Soils and Crops

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Care of Young Chicks.

The methods of feeding and caring for baby chicks are as many and varied as those of our real babies, and as with them, it pays to start right, keep on right, and never deviate from your method after once established.

We build the coal fires in our brooder stoves at least twenty-four hours before using the house—clean, gritty sand is placed on the board floor to a depth of two inches. A cloth covered wire screen eighteen inches high is stretched around the hover, about a foot from it, thus keeping the chicks within the warmed zone. Use brooder thermometer and bring the temperature up to ninety-seven or ninety-eight degrees. When thirty-six hours old the babies are taken from the incubators in warm lined baskets and carefully placed under the hover. It is a beautiful sight to me, to see the yellow, fluffy balls go after the sand. A dish of sour milk, so arranged that they can not get wet, is put before them, and that is their forenoon drink until they are a month old. I try to get them into the brooder house in the forenoon and about three p.m. they are given a very light feeding of rolled oats, dry bread and hard-boiled egg, ground together. At six o'clock another feeding is given. One egg to fifty chicks is sufficient at first. I find a heavy piece of dark paper spread on the floor makes the best feeding place until they learn to eat, when small troughs are used. We feed them five times a day throughout the season, or until the broilers are disposed of. The first three days they get the egg mash, then a little bran is added with a dash of red pepper. By the end of the week they get their first corn meal, and a hopper of dry bran is placed before them. The floor is then covered with fine clover chaff and chick food is scattered on it. The little fence is enlarged and if the weather is not too severe the hover is raised through the day. After the 3.30 feeding, the hover is lowered and heat increased to insure extra warmth at bedtime and thus avoid crowding.

After the first week, the first feed in the morning is chick food in the litter and always their drink of sour milk at 9.30, mash of one part egg, oatmeal, bran and meal mixed with sour milk to a crumbly mass—never sloppy. The noon feeding is scratch feed, 3.30 mash, and at night all they will clean up of the scratch food again. Gradually I change the mash so that at three weeks they are getting three parts of bran, two of cornmeal, one of white middlings, one of sifted beef scrap and one-half ground bone. This is kept in the dry mash hopper, before them all the time.

By this time the fountains are filled afternoons with water slightly warmed. They are placed on the flat side of a two-by-four against the wall and the sand on the floor in front of them is always kept wet—extra sand or a sod being placed there kept soaked. The hard coal ashes are thrown in one corner of the house and the chicks scratch in them, eating much of the charcoal.

Very gradually the mash is changed until we are using the regular growing mash consisting of, by weight, three parts of bran, three parts of cornmeal, three parts of white middlings and two parts of beef scrap, the sour milk taking the other part. Also one part of ground bone.

By following this method, we seldom lose more than two per cent., and a case of leg weakness is unknown. The litter is changed as needed, never allowed to become soiled or heavy.

Extra Special Washing

How to Take Care of the Frail and Dainty Garments That Will Not Stand the Big Wash.

BY GERTRUDE COBURN JESSUP.

The smell and the feel and the look of clean clothes fresh from the line or the bluegrass, afford one of the real satisfactions of the housekeeper. Many a tired woman is rested by them on every pleasant washday afternoon.

After the spring cleaning is done and vacation time in on for the young folk, there is a variety of clothing to be looked over, discarded or put in order. A thrifty woman discards very little. On a bright Monday morning, when sun and air are right and energy high, the temptation is to gather up everything that is not perfectly fresh and clean and get it into the purifying suds and disinfecting light. Right here we must beware! Not every soiled garment can stand up under the routine of the laundry. Just now, especially, when thin fabrics of real delicacy are in vogue, wastefulness from careless cleaning is too common. Crepes and other sheer silks are high-priced and difficult to fit and finish. Long days of patient sewing and many dollars, slowly earned and joyfully spent, may be thrown away with one dip into hot soapy water. Color, crispness, form, even durability, of the choicest possession may vanish thus quickly.

Imperfect dyes, also, make necessary the cleaning of many fabrics separately. The sudsing of a number of colors at once, or leaving them in the tub or basket, may destroy the beauty of all. Little Mary's handsome plaid becomes a smear because the red runs all through the other colors; Mother's hand-made lace that came all the way from his missionary sister in Chile to trim her best blue voile, turns a hopeless gray; the white pique cuffs and collar on Jean's favorite buff school frock can never be snowy white again; and the ribbons and silk waist are ruined.

