

A GARDEN LESSON.

Said Uncle Josh, "Look here, b'gosh! That isn't the way to hoe. Just scratch around, loosen the ground 'n then your stuff will grow."

"N dig out that weed; if it goes to seed The Devil will be to pay. Thee thin out your stuff. There that's enough."

And Josh went on his way. —From National Emergency Food Garden Commission.

High diddle diddle this life is a riddle For prices have jumped o'er the moon, But plan a food garden on some vacant lot And prices will tumble down soon.

Rock-a-bye baby in the tree top, Father is hoeing his home garden crop Soon he will harvest enough for us all, And High Cost of Living will have a bad fall.

Old Mother Hubbard should go to the cupboard She'd find all the food she'd desire For stored away there is foodstuff to spare. The product of canner and dryer.

Old King Food in his merriest mood Set a-watching his garden plot He counted his beets and he reckoned 'his beans And he said "Will we starve? We will not."

Mary, Mary, no longer contrary, Has made a home garden grow, With turnips and beans to feed the marines And the soldiers and sailors you know.

President Pack, come blow our horn, Our allies are calling for wheat and corn, Set the nation to work to grow turnips and squash And we'll feed the whole world with our food, by gosh!

Dickery, dickery, dock, The back-yards in our block Are full enough of garden stuff Our pantry shelves to stock.

"A dollar, a dollar, a ten o'clock scholar, Why do you come so late?" "I've stayed at home to dig the weeds; This gardening stunt is great."

There was an old man and he had a wooden leg And he couldn't steal a ride, not a ride could he beg, So he bought a back yard and he planted some beans And raised enough cash to buy a dozen machines.

Taffy was a Welshman, Taffy was a thief, Taffy will not work, so he must come to grief. The neighbors planted seeds in their yards and vacant lots And spent the summer raising things on thrifty garden plots.

They're canning 'em and drying 'em and storing 'em away If Taffy cannot steal 'em he'll have grocer's bills to pay. —From National Emergency Food Garden Commission.

A CHANGE OF MASTERS.

Dr. Michaelis was being piloted down Fifth avenue through the fog. His little limousine, swung by big springs on a long and heavy running-gear moved forward gently with the south-bound line, which was checked at intervals as trucks and carriages crossed the Avenue or melted in the stream of traffic. He sat in a corner, relaxed and introspective, with one elbow half out of the open window, for although it was January, the afternoon was very warm. During a momentary gap in the compact procession a yellow taxicab, launched by an ambitious driver, shot in abreast of him, grazing his mud-guards and, squeaking, stopped short as the whole line halted obedient to the blue Coliseum at Forty-second Street. It carried a woman with black eyes, who suggested youth freed from the trammels of its inexperience. She wore a fur-trimmed cloak, and black hat with white feather curling down one side, and this feather trembled when she saw Michaelis so close to her; but, suppressing her lips together, she leaped across the short space which separated her from him, and touched his arm with a little air of ownership. It was the free act of a moment, quickly ended, and before he fully took her in she was drifting away from him; for a trilling whistle had pierced the mist, gears were clanking everywhere, and all cars but his and a huge limousine ahead of it, one of whose tires had exploded with a pistol-shot report, were moving south.

Leaning out of the window, he cried: "Sylvia! Sylvia!" but the yellow taxicab, like a log in the stream, drew relentlessly away, as she stood, dim in the growing darkness, turning and looking back, waving half reluctantly; he heard her call, "Bon chien chasse de race," and she was gone.

He motioned his driver excitedly, but they were pocketed by the crippled car ahead, and the vehicles moving past were so jealously closed up to be broken into. After several minutes of restless, fuming delay, he was free and across Forty-second Street, but then the other cars had scattered. His machine, wakened from its lethargy, started in swift pursuit, dodged in and out, skidding at times for yards, overtook a dozen other cars, and just below Thirty-fourth Street missed a fat policeman by a hair. But the taxicab had been swallowed up by the great city, and at the Farragut monument he cancelled a visit in Ninth Street from his book, turned, and went slowly upward, again, still searching for both windows.

Sylvia Dare! It was fifteen years ago that he saw her last, like a speck on the upper deck of the steamer, with her "swarthy man" towering over her. She must have a master, she always used to say, and had hit on this Rumanian prince just as Michaelis finished his year of being a needy student in Vienna. As her last fluttering good-bye, the great vessel warped from the pier, seemed to carry to him a reproach and a promise, but as

they had both agreed that everything should stop then and there, he had not heard directly from her since, except perhaps once, five years ago, when a postal card from one of the cafes that brighten the river at Budapest came to him, bearing the single line, "Bon chien chasse de race." He had not been sure that it was in her handwriting. But now she was here in the same place with him; free, perhaps; anyway, plainly inviting as it flashed over him—she must have been before.

