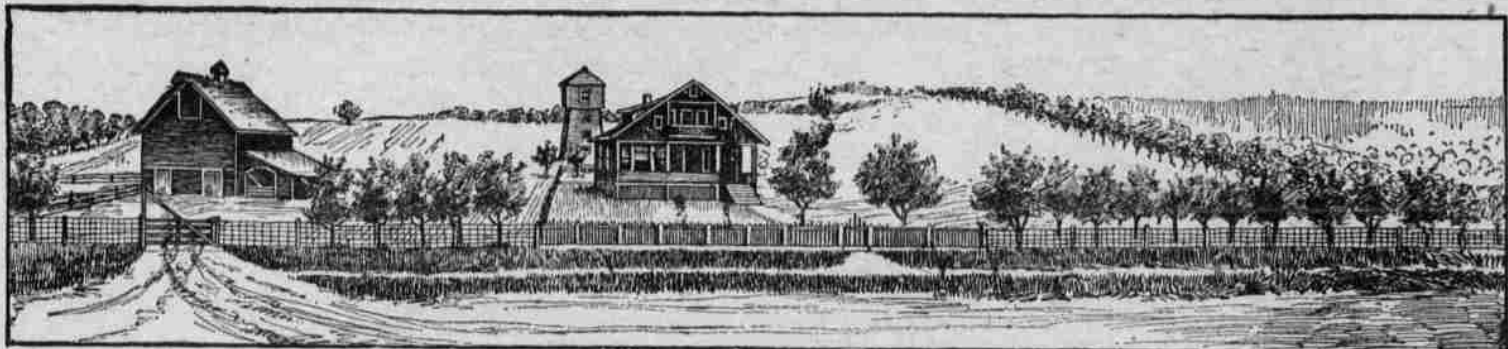




Intensified Farming

CHAPTER XIII. Cabbage.

"Back to the soil!" let us go before we attempt to produce any crop whatever. Have you the right kind of soil to produce the crop you wish to grow? A deep soil which has the power to hold moisture to be preferred, but it must have thorough drainage for cabbage. The soil should be very rich. The chemical manure suggested in Chapter 3 is a preeminently successful fertilizer following green manuring the previous season. If you wish to produce 14 perfect heads of cabbage per square rod that will average 4 pounds per head, 40,000 pounds per acre, you must have soil fertility, moisture and tillage.

A soil rich in humus, nitrogen and potash will grow cabbage successfully. Plants must breathe to a certain extent through their roots, hence the soil must be frequently and thoroughly stirred, weekly if possible, so long as the plants will permit. Plants must drink, hence a moist soil, naturally, and thorough and frequent cultivation. When the leaves are rapidly spreading out and cover the entire surface of the ground, having just previously deep cultivation, the plant will never lack for moisture to carry them through to perfection.

Cabbage, in fact all plants, must have soil that is free from their own excreta; hence frequent rotation of crops. Experienced farmers are aware that potatoes, beets, cabbages and kale, etc., will not successfully grow on the same soil year after year; they throw off a toxic or poisonous substance that injures their kind. Hence, cabbages having a coat of 10 tons of chemical manure plowed under in the fall of the year, and another coat of the same kind of manure, 10 tons per acre in the spring plowed under, and the soil thoroughly disked or harrowed with frequent cultivation during the active growing of the plant will mature a crop, even if there is no rain fall during the summer months; the spring rains maturing the early crop, and the fall rains the late crop.

An ounce of seed will produce on an average, 2000 plants ready for use in about three months when planted in cabbage green house; namely, a board, sod or stone wall two feet high; on the south side of it sow the seed in a bed three feet wide, roof with muslin at an angle of 45 degrees. Keep plants covered at night while there is danger of frost. Even cold nights greatly retard the active growth of the plants. Keep plants growing, for there seems to be less bastards developed. After transplanting, and when the plants have begun to grow, look carefully every plant to see if it is going to develop a head. A plant having leaves developing in the center is most likely to produce a head. A plant having no center leaves is called a bastard, and should be plucked up and another plant set in its place. A little diligence and watchful care at the right time will insure you a stand of over 10,000 plants per acre, and almost every plant will develop into a good head.

