

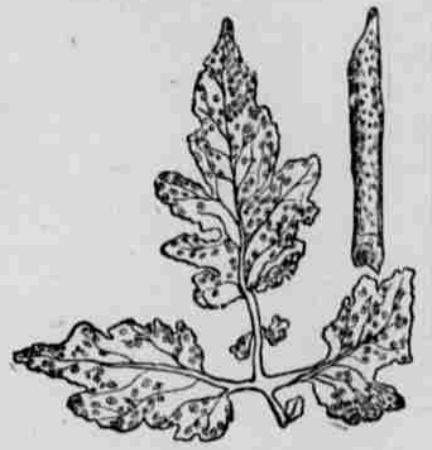
ROAD AND FARM IMPROVEMENT

LEAF SPOT AND BLACK ROOT

Most Destructive Disease Attacking Leaves and Stems of Tomatoes and Hard to Control.

Leaf spot is the most destructive disease attacking the leaves and stems of tomatoes, and it is very hard to control. Small, grayish-brown angular spots, containing minute black fruiting bodies, appear upon the leaves and stems. The lower ones are first attacked and the disease spreads upward, often almost defoliating the plants. Many growers report that this disease is worse on high, dry, gravelly or sandy soils. It is carried over the winter in diseased stems and leaves.

Treatment: Spray with Bordeaux a week after transplanting and repeat



Leaf Spot of Tomato.

at intervals of ten days or two weeks. It is often advisable to stake and tie up the plants for greater convenience in spraying. Pinching off the lower leaves which touch the ground when the plants are set out is also recommended. The diseased tops should be raked up and burned.

Black rot is a fungus which attacks the stems, leaves and fruit of the tomato. It is by the destruction of the fruit, however, that it causes the most serious loss. Roundish black velvety spots appear on the blossom end of the tomatoes. These increase in size and sometimes involve the whole fruit. On the surface of the diseased spots



Black Rot on Tomatoes.

dark-colored, many-celled club-shaped spores are produced.

Treatment: Spray with Bordeaux, beginning when the flowers open, and repeat at intervals of ten days or two weeks. Remove and destroy diseased fruits. Burn the diseased tops.

Olive brown, feltlike areas called scab occur on the under side of the leaves and brown discolorations on the upper surface of the tomato. In several cases the leaves turn black, shrivel up and die. Tawny-colored, two-celled spores are produced on the clustered stalks of the fungus on the under surface.

Treatment: Spray with Bordeaux early and repeat at intervals of ten days or two weeks.

WHAT REAL FARMING MEANS

Truly Work of Science and Improvement Comes Through Course of Education, Says Hoard.

Agriculture in this country will take a great uplift in its general efficiency and financial profit, says Gov. Hoard of Wisconsin, in his Dairyman; the material resources of fertility, forests and fuel will be better conserved and its life on the farm greatly elevated in its scope of enjoyment, when the American farmer comes to that period of mental development that will enable him to see that farming is as truly a work of science and large comprehension of forces as any industry. No improvement can come as long as the farmer believes that he does not need education and well developed brain to carry on his business. The only farmer in the land that is making good growth and progress is the man who accepts the statement squarely, that thought, knowledge and real mental power are necessary to his well being as a farmer.

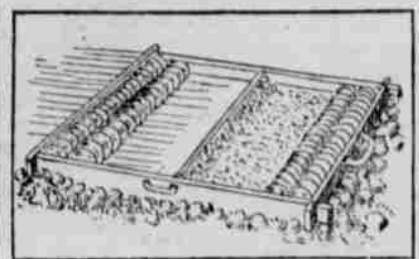
STANDARD WEIGHT OF PRODUCE.

Kind	Pounds per Bu.
Wheat	60
Corn on the ear	70
Corn shelled	56
Rye	56
Buckwheat	48
Barley	48
Oats	52
Peas	60
White beans	60
White potatoes	60
Sweet potatoes	55
Onions	57
Turnips	60
Clover seed	50
Flax	56
Millet	58
Timothy seed	45
Blue grass seed	44
Hemp seed	44
Cornmeal	48
Bran	20

PROFITABLE ONION IN FALL

Of Many Kinds Yellow Potato or Multiplier Has Proven to Be Best for Late Planting.

After trying many kinds, I have found that the most profitable onion to plant in the fall is the yellow potato onion or multiplier. These increase entirely by division of the bulbs



Smoothing Ground.

and never make seed, and the small bulbs can be pulled off for bunching in the spring and any that are left will mature into good onions that can be sold in a dry state, so that there is no loss in running to seed, says a writer in the Business Farmer.