After years of observation in stifling dispensaries, packed with those ill and those who fancied themselves so, of learning in laboratories what trace the microscope can show of the real reason why things go wrong, of analysis of ill-directed human motives which create the half of all disease, he had finally won out, as far as his profession was concerned. He was established and even sought for in those disorders where self-consciousness betrays itself, and where ugly spots in character may be washed away by a properly directed stream of interest. He had learned the way to make fluttering hearts march evenly, and to put neurotic women on their feet without sacrificing the approval of their husbands, by methods made public in his book on Relapsing Personalities, which was in its third edition and had been translated into French. But he had never ceased to think of Sylvia Dare, and she had found him, after these years, distinguished, sombre, and impersonal, still brooding on the blunder of his life in letting her, who had so much to give and who gave so generously, escape him.

Her home had never been in New York, and thinking of the quickest way to get news of her, Dangerfield occurred to him.

Dangerfield, just back from three years at the French embassy, fleckless at 6 p. m., true test of the man of leisure, was in the club's big foyer, drinking a long glass of apple brandy. He was bubbling over with re-awakened patriotism, and took Michaelis several minutes to get him on to Continental topics. But he was led there finally.

"Whom do you suppose I saw last month in Paris?" he said. "The Princess Marinisco—you know, Sylvia Dare; you remember that little forceful way of hers. Poor Sylvia! She found her master. The fellow was brute, like most of those royalized Rumanians. Let's see, how long has she been gone? Fifteen years? Gad! time flies! She doesn't look it. She hasn't turned a hair. She might have, for they say the prince pulled her about the house by it before he finished. His valet shot him, finally. 'Self-defense,' the valet said. They hung him, anyway."

That was all Dangerfield knew, and as the club was filling up with cocktail-drinkers, Michaelis left it, forgot his car, and walked home through the misty night. Fifth Avenue, almost stripped now of its engines, stretched silently before him, dim and glistening, lined with a double row of violet lights, the farthest floating in the air like twin balloons. Soon he was at the spot where she had called to him an hour before, with the well-remembered quickness and assurance, and as always, lurking behind them a whispered promise of surrender. He was bound for the evening by professional obligations he could not shirk, but which he met mechanically, saved from error only by a long habit of being right. Through a dreary interview over a wheezing millionaire, at which the physician who called him in consultation did the talking, and through a three-hour meeting of a medical society, over which he presided by the ill-luck of being its vice-president, he kept picturing to himself what his life might have been with her warm sympathy; and imagining, with her vigorous personality firing his energies, a far different success from the material one he had.

Te next morning a hand-delivered letter, topping the pile that awaited him, did away with his plans for finding her. "Dear Carl," it ran, "I need you sorely. Come to me. Till then I am here—and yours, Sylvia."

He had read it twice, standing up, before he called his assistant, Lynnhart, an intense young man with round shoulders and deep-set eyes. "Busy day, Doctor," Lynnhart said, holding out the appointment card.

"Can't see any one," Michaelis jerked out. Lynnhart looked at him sidewise. "Let me see," Michaelis muttered, scanning the lined paper. "Schenck? Tell him the solution isn't ready. Mrs. Gildersleeve—that awful woman—telephone her I am sick—out of town—anything. I'll see Watrous for two minutes. Mrs. Sniffens—oh! you see her, Lynn."

He did away with all of them and half a dozen others and in a few minutes was humming up Fifth Avenue to her hotel, through a sparkling atmosphere, for the hopeless fog of the day before had vanished.

At the open door of her little salon he stood for a moment, waverless, powerless, paying the penalty of years of repression, while she, gasping his name, pushing aside her breakfast-table, came running to him. He met her half-way and caught her wrists, pulling them to his sides, looking down into her face.

"Sylvia," he whispered, "the same Sylvia, and free again, thank God."

She trembled and ceased smiling. "The prince is dead," she said. This from her lips fired him still further, and tightening his grasp he drew her toward him, but she was in a different mood and turned away, shaking her head.

"No, no—not now," she said; "there is something else first—something different. Oh, my dear, why should something always come between us?"

He did not seem to understand at first, and tried to put his arm around her, but she freed herself and put her black-bordered handkerchief to her face, leaving him nonplussed, uncertain, till she turned, metamorphosed, smiling again, the handkerchief crumpled in her hand.

