silo has once been opened it is not advisable to cease feeding silage until the silo has been emptied or there is an abundance of grass. With the average farmer, silage should be fed from grass to grass, even if lighter rations are necessary to make it hold out. In this way the animals will always have succulent feed with the daily ration.

Where corn is put in the silo at the proper stage, little or no packing is needed during the process of filling, but all silos should be thoroughly packed at the top after they are filled in order to form a cap and preserve the silage.

Farm Notes

Onions require cool, dry storage.

The soil is in better condition for hauling and spreading lime now than in the spring.

A good time to clean out the henhouse is right now while you are thinking about it.

Soil should be regarded as a checking account—it must be added to if it is checked against.

Terracing of fields, planting of trees, and growing grasses will solve the erosion problem.

Cabbage plants started in February will be less likely to produce seed stalks than those started in January.

While we are doing something about everything else, why not try our hands at cleaning up the fence rows on our own farms?

Live stock of all kinds should be kept off the ground occupied by the trees, until the trees are large enough to provide shelter and shade.

Field observations point to the fact that lime can be used to great advantage. It should be borne in mind, however, that lime is not a fertilizer.

Where it appears necessary to burn pastures to obtain more uniform grazing, the burning should be done just before the native forage plants start growing and after the freezing weather.

MALAY STATES



Rubber Planter's Home in Malay States.

(Prepared by the National Geographic Society, Washington, D. C.)

THE Federated Malay states, on Asia's southernmost peninsula, have been literally snatched from an all-covering wild vegetation. Where once the choking jungle crowded men back, a jungle so thick that a man swimming in a stream could hardly land because vines and plants hugged so close to the water's edge—broad fields have now been cleared, and Malay plantations are among the richest in the world.

Forty-five years ago a few para rubber plants smuggled out of Brazil fruited here. Today, three-fourths of the world's rubber comes from this region. And in this magic development Americans have played a leading role.

This Malay peninsula, stretching hundreds of miles from the Siamese frontier down toward the equator, forms a vast humid region of dense forests of jungle, wild elephants, snakes, and naked people, rice fields, rubber plantations, and tin mines.

There is a governmental mixture in this region. Singapore, built on a tiny green isle off the end of the peninsula and just off the equator, is the capital of the British crown colony commonly called the Straits Settlements. This colony embraces the Province of Wellesley, the Dindings and Malacca on the mainland, and the islands of Penang and Singapore.

The Federated Malay states, on the peninsula and adjoining the Straits Settlements, comprise the States of Perak, Selangor, Pahang, and Negri Sembilan. Kuala Lumpur is the capital.

Just opposite Singapore, on the mainland, is the independent native state of Johore, which has its own sultan and government, but which is under British protection. The British governor of Singapore is also high commissioner for the Federated Malay states and Brunel, and British agent for north Borneo and Sarawak, thus linking up British possessions and spheres of influence in all Malaya and establishing close contact, through one man, with the colonial office in London.

Many Races There.

"The Melting Pot of Asia," they call this prolific, potent peninsula, because of the babel of races, colors, and castes which its wealth of rubber and tin has drawn to it. But in all this industrial army of Europeans, Chinese, Japanese, Tamils, Hindus, and assorted South Sea Islanders, the Chinese are the most numerous and powerful.

The Malay himself is too lazy even to be a good fisherman. He grows a little rice, a few coconuts, and nets the fish he needs; but nature is so kind that it is said one hour's effort a day will support him and his family.

It is the Chinaman who is the tin miner, the farmer, shopkeeper, artisan, contractor, and financier. The Tamil and the Hindu add to the stock of local labor and own small farms and herds, but the many millionaires made in Malaya have mostly been Chinese. The palatial homes of the rich Chinese bosses in Singapore and Penang, in contrast with the miserable shacks of the natives, afford proof enough of the singular commercial superiority of the yellow race.

Here, indeed, Chinese immigration has worked a modern miracle in the magic reclamation of this once reeking, fever-cursed, jungle-grown wilderness. The Chinese it was who first braved the poisonous darts of the lurking savage, the perils of tigers and reptiles, the flames of fever, and the danger of dysentery, to conquer these jungles and dig the tin that put Malaya on the map of the trading world. Chinese say that tin "grows" and they use the divining rod to locate it.

Singapore is both a great trading center and fortress of the Far East. It is a shining example of how Great Britain has "muddled"—as the British themselves put it—into possession of some of the world's most important strategic gateways. Singapore is an island 27 miles long by 14 wide, and just misses being the southernmost point of the continent of Asia by a half-mile water channel. It is at the funnel point of the Strait of Malacca, which extends between the Malay peninsula and the island of Sumatra, the great water highway between India and China.

How Raffles Made Singapore.