No, don't gather them up and put them into the machine! Save them for a special day, and then have all the materials ready for a thorough job. Wait for a fair morning, when it is warm and dry enough for quick evaporation, and when you can work out in the yard leisurely, then have a really good time luring newness back to aging garments and restoring to the several members of the family their special finery.

Father's neckties, and the boys', will need attention; the little girls' hair-ribbons; the blue voile that is to be altered and the yellow crepe party dress that had ice cream spilled down the front; that old summer silk of Mother's that looked so worthless; the delicate cuffs and collars, and all the gloves. They do accumulate amazingly but a day devoted to intelligent renovating will surprise the most sanguine. Replacing the garments, or even shopping for new materials, would take many times as long, to say nothing of the cost, and the expense for cleaning fluids is as nothing compared to that of professional cleaning.

Different Processes.

Four or five groups of articles may be sorted out and handled the same day quite economically if care is used about cleaning the lightest and least soiled first, then the next dirtiest, and so on. There will be several different processes. The first requisite is to have all the necessary liquids at hand, with plenty of bowls or pans of suitable sizes and absolutely clean and free from rust. Some soft white rags or cheesecloth will be needed, and probably a small, clean brush. Large tubs, rubbing board and boiler have no place in this day's program. A high bench or table at which one may stand comfortably, and a high stool or chair are desirable.

The best white soap, already flaked or shaved thin with a knife, should be cooked until dissolved in the softest, clearest water obtainable. If the very slightest stiffening is wanted, as for organdy, a solution of borax is used for rinsing. Gasoline of the best and whitest quality should be ready in abundance. A still more voltaile fluid may be needed for lace collars and vests which cannot be conveniently removed from a dark garment and must be cleaned by patting with a little fluid at a time which is absorbed by a soft pad of cheesecloth or old linen held under the spot. A mixture recommended for this purpose follows:

1 gallon gasoline, 1 ounce alcohol, ½ ounce chloroform, ½ ounce ether.

The two-ounce mixture of alcohol, chloroform and ether may be purchased at the drug store in one bottle, and one-fourth of it added to a quart of gasoline when needed.

For summer cottons such as lawns, dimities and fine ginghams, which can no longer be dry-cleaned and yet should not be exposed to the ravages of soap, a good supply of thin cooked laundry starch is the best thing. If ecru or natural linen color is to be preserved then cooked bran water may take the place of the white starch.

Of the sorted garments there will be two piles of white or very light; first, lace and net collars and guimpes, silk and cotton gloves, and light cotton or silk dresses which are but slightly soiled and need only gasoline for the oily parts that have been next the skin or for accidental spots; and, second, similar articles which have been previously dry-cleaned and reworn until they are soiled all through and must be washed in either soap or starch water.

The third group may contain white or light kid gloves, silk ribbons, ties and mufflers, blouses and dresses, all to be immersed two or more times in gasoline. The fourth bunch will be similar to the third but of darker articles, and more soiled. Woolens not thoroughly shrunken and of fast color should be dry-cleaned in gasoline, and will make a fifth group, along with the small boys' trousers and caps and such other heavy articles as may need only a careful sponging and pressing. If spots are to be treated, they should be encircled by a white thread or chalk mark so they will not be lost as soon as moistened.

In the fifth pile will be those excellent woolen and silk things previously dry-cleaned to the limit, that can profit finally by warm suds and equally warm rinsing to remove all stickiness and grayness. These may follow through the water the daintier articles mentioned as a part of the second pile, for all the soap washing should be put off until after things cleaned in gasoline and starch have been hung up. The gasoline will need all day to evaporate, and the starched clothes should dry early and be sprinkled ready for the irons when they are heated for the woolens.

When everything that needed a full bath has been hung up, we may sit down to the spots. As has been suggested, if there is only a little oily mixture of dust at nick and wrists, or a grease spot on the vest, we take a little soft dauber of cheesecloth and a larger pad for an absorber under the spot, and pat with the cleaning fluid over and over, turning the absorber each time as the dirty fluid is carried into it, until there is no trace of dirt left. Only airing and pressing then remain.

As to other grease spots we must remember that we cannot successfully clean a spot if the garment is dirty. We may remove the grease spot, but it will be only moved along and will form a ring or streak around the clean spot. Why is this?