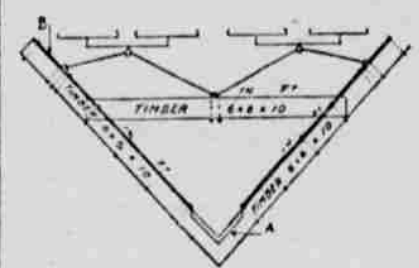
Onions, especially fall planted onions, need a light and well-drained soil. It is a matter of course that the soil should be well prepared and made rich. There is one advantage in the onion crop in that it can be grown to advantage year after year on the same land if the soil is properly fertilized. Clean cultivation and the use of chemical fertilizers only will gradually clean the lands of weeds, for weeds must be kept out at all hazards. "Clean as an onion bed has come to be a maxim for clean cultivation. If you want a rapid and early growth you must be liberal with the fertilization. The manure needs of the onion crop are mainly nitrogen and potash. To make a ton of fertilizer for onions, I would mix 900 pounds of acid phosphate, 600 pounds of cottonseed meal or fish scraps, 100 pounds of nitrate of soda and 400 pounds muriate of potash. Of this I would use 1,000 pounds per acre well mixed in the soil, half in the furrows under the sets and half alongside the rows. The distance between the rows will depend on the extent of the crop and whether horse culture or hand culture are used. In either case lay off furrows and apply the fertilizer. Throw a furrow over this one from each side to make a bed or list. Flatten this somewhat and open a shallow furrow in the bed for planting the sets. The sets should be covered rather deeply, as a winter protection, the earth being pulled away in the spring. Setting them deeply in the flattened bed will bring the bulbs on the surface in the spring, or just where they will develop best.

An illustration is given of an implement that will prove of much value to the farmer in smoothing the ground before seeding.

GOOD WORKING ROAD DRAG

One Made by South Dakota Farmer Four Years Ago and is Still Giving Satisfaction.

The accompanying cut illustrates a road drag or grader which was built by a South Dakota farmer four years ago, and after a fair trial has given entire satisfaction. It draws the dirt



Road Drag.

together, fills ruts and leaves the road in condition to shed water. Lower front edge A should be chamfered so that dirt will crush and pass out. Strap iron 2x2½ inches should be placed at B on front of lower edge to protect the timber.

FARM NOTES.

When packing apples do as you would be done by.

A weed killed now means 100 fewer weeds next spring.

Plow up the old strawberry bed if it is failing and start a new one.

Store early dug potatoes in a cool, dry place. Do not put in the cellar.

Allowing a potato to take a second growth spoils it for eating purposes.

Clip grapes off with a pair of shears. Don't allow anyone to tear off the bunches.

Mulched potatoes will not grow as badly as the unmulched if wet weather comes on.

Plowing the orchard late encourages late growth of wood which is apt to winterkill.

Letting weeds go to seed means that you are laying up trouble for next year.