"Oh, come," she said, "truce—for a moment, anyway," and led him playfully to a chair beside a divan into which she nestled. She launched a battery of questions at him, about his friends, his way of living, his daily routine. She knew pages of "Relapsing Personalities" by heart, and had heard of many of his famous cures. He did not try to keep up with her, feel-

ing his way, worried, the lover lost in the physician who could not help speculating as to why she was so restless, so ill at ease, with fingers inter-twining and strong limbs never stilling her morning gown.

"But why so nervous?" he asked at last, quieting her ring hand which had no rings on it. "It surely isn't that—I can't flatter myself?"

"Platter yourself?" she interrupted. "How could I flatter a career like yours, a great name like yours—"

"What there is of it you have done!"

"I have done? I? Why, what do you mean?"

"I mean," he said, leaning over her, "that what there is of good in me is you, that my work is really yours; without your image, without the memory of your free spirit breathing life into it—I mean, Sylvia—"

He stopped short in alarm, feeling instinctively for her pulse—for she had sunk back in the pillows, pale, shrunken, her hand clutching her heart.

"Quick!" she gasped, her breathing labored, "my medicine in the napkin—with the hypodermic syringe—two pellets. Don't stop to boil the water."

Without questioning, he went as she directed, shook two tiny pellets from a glass cylinder into a spoon, melted them and drew the solution up into a small transparent syringe. In less than a minute he was back again and deftly forcing the shining hypodermic needle into the arm which lay bared for him. The effect was magical. She made a low sound of satisfaction, threw her head on her arm like a child going to sleep while her lips glistened again, a faint flush lingering her pallor.

Michaelis waited until her breathing had become regular, and then, putting up his watch, went over to the breakfast-table pulling his mustache, his forehead wrinkled. He picked up the little vial, turned it to the light, studied its finely printed label, and looked sharply over toward the divan. She was watching him lazily, with half-closed eyes, and seeing the question in his face, nodded yes to it.

"How long have you been taking it?"

She beckoned him to the divan beside her, but he moved reluctantly, and chose the chair, embarrassed and ill at ease, like a man controlled by something beyond his sense.

"It did not begin until years after I was married. Oh, years and years! It was only four years ago. What I went through before—but that is neither here nor there. This began it."

She held out her left arm which was crooked, just above the wrist. "You see, it never got quite straight again. As he had been drinking, it took some time to get a doctor, and even after it was set the pain was so terrific the doctor gave me an injection. Of course, he repeated it, and—and so the wretched thing went on."

"But you must have known," Michaelis said, "a parent reproving a wayward child."

"I didn't at first. Once, after a week or so, I asked him if so much morphine wasn't dangerous. 'Not in surgery,' he laughed. 'We use it all we like.' He was an ancient interne des hopitiaux, straight as a string, and I trusted him. Oh, Carl, you know the rest of it."

But he was now distant, formal, impersonal, trying to be the critical critician who must find the right way and point it, even when it leads away from him.

"She smothered her, and leaning toward him, she threw her arms about his knees, the wide sleeves of her gown touching the floor. He patted her shoulders, soothed her, and then gently released himself, urging her to tell him everything.

So she continued: "The young doctor came to open the prince because of unreasonable, insane (you know what drinking men are,) jealous, and forbade him the house. That was when it really began, for then I got my own outfit—Oh, must I go on? You know the story—every doctor knows it."

It was the same old story, morphine, comforter, then friend, until it changed to the brutal master, keeping its solitary, friendless slave at its feet in trembling expectation and obedience.

"I often stopped it for a week, once for thirteen days, but then, after some quarrel, the pain at the wrist would begin again. I would see the little needle shining in its case, so sure to bring me pain—and all the other things—"

"Yes, of course," Michaelis said, coldly, "but, now he is dead, why now?"

"I have tried, oh so many times—and cannot." Michaelis muttered, as though to some third person: "That's the brutal part of it. It rots the will, blots the vision. It kills purpose, honor, truth—"

Catching the look of pain in her face, he stopped, while she, getting up impulsively, put both her hands on his broad shoulders, pressing them to the back of his chair, and sat down on his knee.

"Carl Michaelis," she said, "look me in the face. Is untruth there?" He looked at her with effort, but the desire his muscles rebelled at was lurking in his eyes. "Sylvia," he said, slowly, "you might be steeped in lies, and I would never know it."

THE SIGN OF THE RED CROSS.