Gasoline (or benzine and other dry cleaners, such as chloroform and ether) dissolve oils but when the dry

Using Gasoline.

cleaner evaporates, the oil is left behind, just as sugar is left when water has evaporated from syrup. If a sticky spot of syrup is to be removed from cloth it must be not only dissolved in water but must be washed away with more water. The sugar does not vanish into the air, and neither does the oil which the gasoline dissolves; it must be rinsed away with repeated fresh supplies until no oil remains to resettle after the solvent has evaporated. If the oily spot held dust it will be carried along with the dissolved oil in the gasoline and the cleanness of the garment will depend upon the thoroughness of the rinsing.

A drop of gasoline on a grease spot acts as a drop of rain does on a dusty board—it spreads in every direction and carries the dirt out from the centre in a ring. If there is not more gasoline to follow, again and again, until the ring is pushed quite off the cloth, then dirty streaks will remain. Rinsing is just as important in dry cleaning as in sudsing.

If a whole garment is soiled, as a silk blouse may be, or kid gloves, or a child's coat, it is most easily cleaned in a quantity of gasoline to cover, as though it were water, with squeezing and turning, in one bath after another until the last one remains clear. The gasoline is kinder to the hands and more effective if warmed, by setting the can or bowl in hot water. Of course gasoline must not be warmed or used near a fire. Also, do not rub garments in gasoline, hard enough to produce friction.

Growing Seed Potatoes.

The farmer who intends to produce his own supply of seed potatoes should now plan for the crop. The seed plot should be removed some considerable distance from the main crop of potatoes and special hill-selected seed should be used for planting. During the growing season this plot needs to be carefully sprayed and any hills showing disease should be mercilessly removed. Seed for next year's planting can best be selected at digging time. The best hills would naturally be removed first and marked for use in the home seed plot for the following year. The remainder of the plot can then be harvested and this seed used for the main crop. Following a program of this kind will enable the careful farmer to develop a satisfactory strain of potatoes that will be especially adapted to home conditions.

A balanced daily program of work, play and recreation will make for greater accomplishment and better living.

The Dairy

Spring freshened cows should be fed much in the same manner as during the winter, except that grass will take the place of ensilage and other roughage until the drought period comes. A well- balanced grain ration should be compounded much the same as for winter feeding. Grain grown upon the farm should constitute the base of this grain ration. Experiments show that cows will produce enough more milk on pasture to more than pay for the grain ration, besides encourage persistent milk flow and sustain the cows in good flesh.

While the majority of dairymen much prefer winter cows, spring freshened cows should not be considered unprofitable. On my farm I have a large amount of lowland pasture and I find that I can produce milk much cheaper during the summer than during the winter. I find also that the spring freshened cows help out on the milk cheque and this is quite acceptable as farm expenses always run much higher during summer months. With a suitable grain ration, some supplemental roughage, when needed, and proper care, spring freshened cows can be made quite profitable.

Paint Primps Poultry House.

Painting adds greatly both to the appearance and service of all buildings and appliances. One may buy ready mixed paints, or may purchase paste pigments and oil and mix them. All surfaces should be clean and dry before they are painted. Use a priming coat made of equal parts of paint and linseed oil and cover with one or more coats of paint, which should be thoroughly brushed into the surface.

Whitewash is the cheapest of all paints, and may be used either for exterior or interior surfaces. It can be made by slaking about ten pounds of quicklime in a pail with two gallons of water, covering the pail with cloth or burlap and allowing it to slake for one hour. Water is then added to bring the whitewash to a consistency which may be applied readily. A weatherproof whitewash for exterior surfaces may be made as follows: (1) Slake one bushel of quicklime in 12 gallons of hot water, (2) dissolve 2 pounds of common salt and one pound of sulphate of zinc in 2 gallons of boiling water; pour (2) into (1), then add 2 gallons of skim milk and mix thoroughly. Whitewash is spread lightly over the surface with a broad brush.

Spraying Bush Fruits.

In the handling of bush fruits, it has not been found as practical to control diseases attacking these plants by spraying as it is for similar troubles on tree fruits. The general practice is to cut out and burn all old canes as soon as the fruit has been removed. Other diseased canes may well be taken out upon their first appearance of the ailments. It is wise to select varieties that are resistant to diseases.

Caterpillars on the leaves of raspberries and blackberries can be controlled with a spray of arsenate of lead. Use one pound of the powdered arsenate to fifty gallons of water.

Mildew, which appears as a grayish powdery fungous, is controlled by an application of potassium sulphide used at the rate of one ounce of the sulphide to two or three gallons of water.

Plant lice are controlled by nicotine sulphate. This should be applied, however, before the leaves curl, since this folding of the leaves prevents the spray from reaching the lice.