Fight the worms and lice with an emulsion made of concentrated lye, one pound, saltpeter one pound, dissolved with water that has been previously parboiled, one quart to the gallon, leaving the lye solution at sufficient strength to cut a feather. Add animal fat and bones of any kind one half pint of kerosene per gallon of poisoned water; frequently stir for 50 days. The whole of the ingredients will thoroughly emulsify. This emulsion will keep for years and is good the second year. When ready to use dissolve in warm water. There is no danger that will arise from paring green, for in a few days' exposure it oxidizes and loses all its poisonous qualities. Too strong a spray, however, will blight cabbage plants. Sow short rows of cabbage plants to experiment on and learn for yourself what strength you can make your emulsion. Cabbage worms will quickly disappear with its use. If any lice are left sprinkle it with ashes. When the crop is ready to ripen, and the heads begin to look glazed, lift them with a long handled shovel that has a block of

wood bolted on the back of the shovel. This gives a fulcrum to pry over. Only start the roots if the weather is dry, the head will cease to grow for a long time.

Our storage is unique, a discovery of our own. It consists of a series of walls of cabbage six feet high. To build one of these walls first lift the cabbage from the ground by this fulcrum shovel, then the roots will not be injured, and much soil will be left on the roots. Carry them to the root shed on a "stone boat." Lay them root against root, heads outward. If you build the wall 50 feet long and 5 feet high it will contain between three and four thousand heads. Cover the roots with moist earth, pack it firmly with the shovel; lay another row on top of the first row and cover with earth as before. Continue this process until the wall of cabbage becomes as high as you can reach handily. The next row build two feet from the first. This will give ventilation and an opportunity to examine the heads of the cabbage during fall and winter.

If any of the cabbage in the rows begins to show signs of bursting pluck them out and market them. Cabbage thus stored will begin a slow growth, keep fresh, crisp and sweet, and very few heads will burst, and none will wilt, and very few rot. Undeveloped heads of cabbage thus stored will by the next May become solid heads and bring a good price in the market. One experiment will abundantly prove to you that cabbage will grow when thus stored.

The price of cabbage in February on the Pacific coast is from two to four cents per pound wholesale. 40,000 pounds will bring \$800 to \$1600. The last five years the highest price during the month of February has been, respectively 3, 3 1/2, 3, and 4 cents per pound.

Twenty thousand head of cabbage can be stored in a space of 20x50 feet. Where the temperature does not go much below freezing, a roof of boards, unplaned, is sufficient. There will be sufficient dripping of water through the cracks to keep the cabbage roots moist; for the roots must not be allowed to dry out. A wall of muslin sheeting will be sufficient protection. If stored in a cellar in a cold climate the temperature must be kept as near as possible 40 degrees Fahrenheit. An easy method of wetting each rick of cabbage is with a long gas pipe having small holes on one side. One end of the pipe closed, the other a funnel; a small ditch filled in the soil on top of each rick and filled with water occasionally will percolate down through and start little white roots growing which will cause the cabbage to very materially increase in weight during the winter.

Cabbage for home use can be stored in the cellar in a circular shape; that is, place the roots toward each other in a circle, heads outward; cover the roots with earth; moisten the soil frequently during the winter. Cabbage thus stored will keep until the next June and July if not allowed to have too free a circulation of warm air. Potatoes, roots and cabbage will keep cold and crisp as in mid-winter in April, May, June and July if in a tight barrel and weekly a cake of ice placed on sticks over a tub to catch the water. The temperature of the room can be reduced to 40 degrees if salt is sprinkled on the ice occasionally. Salt and ice produce zero temperature.

Bowel Complaint in Children

When six months old the little daughter of E. N. Dewey, a well known merchant of Agnewville, Va., had an attack of cholera infantum. Chamberlain's Colic, Cholera and Diarrhoea Remedy was given and effected a complete cure. This remedy has proven very successful in cases of bowel complaint in children and when given according to the plain printed directions can be relied upon with perfect confidence. When reduced with water and sweetened it is pleasant to take, which is of great importance when a medicine must be given to young children. For sale by Jones Drug Co.

