

FARM AND GARDEN.

MATTERS OF INTEREST TO AGRICULTURISTS.

Some Up-to-date Hints About Cultivation of the Soil and Yields Thereof—Horticulture, Viticulture and Floriculture.

IT IS unreasonable to expect that a private individual will invest in a spraying apparatus and spray the large shade trees in front of his grounds, therefore in spraying operations where large trees exist in numbers there must be combination of resources, says L. O. Howard, entomologist of the department of agriculture.

This affords an opportunity for the newly invented business of spraying at so much per tree. In Bridgeport, Conn., Mr. W. S. Bullard, who was formerly and is yet for the greater part of the year a roofer and paver, has constructed several cart sprayers, and during the months of June and July (at a time, by the way, when the men in his employ are apt to be out of work) he sprays trees on the grounds of private individuals and along the streets in front of their grounds, under contract, at so much per tree, guaranteeing to keep the trees in fair condition during the season. His work has been directed solely against the elm leaf-beetle, since that is the only insect of great importance in Bridgeport. In the month of July last the writer, in driving through the streets of Bridgeport, found it easy to pick out the trees which had been placed in Mr. Bullard's care. Such elms were green, while all others were

back. The stem is from two to six feet high, and the plant in good soil, under a little neglect, becomes very troublesome. It is an annual and bears a great quantity of seed; therefore, to control it, it should not be allowed to seed anywhere.

Bracted Plantain (Plantago aristata), this weed was discovered on the college grounds this summer limited to about 2 dozen plants in a small section where bluegrass and clover were sown two years ago. Being reported to Prof. L. H. Dewey, of the department of agriculture, at Washington, D. C., he replied that it was the first notice of this plant in Pennsylvania. It has since been reported from Easton and West Bethlehem, Pa. It belongs to the Mississippi valley, but in 1894 Prof. Dewey states it appeared in abundance in meadows, pastures and lawns in many localities from Maryland to Illinois. The weed resembles the Buckhorn or Ribgrass (Plantago lanceolata), the most noticeable difference being in the inflorescence, in which the bracts are one-fourth to one-half inch long and extend from the spike of flowers at right angles. The leaves also are narrow and grasslike, therefore the plant will usually escape detection until the flowers appear. It is likely to be disseminated in clover seed, and according to its behavior in some places it may become as troublesome as the Ribgrass. When the plants are few they should be pulled by hand and burned.

Geo. C. Butz, Horticulturist, Penn. Experiment Station.

Nature of Foul Brood.

It was at one time supposed that only the brood or larvae were attacked by the disease, hence the name "foul brood," says a writer in Farm and Home, of England. But Hilbert's investigations in 1875 enabled him to state that it was not only a disease of the brood, but that the mature bees—sometimes including the queen—were

and badly nourished are attacked and become centers of infection to others. So rapidly does the disease spread by contagion, that in one season, unless precautions are taken, a whole neighborhood may become affected in a short time. Combs which contain foul brood retain the spores. The queen lays eggs in the cells and the workers deposit their honey and pollen in them. Both honey and pollen in this way become vehicles for the transport of the disease to the larvae in the process of feeding them by the nurse bees. The workers in endeavoring to clean the combs scatter the spores, which may also be driven out of the hive by the current of air produced by the fanners at the entrance in their endeavor to rid the dwelling of the foul odors. As colonies become weak bees from healthy hives rob them and thus carry off the germs of disease along with their ill-gotten gains. Bees in straw skeps often die without the owners knowing why, and as these skeps are frequently allowed to remain on the swarm the result may be imagined. Formerly, when few bees were kept, and these in the same garden, and swarms seldom sold out of the neighborhood, it was possible to keep foul brood within the bounds by destroying the bees. Now, however, the facilities for its propagation are greatly increased by the large traffic there is in bees. The beekeeper even may himself be a cause of spreading the pest by indiscriminately manipulating first diseased and then healthy hives without taking proper precautions to disinfect himself or his appliances.

Root Killing of Fruit Trees.

Rural Life says: Last winter young apple trees in nursery and orchard were root-killed to an unusual extent. Hence we have a number of queries as to the cause from north Iowa and Wisconsin. Some of the queries are: 1. Are some varieties more subject to root killing than others?

A LIGHT ON PHARAOH.

THE CONDITION OF HIS KINGDOM ON HIS ACCESSION.

He Set About to Build Up His Power—A Great Battle in Which 9,000 Prisoners Were Taken—Utter Defeat for Maury.