Brushing the lower crust with egg whites, some housewives say, eliminates sogginess in pies.

Parents as Educators

Blessed are the Tactful—By Mrs. Lydia Lion Roberts

Two boys went up to a house and sat down on the steps, shuffling their muddy feet and dragging a heavy cart back and forth on the path. It was not their house nor even their own neighborhood, yet they had taken noisy possession. Presently a man opened the door, watched them quietly a moment and then said pleasantly, "How do you do? Won't you come in?"

The boys looked up in abashed surprise, sheepishly got up and hurried away without a word. The man smiled and closed the door.

The man could have shouted, scolded, threatened or abused the trespassers with doubtless unpleasant results before the boys went away. Because he was pleasant and tactful the annoyance ceased at once and the incident was closed.

We admire diplomacy; we sigh when we meet untactful persons who rub us the wrong way. A person may be good and yet lack the soothing balm of tactfulness. We realize this between older people but I wonder why we do not practice it more with children? Too often we are careless and blunt, hurting sensitive little feelings and often making it twice as hard for children to be good and kind because we are so untactful.

On a pretty suburban street there were ten boys who played together, and problems of property rights often came up. Every time a mother approached the boys in a friendly, reasonable spirit, the boys responded, and there was no trouble. One day a mother looked out of the window to see two boys fighting furiously over her smooth back lawn, while an admiring crowd of playmates gathered near. She thought a minute and then went out and stepped up to the antagonists, and said goodnaturedly, "I don't like to have my pretty lawn torn up, so would you boys please go over to the vacant lot across the street to finish your fight? You see, this is my land and I can't have you fighting here, but there is plenty of room over there."

The boys stopped a minute, looked at each other, then each slowly grinned, gave her a cheery, "Sure!" and the whole crowd moved amiably up the street without finishing the fight.

Children do not like to be talked over as if they had no ears, and they are hurt and antagonized when their likes and dislikes are laughed at or their mistakes ridiculed.

A little girl, whose family had indulged in a hearty laugh because in dressing herself she had put her underwear on over her stockings instead of underneath, said reproachfully to her mother, "I don't like you to laugh—it makes me feel so mean at myself!"

We would not dare treat our friends in such a manner, for we would soon be friendless. Then why treat little children that way when we need to be friends with them if we are going to teach or guide or help them? The friendship of little children is one of the sweetest, most precious gifts with which life can bless us, and unto the tactful shall it be given.

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THE SUNDAY SCHOOL LESSON

JUNE 18

The Downfall of Judah, 2 Kings 25: 1-12. Golden Text—Be not deceived; God is not mocked; for whatsoever a man soweth, that shall he also reap.—Gal. 6: 7.

Lesson Foreword—The downfall of Judah occurred in two stages. The first was in B.C. 597, when the Babylonians captured Jerusalem and carried Jehoiachin, along with many leading nobles, warriors and artisans, into exile to Babylon (see 24: 10-16). The second stage was when the succeeding king, Zedekiah, revolted, and the Babylonian army advanced once again on Jerusalem. After a siege of a year and a half (B.C. 588-586), the city was captured and sacked. The exile which followed the capture of Jerusalem is the great dividing point in the history of Israel. Before the exile the prophets could not get a sympathetic hearing from the people but after the exile, it was seen that the prophets were in the right, and Israel's religion became largely a prophetic religion.

I. Jerusalem Besieged, 1-3.

V. 1. **The ninth year of his reign.** Zedekiah reigned eleven years, ch. 24: 18. He had been set on the throne by the Babylonians and was made to swear allegiance to them. This vow of homage he kept in the earlier part of his reign, but eventually the war party among his councillors induced him to revolt against Babylon. **The tenth month**; the month of January. Before the exile, the Hebrew calendar was used and the year began in the autumn, when the fruits of the earth were gathered in (Exod. 23: 16), but after the exile, the Babylonian calendar was adopted and the new year fell in the month of April. **Nebuchadnezzar.** In B.C. 606 the Assyrian empire fell before the Chaldeans, and Babylon, instead of Nineveh, became the seat of that great empire. Nebuchadnezzar came to the throne of Babylon in B.C. 604, and reigned for forty-three years. He was a powerful ruler and under him the city of Babylon entered upon a period of wonderful growth and prosperity. **They built forts**; bulwarks, or some sort of siege-walls.

V. 2. **The city was besieged.** The siege lasted from the ninth (v. 1) to the eleventh year of Zedekiah's reign, that is, about a year and a half.