Translated from the French Legendary Poem, "Le Brassard," of Vicomte de Barreilh.

The Goddess of Pity was winging her way Afar to the field where a young soldier lay.

(So humble a victim of war's cruel aim, Yet Love's ministrations the wounded may claim.)

In touch of her fingers the soldier found rest. The goddess again would continue her quest.

But paused as she listened to murmuring low. "The name of this angel, oh, would I might know!"

She smilingly sought out a white linen band—

All untaught in letters, yet deft was her hand— She dipped in his lifeblood her finger so fair And pressed the fine linen lo, Red Cross was there!

The daughters of France, loving legend and charm, Now wear the Red Cross as a sign on their arm! —By Harriet N. Ralston, in Red Cross Magazine.

THE FAMILY BALANCED RATION

(By Carl Vrooman, Assistant Secretary of Agriculture.)

In time of war, as in time of peace, it is not only important, but essential, that the people be well fed. Victory does not depend alone on guns and soldiers; it depends as well on the efficiency of every man, woman, and child back of the firing line.

To maintain this efficiency there must be enough food, and it must be both palatable and nourishing.

The selection or organization of food in the diet is as important as the organization of an army; a small amount of food rightly combined will give more energy than a large amount badly combined, just as a small disciplined force of soldiers is more effective than an untrained mob.

There is nothing mysterious about planning the cheapest, most palatable and most nutritious meals. On the fingers of one hand the different groups of food can be counted thus:

I. Foods depended on for mineral matters, vegetables acids, and body-regulating substances.

II. Foods depended on for protein.

III. Foods depended on for starch.

IV. Foods depended on for sugar.

V. Foods depended on for fat.

If all these groups are included in the diet, the body will lack no necessary kind of material. To illustrate: Group I. Foods depended on for mineral matters, vegetable acids, and body-regulating substances. Fruits: Apples, Pears, etc. Bananas, Berries, Melons, Oranges, Lemons, etc. Vegetables: Salads—lettuce, celery, etc. Potatoes, or "greens." Potatoes and root vegetables. Green peas, beans, etc. Tomatoes, squash, etc.

Group II. Foods depended on for protein, for muscle building: Milk, skin, milk, cheese, etc. Eggs. Meat. Poultry. Fish. Dried peas, beans, cowpeas, etc. Nuts.

Group III. Foods depended on for starch: Cereal grains, meals, flour, etc. Cereal breakfast foods. Bread. Crackers.

Group IV. Foods depended on for sugar. Sugar. Molasses. Syrup. Honey. Candies. Fruits preserved in sugar, jellies, and dried fruits. Sweet cakes and desserts.

Group V. Foods depended on for fat: Butter and cream. Margarine. Lard, suet, and other cooking fats. Salt pork and bacon. Table and salad oils.

Thinks of foods in these groups. If possible, see to it that at least one food from each group is served at least once a day. Learn from a study of these groups how to make up your own menus, and how to substitute one food for another in accordance with palatability and price. When laying in supplies of foods, think in terms of these groups. Realize, for example, that when it is difficult to obtain meat, dried beans and peas, dried fish and nuts can be eaten instead, and that the cereals, too, are rich in protein. When potatoes are scarce, rice or cornmeal is an excellent substitute.

A knowledge of these facts will prevent much sickness and useless expenditure of money. Consult with neighbors. Get in touch with your county agent, your State Agricultural college, or with the United States Department of Agriculture if you want more information.

The war must be won in the kitchens and on the dining tables of America as well as in the trenches. The Department of Agriculture stands ready to supply information to help the housewife do her bit toward winning the war.

FURTHER SUGGESTIONS.

Further suggestions for planning well-balanced family menus will be found in the following bulletins sent free of charge by the United States Department of Agriculture upon postal card request:

Corn Meal as a Food and Ways of Using It. F. B. 808. How to Select Foods—I. What the Body Needs. F. B. 808. How to Select Foods—II. Cereal Foods. F. B. 817. How to Select Foods—III. Foods Rich in Protein. F. B. 824. How to Select Foods—IV. Fruits and Vegetables.

Home Canning by the One-person Cold-pack Method. F. B. 839. Drying Fruits and Vegetables in the Home. F. B. 841, 976. Food Requirements and the Menu. Extension Circular No. 65, Penna State College of Agriculture, State College, Pa.

Through an intensive campaign by a crew of trained thrift workers, a Detroit savings bank within a few weeks obtained 7,500 new depositors, and another bank recently celebrated its first birthday by putting 5,000 new names on its books.