PROF. FLINDERS Petrie contributes to the Century for August an account of his discovery of a tablet which gives the first historic account of the oppression of the children of Israel. Concerning the character of "Pharaoh of the Hard Heart" Prof. Petrie writes as follows: A melancholy prospect he had seen as he grew up. His father had been active in the earlier years of the reign; but after about twenty years he ceased all personal labor and seems to have sunk in his fatuous pride into a mere despot, devoted to perpetuating his effigies on the monuments and his family in the harem. The kingdom went steadily into decay year after year, and the old man became more indolent and more fatuous, while none of his sons seems to have been allowed to take up the reins and save the country. "Egypt is desolated and abandoned to invasion from all lands; the barbarians overrun its frontier, the revolvers invade it daily, every country is pillaging its cities, raiding its dwellings in the fields and on the river. They abide and settle there for days and months, seated in the land; they reach the hills of middle Egypt. . . . They search for the corn land, seeking to fill their bellies; they come to Egypt to find provision for their mouths."

Such is the melancholy picture drawn by Merenptah of the state of the country on his accession—a striking contrast to the work of the really great kings of Egypt, of the Amenhotep and Thothmes line, who had handed on the rule of Syria from father to son unbroken. The continuous record that we have of Thothmes III shows that every year regularly he went through Syria to receive tribute young princes to be educated in and maintain his power, taking all the Egypt before they came to act as vassals in their own country. Until he was over 50 this annual outing was kept up and his children to the third and fourth generation received this dominion in peaceful succession. But under Rameses all this stability had vanished; a few raids which did not cover half the previous conquests of Syria, a treaty on equal terms with the foe and the boastful king sunk into an inglorious lethargy, in which even Egypt itself was largely given up to the foreigners. And this decay was what had eaten into the soul of Merenptah during all his youth and vigor; until he was at least 40 nothing could be done by him. It was not until the old king had come to that condition which we can now see before our eyes in the Cairo museum—a withered mummy, which seems as if still dwelt in and half alive with the spirit of insensate pride—it was not until the evil genius of the land was in his tomb that a stroke could be struck for the freedom of the country.

WORSE THAN INDIANS.

Old Westerner Would Rather Face the Redskins Than Live in a City.

"So you were a pioneer in the early days of the west?" "I was," answered the graybeard. "You lived among the hostile Indians?" "Yes."

"Lived with a rifle in your hands and in hourly expectation of being the mark for a hidden enemy's bullet?" "It was something like that."

"Do you know, I often think that a life that must be terrible. I should think the mere strain on the nerves would kill a man in a short time—holding your life in your hand all the time, always conscious that a moment's relaxation of vigilance may mean death."

"Oh, I don't know," replied the graybeard. "When I came back from the west I was 60 years old and did not have a gray hair. I got off the railroad train and started to walk across the street. Half way over I heard the ding-dong clanging and yelling right at my heels I ever heard and somebody gave me a push that sent me clear to the curb. Then, when I looked around, I saw I'd come within an ace of being run over by a trolley. Never had so narrow an escape from Indians."

"I went into a saloon close by to get a drink and settle my nerves. While I was standing at the bar a couple of fellows got into a scrap and one of them threw a heavy beer mug. Didn't hit the other fellow, but it came within a sixteenth of an inch of my right temple."

"I started to walk up town and the first crossing I came to a policeman grabbed me by the shoulder and jerked me across so quick it made my head swim. I looked to see what was the matter, for there was no car tracks on the street, and I saw I had just escaped being run down by a hackman hurrying to catch a train."

"Up street a little further somebody yelled: 'Look out!' at me, and when I jumped a big icicle fell and struck where I had been standing."

"I got to my hotel and was heading for the door when somebody grabbed me and asked me if I wanted to be killed. They were hoisting a safe into a second-story window over where I had been trying to go and I hadn't more than got out of the way before a rope broke and it dropped."

"I went to bed and about midnight I was called up by a bell ringing over my head and found the place was on fire, and I had to slide down a rope to escape. Being a sound sleeper, they'd had hard work to wake me, and I had barely touched the ground when the roof fell in."

"When I looked in the glass I saw the first streaks of gray that had ever showed themselves in my hair. Oh, there's dangers in civilized life as well as out on the plains!"—Buffalo Express.

"GOOD MORNING, GENTLEMEN."

Reed's Astonishing Politeness Made the Ladies Wonder.

General credence is not given to the story of the remark attributed to George Washington that he "would not be outdone in politeness by a negro," says the Philadelphia Sun. Nevertheless, it is a story that goes, and it evidently has been taken to heart by Mr. Thomas B. Reed. One day last week Mr. Reed was sauntering along a fashionable uptown street during calling hours while ladies were alighting in droves from their carriages. Two colored brothers, decidedly the worse looking for wear, and belonging to the faction which, by casting from ten to twenty-five votes apiece, recently secured the election of a Reed delegate from this district to the national republican convention, were hanging around, watching the scene. As Mr. Reed was passing they tugged at the battered remnants of hats surrounding their pates and said: "How do, Mr. Speaker." Instantly the hand of the speaker was elevated, his hat was removed clean from his head, his body was bent forward in a bow, deep and profound, and the habitual cynical smile which plays around his lips melted into one of extreme cordiality as he replied: "Good morning, gentlemen." And the ladies looked on and wondered.

An Ancient Castle.