V. 3. **The famine was sore** (Rev. Ver.). The siege of Jerusalem resulted in the usual effects of a prolonged siege,—famine in the beleaguered city. The horrors of the siege seem to be reflected in Lamentations 2: 19-22 and 4: 10. The mothers were so crazed by hunger that they were driven to consume their own children.

II. Jerusalem Captured, 4-7.

V. 4. **The city was broken up.** A breach was made in the city walls. **All the men of war fled by night.** The defending garrison, or perhaps the standing army, headed by the king, escaped from the city under cover of night. (See Jer. 39: 4 and 52: 7.) **The way of the gate between two walls.** This was on the southeast side of the city, near where the king's garden was situated at the mouth of the Tyropean valley. At that quarter the walls of the city were double,—an old inner wall and an outer wall built so as to include the pool of Siloam. In Hezekiah's reign an aqueduct had been built to connect the spring of Gihon with the pool of Siloam: thus an adequate water supply was assured in case of a siege. (See Isa. 22: 11.) **The Chaldees**; another name for the Babylonians. The Chaldees proper lived to the southeast of Babylonia. They supplied the ruling dynasty, of which Nebuchadnezzar was a member, and hence their name was frequently applied to the new Babylonian empire. **Toward the plain**; toward the Jordan valley which near Jericho widens out into a great plain.

V. 5. The fugitive army had been able to escape to Jericho, about eighteen miles distant, before they were overtaken. **All his army were scattered.** After keeping together as far as Jericho, they dispersed, each man seeking his own safety.

V. 6. **Brought him . . to Riblah.** Although present at the beginning of the siege, Nebuchadnezzar does not appear to have been present when the city was captured. He had removed his headquarters to Riblah, a city in the valley of the Orontes, south of Hamath and in Syria. It was a suitable place for military headquarters. It was there that Jehoahaz had been put in chains by Pharaoh-nechah (ch. 23: 33). **Gave judgment**; passed sentence on him.

V. 7. The Babylonians perpetuated the Assyrian policy of "frightfulness," but it should be remembered that among the ancients there was little mercy shown in war. **Put out the eyes.** "Putting out the eyes was a punishment resorted to by the Assyrians in dealing with rebellious vassals" (Skinner). From vs. 18-21 and Jer. ch. 52, we learn that many of the nobles, officers and priests were also slain at Riblah.

III. Jerusalem Sacked, 8-12.

V. 8. The Babylonian army proceeded to sack the city of Jerusalem. The city was captured in the fourth month (v. 3), and the sacking did not begin until the fifth month. During this month the officer-in-charge, Nebuzaradan, before destroying Jerusalem, had awaited instructions from Nebuchadnezzar, who was in Riblah.

V. 9. The treasures of the temple were removed and carried as booty to Babylon before the temple was burned. (See vs. 13-17, Jer. 52: 17-23.) Then the temple, the royal palaces and the houses of the people were burned.

V. 10. **Brake down the walls.** This would render Jerusalem incapable of defence and powerless to effect any future revolt. Nebuchadnezzar's purpose seems to have been to make Jerusalem uninhabitable. Thus the prophecy of Micah was literally fulfilled: "Jerusalem shall become heaps, and the mountain of the houses as the high places of the forest" Micah 3: 12.

V. 11. The inhabitants of Jerusalem, the deserters to the Chaldean army and as many more as they could lay their hands on, were carried into exile by the Babylonians. In Babylonia, where they were transported, they were not kept in prison but were allowed a great measure of freedom, engaging in agriculture and trade. Many of them were materially better off in Babylonia than they had been in their own country, but the love of home made them always turn their eyes wistfully toward their own country.

V. 12. **The poor of the land.** Nebuchadnezzar did not wish the land to revert to a jungle; so the poorer classes were left to cultivate it,—vine dressers and shepherds. The flower of the nation had gone into exile and those left were forlorn and spiritless. They were exposed to barbarism. Their inveterate foes the Edomites and the hungry Bedouin from the desert, overran the country.

Application.

There is no such thing as disobeying God without having sooner or later to face the consequences. A young man graduated from an Ontario College and boasted that there were certain subjects that he never really understood. He had, however, studied old examination papers, and read up the answers to questions he thought would be asked. He succeeded in securing pass marks, but later confessed to a friend that in his professional career, he had been severely handicapped because he needed the very knowledge which a study of the subjects he had skipped would have given him. In the realm of morals there is no such thing as committing sin and "getting away with it."