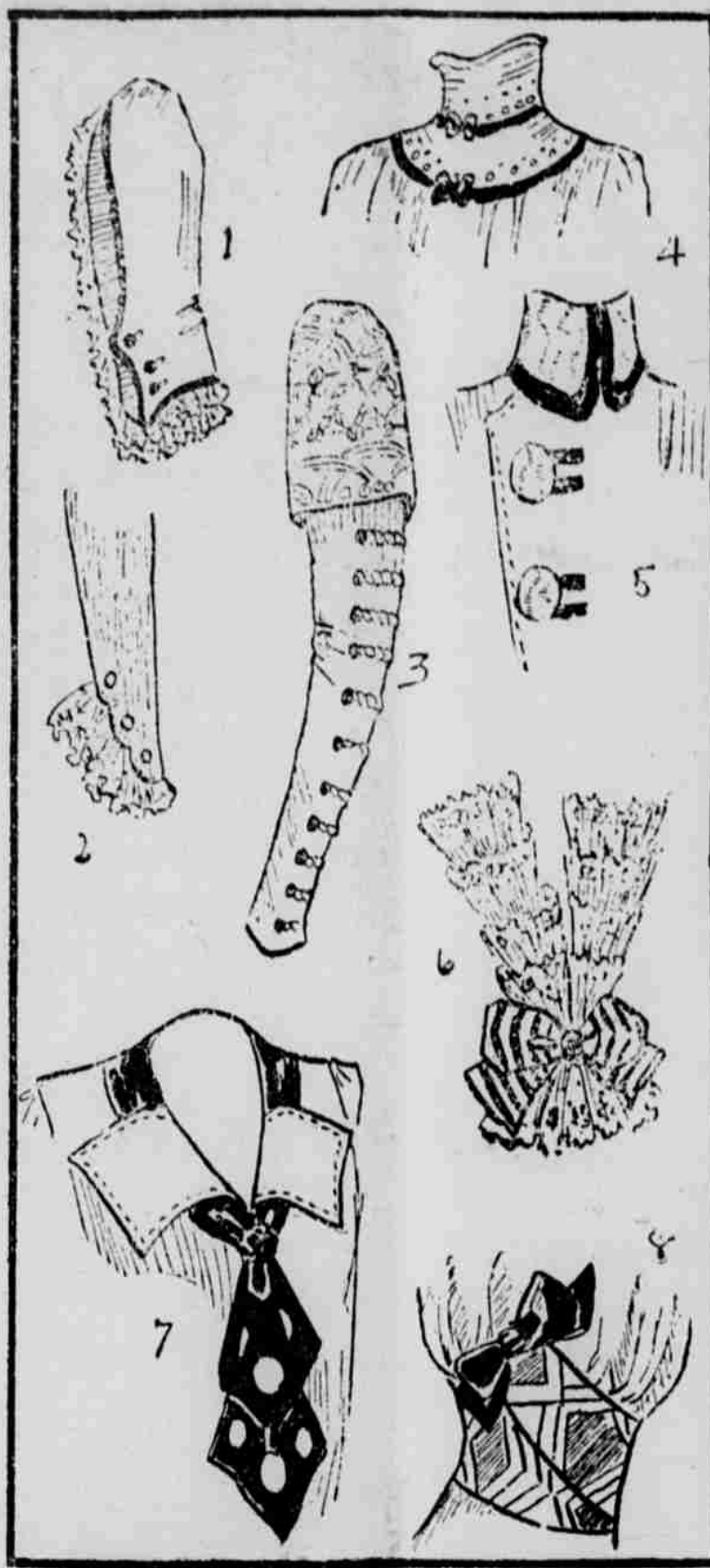
Potato in Wild State.

In a wild state the potato vine is very hardy and will grow to a considerable height. It is said that the Indians did not cultivate the potato except for the leaves, which became known as their tobacco—hence the leaves and stalks of tobacco are large, but there are no signs of potatoes at the roots. So much for cultivation.

Good Roads Help Farmer.

Good roads help in every way; they promote sociability by making friends and relatives accessible, and by means of them it is easier to reach the schools and churches and to generally do and enjoy the things which make life really worth living.

The Little Touches



These little individualities of dress are a valuable feature. Any separate idea can be appropriated by those designing a new gown and often this little original touch will impart an air of elegance to an otherwise colorless costume.

The new small sleeve is a problem to nearly every home dressmaker—how to avoid the "nippy" look. Nos. 1, 2 and 3 offer suggestions for sleeves for different gowns. No. 1 is a sleeve for a semi-dressy evening gown of crepe de chine, piped with chiffon velvet in a darker tone, and the buttons are covered to match. The undersleeve is chiffon and lace. No. 2 is a blue serge, suitable for a morning frock. The top of the sleeve is leg-of-mutton shape, cut with one seam, and the band scalloped well up the back, from which falls a frill of lace or hemstitched mull. No. 3 is attractive for a cloth afternoon gown and takes away the plain look from the top of the arm which is not often becoming. The little cap is made of the material, braided, and held together with matching cord and braid buttons, which also trims the outside of the sleeve.

The cap is lined with a matching shade of soft satin.

No. 4 is a novel finish for a simple blouse. Two rows of narrow velvet ribbon, black or some dark shade, and a row of gold and one of silver buttons form the trimming.

Something new in buttonholes is sketched in the serviceable coat in No. 5. The garment hooks with large cloak hooks, while the buttons and double simulated buttonholes form a finish. The buttons and collar facing are of moire silk—another new feature of the winter modes. The buttonholes and collar edge are of darker cloth.

No. 6 shows one of the smart touches on the latest chapeaux—a lace cockade, stiffly wired and tied with a black and white bow.

For this fashionable cloth coat for early fall an unusual collar finish is the only trimming required.

No. 7 is a light pearl gray cloth with square, stitched revers of black satin. A very stunning effect is given by three great gold disks on the end of each tie.

A belt of two shades of taffeta and black soutache braid, crossed over in front and fastening under a black satin bow, gives a cachet to a plain silk gown.

HAT OF MOIRE.



Edged with black silk, with a soft crown and a wreath of oxidized silver roses.

A Trying Collar.

