The BACKYARD FARMER

By PROF. J. WILLARD BOLTE

FEEDING THE GARDEN.

You must feed the garden if you want the garden to feed you. The virgin soil is not a source of plant food, but rather a container of plant food, and after the first few crops have been grown, it is mighty hard to get out even such plant food as the soil contains.

Plants must have a balanced ration if they are to grow naturally. They eat and digest their food in certain more or less fixed proportions, and if only one of the elements they need is lacking, they cannot grow properly, regardless of the amount of the other foods that may be available. Lack of decayed vegetable and animal matter will kill plants even though there be present enough potash and phosphorus to last for all eternity. This is the trouble with sandy soils in most cases.

If your garden did not do as well last year as it did before, or if your neighbor has a better garden on the same kind of soil, it is up to you to feed your garden this year, and if this is done wisely, your results will pay you.

What most worn soils lack is vegetable matter. Garden crops are heavy feeders on organic matter, and the first thing to think of in the garden is barnyard manure. Usually a kitchen garden cannot get too much well-rotted manure. Manure is a nitrogen feed, and it promotes the growth of stalks and roots more than of the fruit.

If stable manure is hard to secure, you may get the necessary nitrogen from any of the ammonia salts, or from blood meal, if the amount used be small.

On worn soils in the older sections of the country the nitrogen is not the only element lacking and both phosphorus and potash must be supplied from time to time, as the crop indicates the need of more fertility.

Phosphorus is more frequently lacking and it should be applied if the size and amount of the fruit is lessening year by year. Bone meal is a good phosphorus container, and it may also be secured in ground phosphate rock.

Among other functions, potash has a very distinct control over the color of certain fruits and vegetables. As a general thing, it is the most plentiful plant food in all soils, but it should be applied to sandy or muck soils if the crop indicates a lack of something.

In studying this problem, always remember that no garden can do well unless the soil is well drained and well cultivated. Good seeds are wasted on a hard, lumpy seed bed, or in a garden where the soil water or hard subsoil keeps the roots from going down as far as they should.

THE SETTING HEN'S SECRET.

The setting hen has a secret that has baffled mankind since the time of Pharaoh. The fact that she does not know her own secret has no bearing upon its solution, because she could not tell it if she knew.

Ever since the days of ancient Egypt's glory, men have been trying to hatch eggs artificially, and to get as many strong lively chicks from the same number of eggs as the hen, but she is still in the lead, and seems likely to remain so. This does not mean that artificial incubation is a failure, because a good incubator properly managed, will do almost as well as hens, and its economies place it far in the lead as a financial proposition.

But we would like to know why hen-hatched chicks are a little greater in number, why they hatch out a little stronger and live a little better than a machine-hatched brood. One thing in her favor is the fact that her temperature does not vary, and the eggs are properly warmed at all times, except when she leaves the nest. Ventilation is another great factor in successful incubation, and no incubator has yet mastered it perfectly. The heat from the hen's body is applied by direct contact to the eggs, while the incubator heats them with a current of warm air. The result is that the incubator eggs dry out too much, the shell lining gets tough, and the constant removal of carbonic acid gas takes away its beneficial action in decomposing the eggshell so that the chick can break the shell easily.

It is hard to determine which drawback is the most serious, and some authorities believe that the hen's method of turning the eggs accounts for her superior hatches. Incubating eggs must be turned over from time to time to prevent the germ from rising to the top and sticking to the shell. This is done twice a day with the incubator, but the hen may turn her nest of eggs three or four times a day, as she is constantly working at them with legs, feet, wings, breast and beak.

All things considered, it is better to use hens for hatching and rearing the chicks unless the poultry keeper has a sufficiently large flock to require the hatching of at least one hundred chicks each year.

It is no small trick to hatch chickens with hens, though, and a few simple rules to follow are mighty handy. Trust no hen until you have tried her. The broody hen will be found on the nest at night, after the others have gone to roost. Remove her to a shallow concave nest in a secluded spot, put some dummy eggs under her, and cover her with a box. Let her off the nest at dusk the next day to eat and drink. If she returns to the nest and stays there all of the next day, it will be safe to put the good eggs under her.