Little more than a hundred years ago the island, owned by the sultan of Johore on the nearby mainland, was

a deserted jungle save for a little fishing village. Ships in the China trade passed it by as they passed many another jungle shore; the only ports of call in that region of the world were those on the Dutch Islands of Sumatra and Java. But these ports took a big toll in fees, and Sir Stamford Raffles, an official of the East India company, began to dream of a free British port that would facilitate trade. In 1819 he obtained the seemingly worthless island of Singapore for his company for a small fee. Developments quickly proved him a prophet, for within two years the little trading center he established had a population of 10,000. It was only in 1822 that the British government consented to take an interest in the place.

In the little more than a hundred years since it was founded, the jungle of Singapore has given place to a huge city of close to 400,000 population, carrying on trade valued at a billion dollars annually—one of the metropolises of the British empire. Its quays and anchorages serve thousands of craft of all sorts and sizes, from the picturesque, graceful Malay sampans and the saddy Chinese junks to the familiar freighters of the West, and what Kipling asserts are the "lady-like" liners. They build up Singapore's shipping to the tremendous total of 17,000,000 tons yearly.

Though Singapore is free from duties, and to this fact owes its very existence, still the people who make up the city take their toll from the stream of world trade that flows about them. They live, in fact, by and for, and in an atmosphere of commerce. Tens of thousands make their livings by caring for shipping, conditioning and supplying vessels, and taking part in loading and unloading goods. The port is primarily a trans-shipment point for both imports and exports. It gives what the economists would call "place value" to hundreds of commodities which trickle to Singapore's reservoirs of goods from scores of districts in the East and are there obtainable in the large quantities that world trade demands. In the city's "godowns"—as the East calls its warehouses—are handled a very large part of the world's finest rubber before it begins the long journey that will take most of it eventually to American highways.

So, too, much of the world's tin is smelted in and shipped from Singapore. It might be dubbed "the world's pepper pot," for more pepper is assembled there than is ever held in any other port.

Real Cosmopolitan City.

If ever a city could claim to be cosmopolitan, Singapore can. At one of the principal world crossroads, and with a population 100 per cent immigrant, it could not escape cosmopolitanism. It has drawn its population from practically all parts of Asia, from Oceania, the Malay archipelago, Africa, Europe and America. The Chinese predominate, making up about one-half the population. There have been many thousands of immigrants from India, Europeans, Americans and Australians number less than 10,000, and there are probably as many Japanese.

The appearance of Singapore shows its mixture of many influences. The visitor may ride in rikshas or electric cars, automobiles or ancient horse-drawn carriages. In the chief business district he sees modern streets and buildings, and in the Asiatic quarters he encounters facilities and sights and odors that smack of the Orient. Singapore's houses of worship furnish an excellent index to its varied life. There are Christian cathedrals and churches, Moslem mosques, and the temples of half a dozen or more Indian and Chinese and Japanese faiths.

Without making use of reiteration one can hardly describe the physical aspects of Singapore island adequately. It is an island of red, red soil and green, green verdure. The soil is poor, but since Singapore is almost at the equator and moist, vegetation might be said to grow furiously. There is an unending fight between it and the coolies who strive to prevent its vivid green waves from engulfing the conspicuous red roads and cleared spaces.

So, here in the strait, Raffles early declared that the principles of British law should be applied with patriarchal mildness and indulgent consideration for the prejudices of each tribe. All native institutions, such as religious ceremonies, marriage and inheritance were respected, when not inconsistent with justice and humanity. In this policy lies the secret of British colonizing success.

Dame Fashion Smiles

By Grace Jewett Austin

There is a little line somewhere in one of Vachel Lindsay's poems where he tells of nets to snare the moonbeams. And everybody knows how valuable the net is for catching fish, large and small. Even the aristocratic fisherman for game fish will not always despise a landing net.

The dress designers took a leaf from Vachel Lindsay's book and have declared that net for the moonlit hours is exactly the proper wear. Black net gowns for evening are among the season's choicest offerings. And how becoming these swishing folds may be. Incidentally, if there has been a black lace dress laid away in a chest in your home, which you had hated to cut short to knee length, it might be the very time to bring it forth and consider its possibilities. Dame Fashion means to do that very thing.

There are various kinds and meshes of net in use. Some are as coarse as a fisherman's net, but not on that account necessarily inexpensive. The coarse net by the yard often bears the same price-mark as the fine. One enthusiast has described this coarse net mesh as "fascinatingly sleek and wiry, but also silky and soft." Such dresses are usually sleeveless—and as for the backs! One jester declared that the economical designers saved enough from the shoulders to be able to lengthen the skirt.