The very extreme collar has not returned, but has given place to a moderately high straight collar, surmounted, in many instances, by a suggestion of a frill again.

Plaited linen is better than ruffling, and a tiny outstanding turnover is good. This is purposely allowed to flare so as to form a frame for the face. It is slashed open back and front, and is rather stiff and formal looking.

This type of collar is no more generally becoming than is the Pierrat ruff. It takes away from the natural outline of the face and neck, and should be cautiously chosen. There are always styles of this sort for the very slender woman, and they should be reserved for her.

Just a Toilet Hint.

A little borax in witch hazel is a good face wash after motoring, and is also of value in so many ways that every woman should have borax and witch hazel in her dressing case, says an authority on such matters. A little bicarbonate of soda and orris root in the bath make it much more pleasurable.

CHANGES IN TABLE SILVER

Knife Handles of Ivory and Mother of Pearl No Longer Seen—Lavish Display Frowned On.

All of the latest knives and forks have handles of silver, which has entirely superseded the white handles of ivory and mother of pearl. The silver is found to be more substantial and is less likely to be spoiled or broken by constant use. Silver platters also take precedence over the ones of china for the serving of all meats, poultry and fish, as they hold the heat better and insure the serving of these courses piping hot, a thing not possible with china.

It is not customary abroad to place half a dozen knives and forks of various designs, some for fish and some for fowl and some for no one knows what, alongside the plates before a dinner is begun. But for each course as it is removed the waiter brings the "tools" for the next. Not only is this bit of show done away with, but it is considered bad taste to spread out an array of silverware before your guests, an act which appears rather parvenu, as though the object of a feast were to make an exhibition of wealth. It is taken for granted by one's guests that there is plenty of silver to go round.

New Fall Goods.

- Whipcord.
- Satin-faced crepons.
- Crepe bengaline.
- Travers cord.
- Satin prunella.
- Herringbone serge.
- Striped English seil.
- Marquiseite.
- Velveteen and corduroy.
- Broadcloth.
- Cashmere de sole.
- Fancy mensalines.
- Chevron worsteds.
- Sturdy homespun.
- Rough chevrot.

The Leading Lady

By CHARLES L. DOYLE

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There was much surprise and no little consternation in the ranks of the Sterling stock company, when it was announced that the star of the cast, Miss Halliday, had been taken suddenly ill and that the part of "Iris" would be given over to the mercies of a substitute that night. Gerald Morrison, who sustained the principal male character of the play, was particularly worried over the unfortunate occurrence. He looked about him inquisitively as he stepped upon the dimly-lighted stage. The new leading lady was not visible and the only strange face he observed was that of a pretty young girl, who had apparently been brought by some friend in the company for a peep behind the scenes.

"Ready for the first act!" cried the stage manager, and Gerald was surprised to see, when the stage was cleared that the strange young girl remained. He was about to go forward and warn her that the rehearsal was to begin and that the leading lady would want the stage to herself, when he was amazed to hear her repeat in rather nervous tones, the opening lines assigned to "Iris." The act proceeded and the girl became more nervous as each new character appeared, until when Gerald approached her, she greeted him with trembling voice and tearful eyes, instead of the gay flippancy assigned to the part. This annoyed him and he spoke his lines in a rough, careless way that made her almost forget hers. She glanced at him appealingly and whispered: "Please forgive me; I'll do better tonight." Gerald left the theater in anything but a pleasant mood. He looked forward to all sorts of unpleasant happenings during the evening



She Hastened Forward, Breathlessly.

performance and when the time came for his appearance before the footlights he had worked himself into a state of nervousness almost rivaling that of the debutante.

Iris made up very well, he thought, as he came forward on the stage, but it remained to be seen how she would act. He advanced repeating his lines in a jerky, irresolute fashion and mixing the sentences so that the cue was lost. Much to his surprise and relief, however, Iris saved him from the consequences of his lapse of memory by an extempore word or two that brought the play back into its proper groove.

On the following morning the newspapers spoke in highest praise of the opening performance of the Sterling stock company in "The World and a Woman." To Gerald Morrison was given the greatest credit for the success of the play, although mention was made of the clever work of Miss Margaret Deane, who, owing to the sudden illness of Miss Halliday, took the leading lady's part of Iris, and rendered an admirable performance, considering her extreme youth and the fact that she had appeared on such short notice. Before Gerald left the city for a tour in the south he signed a contract with the Sterling Stock Company for the next season. When the members of the company assembled to be cast for the play which was to be produced at the opening of the season, the new manager turned to Gerald.

"I want you to meet Miss Deane, who will play opposite to you, Mr. Morrison," he said.