The hen should be well dusted with insect powder when placed on the nest, and again in two weeks. Keep whole corn and water and a dust bath handy and then let her alone. If several hens are setting in the same room, be careful to see that they go back to the same nests after eating, as two will frequently get on one nest.

Investigate each nest for broken eggs once a week. If any are found, remove the whole eggs to a new nest after washing them in warm water. A nest which is too deep, causes the hen to break eggs in stepping in. One in too dry a place dries out the eggs unduly, and if the nest corners are not filled in, some eggs are liable to roll out into them and become chilled.

STRAWBERRIES.

Do not think that you cannot raise strawberries in your climate, even if they have not generally proved successful with your neighbors, as strawberries can be successfully grown without very much trouble even as far north as the Canadian line.

Strawberries will grow on almost any soil that will produce ordinary garden crops, but they must have sunshine and the land must be well drained and fertile.

The best kind of a place for a strawberry bed is on a patch of fertile soil which has been used previously for a garden, as the soil will then be in good tilth and it will be fertile if the previous crops have been handled properly. Perfect drainage is of the greatest importance and must not be overlooked. Plow or spade the ground six or eight inches deep, turning under a good top dressing of stable manure, and make the surface good and fine, although not necessarily as fine as for a seed bed, as strawberries are propagated by means of plant cuttings.

After the ground has been properly prepared make a furrow or trench just deep enough so that the plants will set well and the crown of the plant comes just above the surface of the soil. Set the plants in these trenches and pack the dirt carefully around the roots, being careful not to get dirt in the crown.

The dead leaves and blossoms, if there be any, should be picked off the plants, and the runners should be cut back so that all of the energy of the plant may be devoted to getting a good start the first year. It is not desirable to secure any fruit the first year as the bed will not do so well in future years. Be very careful not to let the roots of the plants dry before they are placed in the ground.

While very satisfactory plants can be secured from any reliable seedsman, the best plan is to secure plants from some neighbor's bed, as they can be transplanted more quickly and will be acclimated. Be sure that your cuttings are from a bed that was set out the previous year, as plants from an old bed will not live very long.

One peculiarity of the strawberry plant is that part of the plants are incomplete and cannot fertilize their own blossoms, hence it is necessary to plant in some complete plants at regular intervals.

In climates afflicted with cold, late springs, or very cold winters, the bed should be covered with straw in the fall and the covering should not be removed until spring has come.

WHY BLOSSOMS ARE COLORED.

One of the greatest advantages of modern school methods, as compared with the school methods our parents survived, is that they teach the children to observe many things which the parents have never even stopped to think about. Take the blossoms of our many beautiful flowering plants, for example. Everyone has marveled at the multitude of shapes and hues to be found in the various blossoms, but how many of us ever wondered why the flower petals are brightly colored, while the calyx and the leaves are green?

Almost everyone could guess that it was to aid the bees and butterflies in finding the honey bearing portion of the plant, but the pity is that so many of us never even thought of the problem.

Can you tell why some plants produce flowers of different shades during the same season? Did you know that the honey bees feed on only one kind of flower until they have a load ready for the hive, so as not to mix their drinks? Here is where the color of the blossom aids them most, and it also proves that bees either have a well developed sense of color, or an acute sense of smell.

Sometimes part of the flower petals are green and sometimes there are no petals at all, but in the latter case there is no need of bees transferring the pollen from flower to flower, so nature makes no effort to attract them.

Certain plants have highly colored leaves and dull hued blossoms, but most of these are tropical plants which do many strange and inexplicable things. The color in the leaves and petals is derived from small cells in which the plant foods and the oxygen are digested. There is no digestive process carried on in the petals, however, if my memory fails not, and the chlorophyl cells in the leaves do most of this work. Their color fades if they do not have access to sunlight and air, but these conditions do not seem to affect the color of the blossoms materially.

Midsummer Dreams in Flower Hats

If you are fretting your mind in trying to make a decision as to what sort of hat you will have for midsummer, let it rest upon one similar in general style to the two pictured here. Have the prettiest, most becoming and most fascinatingly feminine of all millinery, with laces and flowers and ribbons making up a confection to be worn upon the head. For the midsummer hat will sit at the top notch of style when it is a means of wearing a good-sized bouquet fastened to a fair head at some slightly dashing angle.