—Subscribe for the "Watchman."

Fatigue Duty at the Front.

Six o'clock on an August morning. The sun, although not yet very high in the sky, is streaming down on ground already baked by many rainless, sweltering days. It is as hot as mid-day, although signs of a storm are in the air, a storm that has been threatening for days and yet never comes. In the dusty village street a platoon is just forming up preparatory to going out "on fatigue," a working party going up to the "back of the front," which means about two miles behind the front line. Breakfasts were eaten half an hour ago, washing and shaving and all the other decencies of a British soldier's life were performed even earlier.

The platoon commander has a very spruce appearance, with well polished boots and buttons and belt. He has the face of a boy, and looks as though in normal times he would still be at school, the mustache he wears seems to be having a real struggle for existence, yet there is a set of the jaw and a poise of the head which speaks of experience in command which in ordinary times would not develop until ten years later.

The platoon moves off after being critically inspected by its commander. The heat soon begins to tell its tale in perspiring faces and loosened jackets, and the men look longingly at the closed cafes and estiminets as they leave the village. There is a march of a mile to the Royal Engineers' "Dump" where the platoon obtains its tools for the day's work. Arrived there, rifles are swung across the back, and each man takes a pick or shovel. Next to the rifle, he has often been told, these are his best friends at the front.

There is still two miles of marching to the scene of the day's labor, miles during which the rifle on the soldier's back and the pick or shovel in his hand grows inconceivably heavy and hot. At the appointed rendezvous the party is met by a non-commissioned officer of the Royal Engineers, who points out the work to be done—a length of new trench to be dug. Equipment and coats are removed and stacked near by; each man is given his task.

At first the task seems incredibly heavy owing to the sweltering heat, but that soon wears off and the men plug along steadily at their job, a natural spirit of competition urging them to make as good a show as their neighbors. The turf is carefully removed first and stacked ready for further use, to serve as cover for the fresh earth of parapet and parados. Work proceeds as steadily as the heat permits; in boiling hot weather there must be occasional breaks, and in a short time something that looks like a trench begins to appear.

At midday there is a diversion. An aeroplane is seen overhead, the officer's glasses reveal the enemy markings on the wings, and in a very few seconds, a British machine comes dashing out of the clouds to oppose it. Those interesting evolutions known as "maneuvers for position" begin, with occasional sputtering of machine guns as one or the other gets into advantageous position. Gradually the British aviator drives the German lower until he is within range of the anti-aircraft artillery. The German perceives his danger and decides to "bunp" towards it. His stay has not been long, but it was evidently long enough for him to spot the location of the working party, for soon after he returns, shells begin to come over from the German batteries in unpleasant proximity to the work.

The officer in charge quickly comes to a decision and gives the order. Everyone ceases work and gets into the partly dug trench, where they stay, getting what cover they can, until the burst of fire ceases as suddenly as it began. Casualties number four, one man killed, three slightly wounded, so slightly that after the use of a few bandages they are content to sit and smoke and wait for the rest of the party before going back.

Work goes on with an hour's rest and several short breaks until three o'clock, when the men form up once more and march away homeward.

Such is one day's work if one is a private on fatigue duty. Digging trenches, of course, is not the only duty of working parties. They are employed in clearing, repairing or improving front line trenches, carrying materials, laying light rail-ways, felling trees, assisting in mining operations, pumping water, making roads, building dugouts, or a score of other tasks. They may be employed for the day in the front line or 15 miles from it.

The vast amount of work that has to be done both in and behind the lines, work which is mainly done by regular infantrymen, is hard for the layman to realize. It is very well summed up by the remark of a Welsh soldier in reply to the recruiting poster question, "What did you do in the great war daddy?"

"Put half of France and Belgium into sandbags, my boy."

Whatever the task, the British private on fatigue duty is generally fairly cheerful about it, with one exception. He has a rooted objection to anything that takes him into the trenches during his period of "rest," not so much because he has any great fear of being killed or wounded, but because he feels that "out of the trenches" ought to mean out altogether until the time comes for his next turn of duty. He feels that he is encroaching on preserves that ought to be kept strictly for the use of men who are "up."

His Exemption Claim.

One of the registrars in a Virginia county district tells a story of a Negro obviously within the prescribed ages and of powerful physique, who turned up on registration day. The registrar had a good deal of difficulty in making the applicant understand the questions.

"What's your claim exemption?" he asked.

"Is there any reason why you should not render military service—why you should not fight your country's battles?"

"Oh, yes, suh," replied the applicant, much enlightened. "It's gunshy."