Some Valuable Discoveries

The study of agriculture from a utilitarian standpoint in the agricultural colleges and experiment stations has within the last ten years revolutionized the sentiment of the agricultural world in regard to scientific farming. Up to that time the farmer who did aught but plow his land as he found it, cultivate it industriously throughout the growing season and finally harvest what the enemies to plant life left him, was regarded as a theorist and a dreamer. The practical farmer of the old school with the accepted ideas and methods of generations of tillers of the soil looked askance at and ridiculed any agriculturist who attempted to supplement the efforts of nature with a knowledge of conditions acquired through scientific research and a study of conditions. The results obtained by students of plant physiology and pathology, who have gone out from the agricultural colleges, have changed the ideas of the farmer concerning scientific agriculture and the adoption and appropriation of the knowledge gained by experiment and study has told immeasurably in the preservation of and in the increase in many staple products.

Through the efforts and experiments of the government, experiment stations conducted in connection with the institutions in question, how to fight and prevent many of the plant diseases which formerly placed the farmer at the mercy of their ravages, has become almost common knowledge and within the reach of any taking the pains to acquire it. This much the missionaries sent out by the agricultural colleges have already accomplished, and the government working through the institutions devoted to the development of the science of agriculture has but commenced the work which it is yearly broadening through liberal appropriation and encouragement.

The different blights that visit the Irish potato have been made the subject of exhaustive study. Investigation has established the fact that this staple crop can be insured if the methods prescribed by the experts in plant pathology are followed. In the case of potato scab, the germ can be destroyed and the crop that would otherwise be damaged by half as a re-

sult of its ravages, can be controlled to the extent of 98 per cent. The "scab" appears as a kind of pex on the tubers, and besides reducing the crop, cuts materially the market price of that part of the yield least affected. The malady is caused by a germ that attaches to the exterior of the tuber before planting and is communicated through the plant to the potato in the early stages of development. An effective remedy is a simple one and entails little time and trouble. Soak the tubers, before planting, in a solution of corrosive sublimate or formalin entirely kills the "scab" germ and eliminates the progeny in the mature fruit. Investigation has shown that the "scab" germs flourish in soil that has been fertilized by manure, and that enrichment with manure or other fertilizer will practically destroy them.

"Mildew," the blight that completely destroyed the Irish potato crop in 1840, and caused such misery and want, and which, before and since that time, has caused the loss of millions of dollars in those countries where the potato is a staple product, has succumbed to scientific experiments that have been carried on by agricultural experiment stations and

is now effectively controlled by spraying with the Bordeaux Mixture. Two sprayings a season are required, one for the early blight that comes in July, the other for the later blight that develops in August. The Bordeaux Mixture is inexpensive and practically infallible as a destroyer of the dreaded "mildew." It is composed of copper, sulphate, slaked lime and water. The proportions are four pounds of copper, four pounds of lime and fifty gallons of water. Potato vines sprayed with this mixture twice a year show little evil effect of the blight if the work is done in time.

Experiments made at the Ohio Agricultural College, during that period of thirteen years, with thirteen varieties of potatoes demonstrated how effective is the spraying with the Bordeaux Mixture. The yield of those which had been left to the ravages of the mildew were inconsiderable compared with that of the sprayed vines. The thirteen years' experiments showed that the average yield on the same amount of ground was 254 bushels for the sprayed vines and 105 bushels on the unsprayed tracts. Splendid results have been secured in apple culture through

spraying with a mixture of copper sulphate and lime similar to the Bordeaux Mixture. Experiments have shown that the trees sprayed are 85 per cent free from the scab that almost yearly destroys large quantities of this fruit, while unsprayed trees are only four per cent free from the blight. The spraying with the mixture in question costs from six to ten cents per tree and the gain in the value of the yield is sometimes over fifty per cent.