Roses and small flowers in the natural sizes, the lilac and the violet, forget-me-not, heliotrope, and heather, and small daisies betoken the love for garden flowers which lies in the mind of many wearers of flower hats. But the flower hat bedecks itself with flowers common and uncommon. From the yellow field daisy to the most unusual orchid, like and unlike their prototypes, everything in flowers is fashionable.

One of the hats shown here is a round crown covered with maline, in brown, of the shade of its wearer's hair. Over the crown a brim is slipped, covered in the same way as the crown. It is narrow at the right side, widens and flares up at the left. A fine machine-made lace is laid smoothly over crown and brim. There are plateaus of lace made for this purpose, but milliners fashion for themselves plateaus of laces which they buy by the yard.

The lower part of the brim is covered with lace also in this particular hat, although in others part of the millinery braid is used or part of a body hat, as shown in the second figure. The crown here is of leghorn with the brim, covered with horsehair braid, set in.

The lower crown (or bandeau) of the first hat is trimmed with velvet ribbon in brown and a shaded fancy ostrich feather is in the same coloring, shading off to a very light tint. Deep cream roses, with pink hearts, and natural colored silk wheat, are placed in groups about the brim, with one cluster at the base of the plume on the bandeau.

The second hat is trimmed with silk roses in yellowish pink. They are marvels of delicate coloring, with the shadings and even the veins of the natural petals simulated in the half-opened buds. The foliage also in dark, glossy green is made with loving fidelity to nature.

As types of midsummer millinery these hats may be regarded as criterions. They are not merely modish, but the mode.

Colonial Ties and Pumps

THE shoes of today distinguish their American makers, for they are brilliant achievements in the realm of footwear. When one considers that the fashionable shoe is wide of the mark in shape when it comes to following the natural lines of the foot, and yet is comfortable, it is possible to realize something of the ingenuity which is demonstrated in its making.

The most popular shoe for ordinary wear, the neatest and most shapely, is the Colonial Pump, like that shown in the picture. It is developed in many different styles and combinations of leathers or of leather and fabrics. These embody the patent leather vamp and the quarter of other leather or of plain or brocaded fabrics. Contrasting color is used in the quarters sometimes; light gray or white, and light tan are among the more pleasing effects.

The pumps are fastened (apparently) under buckles of cut steel or silver filigree or enamel. Pumps for evening wear are often made with vamp of satin and quarter of patent calfskin, with finish of rhinestone buckles or ornaments. The pump shown here is ideal in style and may be considered a criterion by which to measure others.

There is almost as great a variety in ties as in pumps. They are shaped on much the same lines and made of the same materials. For semi-dress and for dancing shoes they insure clever effects. The style of the tie indicates small rhinestone ornaments and buckles, and these one finds upon them. The tango tie, with ribbon lace, shown in the picture, is a conception in ties that could hardly be excelled for beauty.

In many of the pumps and ties the buckles or ornaments are placed at the sides. The effect is elegant. A simpler tie is shown in the third figure, very quiet in design and graceful in shape. It is furnished with patent colt vamp and black brocaded quarters. It has a lightweight sole, easy for dancing and a new Spanish heel flattering to the foot.

American women grow more exacting with each season in the matter of footwear. And American manufacturers keep up with all these demands and foster others, in fact, create them, by showing marvels of fine finish and elegant taste in shoes. In this particular article we excel all other people in clothing the feet of the moderns and the civilized, appropriately.

Now we are beginning to depart from black and to insist upon clean streets, that lighter colors may walk without becoming too soon begrimed.

JULIA BOTTOMLEY.

NEGRO WOMAN 114 YEARS OLD

New Orleans Negress Was Born in 1799—Distinctly Remembers Battle in Which Jackson Fought.

New Orleans.—"Good Lord, you have been good to Juda during the short time I have been on this earth; now please do the same by me for the rest of my life." That is the daily prayer of this one hundred and fourteen years young negro who is a native of New Orleans.