The new gown called the "Chanel 5" had its birth in Paris, but is growing popular in America and may be recognized when you see a dress with five to seven bands of shirring going around the gown, from a circle beneath the arms, to the last shirred band at the hipline. From the place of the last shirring the net, chiffon or whatever the material may be, floats full and free to the floor. It is quite proper to have a large bow of the material placed in the back at the level of the lowest shirring.

Dame Fashion, a devoted reader of advertisements issued from the Atlantic coast region, across the marvelous central west, and on to the lively Pacific, often gets a chance for a smile out of some new styles put forward with the utmost solemnity.

In recent years the word corset has not been so much in the public view, and a whole generation, in its desire to be pliable, has not worried about them. Now Miss Corset is quite canny, and in certain places she allows herself to be recommended as "body gloves." That is a taking phrase in a day when Miss Glove is considered an indispensable friend to society everywhere, and at practically every hour of the day.

The other little smile item concerned cameras combined with vanity cases. Dame Fashion studied quite a bit on the psychology of that. Is the case to be loaned to the one about to be "shot," to aid in beautifying for the picture? Or, on the other hand, is the tool of taking pictures so strenuous that the taker herself will need a first aid to the complexion? But in this day of many mergers, it is not at all surprising to find mixtures of many a kind.

Far of many a kind is happy this winter in joining mergers. Do not hesitate to put a pretty bit of it on a hat or on a gown, if the effect is pleasing.

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Russian Tapestry Used as Model for Pajamas



Ancient Russian tapestry served as a model for this interesting pajama suit. The black and pink designs were hand-painted on the flared coat and ample trousers.

Pink Vestee

A sweet Paris frock of black taffeta, figured in minute pink, yellow and cream flowers has a little chiffon vestee of pink that attaches at the back of the neck and hangs over the front like a many-pointed bib.

Jersey Appeals to Girl or Short, Stout Woman



Jersey is an important material this season both in popularity and style appeal, says the Woman's Home Companion. Just as important is the vogue for the one-piece belted dress. When you put the two together you have the beginning of a real Paris model. Place the belt at the top of the hips and be sure that the skirt is amply full and considerably longer than last year's. Then choose two tones of this winter's brown or green or red, use the darker for a deep V in the bodice and for turn-up cuffs, and your Paris dress is complete. A dress which appeals to the young girl and which is excellent in line for the short, stout woman.

Gloves That Harmonize With Frock Are Stylish

The Maggy Rouff glove, the Worth glove, the Jane Regny glove—all these are eloquent testimonials to the importance of accessories in the mode, and how far we have progressed since the days when designers could afford to be concerned with the matter of frocks alone, observes a fashion writer in the New York Times. Increasing formality means more interest in gloves. Where one pair would answer before, the well-dressed woman must now have half a dozen, and these in colors, types and fabrics to complement the costume with which they are worn.

It is in recognition of these facts that the leading couturiers now present their own gloves, showing details characteristic of present-day fashions.

With the bridge, matinee or dinner frock the classic pull-on in suede or kidskin continues the favored type. Suede has always appealed to women, but glace kid is rapidly gaining in popularity—perhaps because it is far more practical, but also because it is being presented in new designs and lovely colorings. These pull-on gloves are much longer than those of last season, for the long glove has definitely arrived. Some show the three-button fastening, while others are buttonless—the latter being newer. Delicate shades of beige are much worn, beige with either a gray or a pinky cast, according to the color of the frock and the other accessories. Black suede gloves have enjoyed an unprecedented popularity, especially with the black frock.

White and off-white gloves have also returned to vogue for formal afternoon wear, for they are a true expression of the fashion for elegance. The new pale creamy gardenia tint in a six-button glove of glace kidskin adds the final touch of perfection to the ensemble of black with lavish furs. Gardenia, by the way, is one of the shades most talked of for Southern resort wear.

Waistline Should Not Be Too High; Not Too Tight

It is important to know a few fundamental facts before one adopts the waistline in present fashion. Over-exaggeration is easily possible and is not in good taste.

Designers have not revived the hour glass silhouette nor do they seem to evidence any intention to do so. The waistline should not be placed too high nor should it be confined too tightly. The correct interpretation of this new phase of the mode is a conservative one.

Hunter's Green Is Used in Afternoon Ensembles

Hunter's green is often mentioned this season and it has been used successfully for the formal afternoon ensemble. Mixed green tones are to be found in tweeds for sports and informal daytime wear and jade, or sometimes a greenish blue of the turquoise sort is combined with black or used alone for evening gowns.

The New Neckwear

Many of the new silks resemble woolen fabrics in both weave and color. It is predicted that this innovation will bring forth new enthusiasm for dainty cuffs and collars. Many neckwear displays include entire collars made of real lace as well as domestic laces. Batiste is also offering a refreshing note in neckwear circles.