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FARM NOTES.

—Ways of Using Barnyard Manure.—There is a right and a wrong way to use barnyard manure. When the rainfall during the year has been above normal, there is an abnormal condition, and it is doubtful if a moderate application of manure plowed under in the fall would often cause the soil to dry out more quickly than one on which no manure was applied. Of course, it is a well known fact that in some instances long manure plowed under in the spring, or even in the fall, will cause crops to suffer for lack of moisture, for the simple reason that such manure intercepts the movement of capillary water from below to the region where surface root-lets get in their work. This only emphasizes the importance of changing the system of farming, so that manure is not applied to stubble land. There are very few farms that can be maintained in productivity without having a certain area in meadow or pasture all the time.

The right thing is to use such a rotation as will bring every foot of the land under the beneficial influence of grass. This being the case, the place to put manure is on the grass land.

There never will be any reason about manure drying out a soil if it is used as a top dressing on meadows or on pastures. In such case every atom of the manure is utilized and a response is immediately made in a stronger growth of grass, while in turn no injurious results whatever can come from the manure when the pastures or meadows are broken up. Of course many a man hasn't the right system under way of using permanent pastures to a greater or less extent. Possibly because of their location adjacent to the building he desires to produce the grain in the same fields year after year and thus is tempted to use his manure where he can most quickly convert it into bushels. The theory of that, however, is wrong, and the quicker the system can be changed so that every field can be given a square deal, the better it will be for the revenues of that particular farm.

In applying manure to the field three methods are pursued: (1) The manure is placed in larger or smaller heaps over the field and allowed to remain some time before being spread. (2) It is broadcasted and allowed to lie on the surface for some time or plowed in immediately, and (3) It is applied to the hill or drill with the seed.

The first method is objectionable because it increases labor of handling and chances of loss by fermentation and leaching, while uniform distribution of the manure is not secured. The spots on which the heaps stand are strongly manured with the leachings of the manure, while the rest of the field receives the coarse part of the manure largely deprived of its valuable constituents. Another disadvantage of this method is that proper fermentation is interfered with by the leaching out of the nitrogenous matter and the drying action of the wind. The practice of storing manure in large heaps in the field is also objectionable, for the manure is too long and is carefully covered with earth the loss may be greatly reduced.

Spreading the manure and allowing it to lie on the surface should be practiced only on level fields, where there is no danger from surface washing. It has been claimed that when manure is spread broadcast and allowed to lie on the surface there may be a serious loss of ammonia into the air; but experiments have shown that, in case of properly-prepared manure, loss from this cause must be very small. On a leachy soil there may be a loss of soluble constituents in the drainage if the manure is spread a long while before the crop is planted; but in ordinary practice the loss from this source is also likely to be insignificant. In this method of application the fertilizing constituents of the manure are uniformly distributed, the liquid portion being gradually and thoroughly incorporated with the soil particles. One serious disadvantage, however, of the method is that the manure before being plowed in is leached to a large extent of its soluble nitrogenous compounds, which, as we have already observed, are necessary for fermentation, and therefore it does not so readily ferment in the soil. It is not advisable, therefore, in the case of light or sandy soils, to follow this practice; but it is preferable to plow the manure in as soon as spread.

As to the depth to which it is advisable to plow the manure in, the general rule should be observed that it should not be so deep as to prevent the access of sufficient moisture and air to insure fermentation and nitrification, and to permit of rapid washing down of nitrates to the drain. In not exceed four inches. In light soils very compact soils the depth should be increased, although in such soils there is more danger of loss by drainage than with heavy clay soils.

Application in the hill or drill is useful where the supply of manure is limited and the full, immediate effect is desired. For forcing truck crops this method is especially valuable. Well-rotted manure is best suited to this method of application. It has been claimed, however, that manure applied in this way sometimes injures the appearance of root crops, especially potatoes, by increasing the amount of scab.

The so-called parking system, or feeding animals on the land, is a method of application which has many advantages; but the distribution of the manure by this system is irregular and subject to the same objection as broadcasting.

The application of liquid manure has certain obvious advantages, and is largely practiced, especially in Europe. Manure leachings is a quick-acting, forcing manure, and is especially valuable for grass. The expense of cisterns for collecting the leachings and the trouble of hauling and distributing, together with the care which must be exercised to prevent loss of nitrogen from the readily fermentable liquid when it stands for any length of time, render it doubtful, however, whether this method is practicable except for special purposes and under peculiar conditions.—Philadelphia Record.

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