Juda Groves was born in 1799. She remembers very well cooking the provisions that her master took with him when he joined Jackson's army, and has a distinct memory of the battle of New Orleans. She also recalls the time when slaves had to separate the cotton seeds from the cotton by hand,

She is 114 Years Old.

and when all the sewing was done by hand, and the only means of travel was by stage, horseback or flat boat. At the Beauregard parish she saw for the first time a locomotive and a flying machine. Her wonder was unique. The ancient crone still enjoys good eyesight and can thread a needle without the use of glasses. She is active and healthy.

WOMAN MAKES A GOOD MINER

"I'm Not a Millionaire," She Says "But I Have Enough to Keep Me as Long as I live."

Tacoma, Wash.—Mrs. Mary E. Hart, sister-in-law of Lieut. Gov. Louis F. Hart of Washington, is a woman who has "made good" as an Alaskan miner.

"I am not a millionaire, but am comfortably situated and have enough to keep me nicely as long as I live," she says.

Mrs. Hart went to Alaska in 1900 and got out on the beach and shoveled sand into a "Long Tom" rocker with the rest of the prospectors.

"That is where I got my start in mining and dug my first gold," said Mrs. Hart.

Now she has numerous holdings in the Jupiter-Mars mine, the Cheuyemere, Lone Star and other paying propositions.

Mrs. Hart is not only a gold miner, but a literary woman. In fact she is known best for her literary and club work.

HIS HEAD HARDER THAN IRON

Thick Bar Bends Several Inches When Brakeman Butts His Skull Against It.

Vancouver, Wash.—Harold Wiggins, a brakeman on the North Bank railroad, had a miraculous escape from death near Patterson, Wash. While riding on a freight car in a train traveling 30 miles an hour he was struck by a signal lamp and violently knocked to the ground.

Aside from a severe gash on the head he was uninjured, having regained his feet before the engineer, who had witnessed the accident, could stop his train. The iron bar which supported the lamp, one and three-quarter inches thick, was bent several inches by the impact with Wiggins' head.

BIG LION COWED BY MOTOR

Cyclist Puts Animal to Flight by Opening Engine Exhaust of His Machine.

Paris.—An insurance agent at Mars Latour was mending a puncture to his motorcycle by the roadside when he was startled by the appearance of an immense lion. The agent started the engine exhaust wide open, and the lion, evidently imgaining it was a rapid fire gun, was completely cowed, and sought refuge in a barn, where he was easily recaptured by the owner of a traveling menagerie, whence he had escaped on the previous day. The hero received $100 reward.

Question Doctor's Sanity.

Kenosha, Wis.—Dr. David Munro was ordered brought into court for an inquiry into his sanity. A deputy sheriff found him assisting in bringing a baby boy into the world. He refused to go with the deputy and Judge Taylor declined to hold him in contempt.

Clarence Darrow is Hissed.

Aurora, Ill.—When Clarence S. Darrow, the noted labor attorney, addressing a meeting in the interest of a "wet" campaign, said that "a man would be better off without booze, but the same was true of pie," he was hissed for several minutes by the audience.

SOMETHING OF A DIPLOMAT

Jimmie's Bright Idea Worked for a Time, but Finally Ended in Disaster.

"What do you mane by writing me that my Jimmie can't pass into the next grade?" stormed an irate female, bursting into the principal's room. "An' after him doin' such grand work all the year."

"Why, Mrs. Flaherty," replied the teacher, "you must know better than that. I've sent you his report cards every month and you know that his marks have been nearly all 'D's.'"

"Indade they hov, and yit you say he can't pass. I don't understand it, mum."

"I am afraid you don't understand our system of marking. D means deficient, you know."

"Sure I don't know phat that may be, mum, but Jimmie told me all about the letters. Sure 'D' is dandy, 'C' is corking, 'B' is bum, an' 'A' is awful—an' he's got 'C's' an' 'D's' ivery month."—Harper's Magazine.

Lose Habits of Industry.

Women in France and other countries of Europe are much more industrious than when they come to this country.

We must either give up our grouches or our friends.