The enemy to the onion, which has been subjugated by the agricultural experiment stations, is the "smut" that often seriously affects the output of this vegetable. It breaks out as lines or pustules on the leaves and bulbs and it is practically impossible to stop its ravages. A field of onions will change in two days from a healthy growth to a ragged, straggling patch with a crop not worth the gathering. A study of this disease of the onion was made by the Geneva, New York, Experiment Station. The fatality was found to be chiefly in the seedlings, and further investigation showed that the disease was caused by a soil fungus. It was found that transplanting the seedlings stopped the progress of the plant malady and that the infection of the soil from which they had been taken could be removed by treating it with a mixture of sulphur and slaked lime. The most effective proportion was ascertained, by repeated experiments, to be one hundred pounds of each to the acre. The mixture may either be drilled into the soil or sown broadcast.

This information has been published in the bulletin issued by the agricultural colleges and the government experiment station until it has become, especially in New York and the eastern states, a subject upon which all large onion producers are informed. The result has been a

Afraid of Ghosts

Many people are afraid of ghosts. Few people are afraid of germs. Yet the ghost is a fancy and the germ is a fact. If the germ could be magnified to a size equal to its terrors it would appear more terrible than any fire-breathing dragon. Germs can't be avoided. They are in the air we breathe, the water we drink.

The germ can only prosper when the condition of the system gives it free scope to establish itself and develop. When there is a deficiency of vital force, languor, restlessness, a sallow cheek, a hollow eye, when the appetite is poor and the sleep is broken, it is time to guard against the germ. You can fortify the body against all germs by the use of Dr. Pierce's Golden Medical Discovery. It increases the vital power, cleanses the system of clogging impurities, enriches the blood, puts the stomach and organs of digestion and nutrition in working condition, so that the germ finds no weak or tainted spot in which to breed. "Golden Medical Discovery" contains no alcohol, whisky or habit-forming drugs. All its ingredients printed on its outside wrapper. It is not a secret nostrum but a medicine of known composition and with a record of 40 years of cures. Accept no substitute—there is nothing "just as good." Ask your neighbor.



practical guarantee of the onion crop and the assurance to the onion med of the country that money invested in the production of this vegetable will not be lost as a result of the ravages of the smut recently dreaded "smut."

A Frightful Wreck

of train, automobile or buggy may cause cuts, bruises, abrasions, sprains or wounds that demand Buckle's Arnica Salve—earth's greatest healer. Quick relief and prompt cure results. For burns, boils, sores of all kinds, eczema, chapped hands and lips, sore eyes or corns, it's supreme. Surest pile cure. 25c at all druggists.

Berry crates and boxes for sale at Oregon City Commission Company.

ALCOHOL-OPIMUM-TOBACCO
Habit Positively Cured. Only authorized Keeley Institute in Oregon. Write for illustrated circular. Keeley Institute, 71 E. 11th St., Portland, Oregon.

A wonderful postcard—Every body should see the picture, Way of Life, and read carefully the explanation of one of the most clear, truthful and sublime revelations of the doctrine of salvation, "The Faith of Jesus," ever printed, superior, as this age of light and revealed truth is superior, to the greatest wisdom and skill of the old masters. Price 2 for 5c. Huntley Bros. Co., Postcard Headquarters and Jones Drug Co.

A Fair Comparison

BETWEEN A NATIONAL BANK OF PORTLAND, OREGON
And the UNION PACIFIC LIFE INSURANCE COMPANY

SAFETY

In Every investment there are two considerations—Safety and profit.

The most important is safety; no one is justified in putting money into any enterprise unless it can be shown that the money so invested is practically insured against loss.

To place funds in a concern of any other character is speculation.

The capital stock of the UNION PACIFIC LIFE INSURANCE COMPANY is an absolutely safe investment.

In considering this investment offer, therefore the following should be kept in mind:

First—that immense fortunes have been and are being made in life insurance—the most profitable of all forms of legitimate business.

Second—That there is a growing sentiment towards the upbuilding of home institutions of every kind, and especially in regard to life insurance.