"The introduction is scarcely necessary," responded that young lady, in a freezing tone of voice. "I have had the honor of meeting Mr. Morrison before."

"Our acquaintance was rather short," remarked Gerald. "I am happy in being able to resume it so soon." Miss Deane merely bowed and was silent. They met constantly at rehearsals and Gerald was surprised and annoyed at the hauteur and disdain with which he was treated by the girl whom a few short months ago he had looked upon as little more than a child. There were moments when he thought he could detect a little more cordiality in her tone or glance, but any encouragement thus derived was quickly overbalanced by her coldness, if he presumed on it. He overtook her one morning as they left the theater.

"Our ways seem to lie in the same direction; may I accompany you?" he asked, somewhat timidly.

"No, thank you," she answered, indifferently.

Despite his repulse, Gerald, who by this time was willing to admit to himself that he was really in love with her, continued to seek Margaret's society. One morning on his way to rehearsal he noticed in a florist's window a pretty bunch of Marguerites. Acting on the impulse of the moment, he purchased them, and on arriving at the theater sent them to Miss Deane's dressing room. When she stepped on the stage she carried the box containing the flowers in her hand.

"Some foolish person sent me these," she remarked to the company who stood around her. "I am not particularly fond of Marguerites, as they remind me too much of my own name, which I have the misfortune to dislike. Won't you all help yourselves? I might not be so generous if they were roses."

As the ladies present availed themselves of the invitation and plied clusters of the pretty blossoms on their gowns, Gerald received a defiant little glance from Margaret that convinced him that she had discovered the donor, and that her dislike for Marguerites was of recent and sudden growth. The dress rehearsal which took place on the night preceding the presentation of the piece in public was a long one, and it was nearly one o'clock when the weary performers emerged from the stage door. Margaret Deane felt decidedly nervous as she walked along the lonely cross streets, which were practically deserted. Every footfall in the distance made her start, and when she fancied she heard a cautious step behind her, as of some one following in her track, her heart beat painfully. She glanced hastily back and caught sight of the tall form of a man who was evidently watching her.

She hastened forward breathlessly, conscious all the time that her pursuer was also hurrying on. At last the thought of calling a policeman entered her mind, but there was none in sight. A light in the window of a house close at hand caught her eye, and she decided to appeal to the inmates for aid. Mounting the steps, she was horrified to hear the rapid approach of her pursuer's feet close behind her. Desperately she reached for the bell, and was about to pull it, when a familiar voice said:

"Do you wish to see anybody here? I have a latch key handy."

"Gerald! Mr. Morrison," almost screamed Margaret, in surprise and immense relief. "Is it really you? I thought it was some awful highwayman following me. Oh, I am so glad!"

"So am I," said Gerald, earnestly, "glad because the barriers are broken down between us, even if you were a little bit frightened. You foolish child, did you imagine that I would allow you to wander through the streets alone at this time of night? And, of course, Fate ordained that you should run up here, where I live. Now I am going to see you home."

Margaret slipped her little hand confidently through his arm, and they started off together. "I was horrid to you, Gerald," she said, falteringly, "but I never will be again."

During the following week the announcement was made in theatrical circles of the engagement of Margaret Deane, leading lady of the Sterling Stock Company, to Gerald Morrison.

"Queer," commented the stage manager, "I thought she hated that chap but you never can tell. I suppose she was in love with him all the time."

Old Custom Abolished.

The British army council has decided to abolish the old custom of "crying down credit." Under the king's regulations, commanding officers, on arriving at a new station, are required to make proclamation warning tradespeople and others that a soldier's pay cannot be stopped for a private debt, and that those who allow soldiers to contract debts do so at their own risk. The custom in the old days often gave rise to a picturesque ceremony the commanding officer, accompanied by a detachment of his regiment and the drums, reading the proclamation in the market place. The last occasion on which the ceremony was performed was a year or two ago. The old proclamation is now to be replaced by newspaper advertisements.

Trial of Radiotelegraphy.

A powerful radiotelegraphy plant has been contracted for by the navy department. This plant will be at Washington, D. C., and will be guaranteed to transmit messages 3,000 miles across seas. The aerial transmission system will be supported by a 600-foot steel tower. The plant is guaranteed to be operative under all atmospheric conditions and to be proof against all interference from all present radiotelegraphic apparatus in use anywhere. It is reported that the navy operators successfully tried for four days to interfere with the operation of a preliminary arrangement of the type of apparatus to be used. The cost of the plant is stated as \$182,600.

Australia Needs Settlers.

Australia has more unemployed area in proportion to the population than any other country.