Third—That the Union Pacific Life Insurance Company stock is absolutely safe under the legal reserve laws, and will grow more rapidly in value than any other stock available.

Fourth—That by securing stock in the Union Pacific Life Insurance Company you have the opportunity of personally and effectively promoting the business of a company in which you are interested, and thus adding to your profits, and the value of your holdings.

Profit

On account of the high percentage of success, and because the profits are greater than in any other business, there is no better investment than that in a flourishing life insurance company.

Life insurance companies have, therefore been practically financed, with the result that the enormous profits which they have made, and are making, remain in a few hands.

The plan of the Union Pacific Life Insurance Company in distributing its capital stock in a way by which it not only offers a remarkable opportunity for investment, but at the same time, puts into effect a successful method of securing the co-operation of its stockholders in the upbuilding of the company, affords an opportunity which will be quickly seen and accepted.

Don't wait until the Stock is either Advanced in price or Withdrawn from the Market. BUY NOW.

A National Bank of Portland

Capital Stock - \$ 500,000
Surplus - 1,000,000
Capital Stock and Surplus - \$1,500,000

Market value of capital stock on basis of capital and surplus on hand (value \$100) \$300 per share.

The bank has paid 7 per cent. quarterly cash dividends for 25 years; which is equal to 30 per cent. on the par value of the stock.

Market value of its capital stock on the basis of dividends earned and paid in cash each year on basis of 5 per cent. interest earnings will equal to \$600 per share or 600 per cent. above par.

UNION PACIFIC LIFE INSURANCE COMPANY

The Union Pacific Life Insurance Company of Portland, Oregon, will have--

Capital Stock, - \$200,000
Surplus, - 400,000
Capital and Surplus - \$600,000

Taking the above figures as a basis of calculation, market value of capital stock on basis of capital and surplus (par value \$100) equal \$300 per share.

The average annual cash dividend earned and paid by the ten leading life insurance companies for the past 25 years amounts to 50 per cent. on the par value of the stock.

Market value of stock on basis of dividends earned by the ten leading life companies on basis of 5 per cent. interest earnings would be equal to \$1000, per share or 1000 per cent. above par.

The security of a life insurance company is many times greater than any national bank, because the laws of Oregon limit the insurance company to investing its assets in first mortgages on improved real estate of double the actual value of the amount loaned, while National Banks must loan its funds on commercial paper without security.

The fact that the securities in which the insurance companies can invest are restricted by the laws of the state to high-grade securities, and the insurance department of each state in which we do business supervises the operation, certainly surrounds the investor with a safeguard that he could not possibly get with many classes of investments.

While every other stock was depreciated during the last panic, not a single share of stock in a life insurance company depreciated in value the fraction of a dollar.

On the contrary, it has been more forcibly brought to the attention of the investing public that the value of life insurance stock is more stable than the value of any other stocks on the market. The same firm and infatuating value of life insurance stocks has obtained during every panic this country has ever had. This cannot be said of any other kind of stocks.

Union Pacific Life Insurance Company

Home Office, Portland, Oregon

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Chicago, Ill.—"I want to tell you what Lydia E. Pinkham's Vegetable Compound did for me. I was so sick that two of the best doctors in Chicago said I would die if I did not have an operation. I had two operations, and they wanted me to go through a third one. I suffered day and night from inflammation and a small tumor, and never thought of seeing a well day again. A friend told me how Lydia E. Pinkham's Vegetable Compound had helped her, and I tried it, and after the third bottle was cured." Mrs. ALVINA SPERLING, 1408 Clybourne Ave., Chicago, Ill.



If you are ill do not drag along at home or in your place of employment until an operation is necessary, but build up the feminine system, and remove the cause of those distressing aches and pains by taking Lydia E. Pinkham's Vegetable Compound, made from roots and herbs.

For thirty years it has been the standard remedy for female ills, and has positively restored the health of thousands of women who have been troubled with displacements, inflammation, ulceration, fibroid tumors, irregularities, periodic pains, backache, bearing-down feeling, flatulency, indigestion, dizziness, nervous prostration. Why