Part of Dunvegan castle, Skye, the ancestral home of the Macleods, dates from the ninth century and it is believed to be the oldest inhabited house in the country—private residence, of course, we mean. The castle is a fine old pile, built on a promontory at the head of Loch Follart, and must have been a place of great strength in the days when the Macleods and McDonalds were at constant warfare. One of its cherished treasures is the Fairy Flag, the palladium of the house of Macleod. Legend invests it with marvelous qualities. Three times only, however, could the virtues of the flag be utilized. Twice, we are told, it has been unfurled with magical results. Its last reserve of power must be employed if the clan is "ever on the verge of utter extinction," and of such a calamity the contingency seems far removed.—London Society.

Saved by His Wit.

Dr. Brown, of St. Louis was walking home late one night, when he was accosted by a footpad. "Give me your money," said the thief. As quick as thought the Doctor turned, and, in offended tone, said: "What are you doing over here? Go on the other side of the street. I'm working this side myself."

Thought He Had.

"I believe," said the pastor, solicitously, as he took the depraved scold by the hand, "that the devil has hold of you."

"I shouldn't be a durned bit surprised," said the urchin, eyeing the minister suspiciously.—Washington Times.

THE SUNDAY SCHOOL.

LESSON VI. SUNDAY NOV. 8—THE TEMPLE DEDICATED.

Golden Text: "The Lord is in His Holy Temple. Let All the Earth Keep Silence Before Him."—Hab. 2:20—God Dwelling with Men.

The beginning of this lesson we can continue our study of the Temple—its courts for worship, and its furnishings which were to be the aid to each one has a practical application. Then we can study the dedication service, the great assembly. Solomon's prayer, and God's answer. And lastly we may consider what the Temple was to do for the people of Israel. All these things are overflowing with instruction for our times, as honey overflows from the comb.

The section includes 1 Kings 8: 1-6 and 9: 1-9; and the parallel account in 2 Chronicles, chaps. 5, 6, and 7.

Time.—The Temple was completed in the month of October (November), B. C. 1005, in the eleventh year of Solomon's reign, having been seven and one half years in building. The dedication took place one month earlier, in Editham (October) (September-October), at the great national festival of the Tabernacles, probably about the first of October. Stanley and Geikie think the time was the October following the completion in October of the previous year; but Dr. Hammond, in the Pulpit Commentary, argues conclusively that it was the festival before the entire completion of the Temple, for the date of dedication would have to be announced some time before, and the building almost always overrun the time set. It was practically finished by the Feast of Tabernacles, and there was every reason why the dedication should take place as soon as possible. Place. Jerusalem, at the Temple.

The text of today's lesson, with explanatory notes, follows: Solomon's Benediction.—Vs. 5-6. After his prayer Solomon stood again before the people and expressed his good desires for them. It was a sermon and a prayer united. It was a high ideal set before the people ever to be remembered as that toward which they should strive.

5. "Blessed be the Lord, that hath given rest unto His people Israel, according to all that He promised: a distinct reference to Deuteronomy 12: 9, 10 (cf. 2: 20), where we read that when the Lord should have given rest to Israel, then a place for sacrifice, etc., should be appointed (v. 11). "Promised by the hand of Moses." The rest referred to above: peace, prosperity, victory over enemies, the presence of God (Lev. 26: 3-13; Deut. 28: 1-14); and the whole extent of territory promised in Joshua 1: 3, 4; see 2 Chronicles 9: 26. In no place is there such assurance and experience of promises fulfilled as in the house of God.

6. "The Lord our God be with us, as he was with our fathers." The visible proof of this was in the glory which then filled the Temple as it had in former days filled the tabernacle. God's presence includes all other blessings, for he is the source of all, and in God's house is the special manifestation of his presence.

8. "That he may incline our hearts." God is the "source of all life and action, physical and spiritual, and of that freedom of responsibility of man which is the ultimate truth of the inner human consciousness. God 'inclines the heart' and yet the heart must yield itself.—Ellicott. We need continued help "to will" as "to do" of God's good pleasure (Phil. 2: 13). This help specially comes to us in the services of God's house; and the influence of the church and its services is measureless toward helping men "to walk in all his ways, and to keep his statutes." A revival of true religion is always a revival of morality; and there is no time when it is so easy and so natural to do right as when under strong religious influences. "His judgments." His decisions as to what is right in his law.

10. "Let these my words": the words of his prayer in the previous portion of this chapter. "Be nigh unto the Lord": be a perpetual prayer, always heard and answered. "That he maintain the covenant of his servant": guide him, protect him, watch over him.

11. "That all the people of the earth may know." Israel was not made and kept a people of God for their own sake alone, but as the best of God's work, the true God to all nations. Their prosperity and wealth, their victories, the wisdom and glory of their king were all as a bill on which the knowledge of the true God was placed that it might be seen far and wide. Every living and growing religion, whether in the individual heart or in the church, is a missionary religion. The house of God is the source of missionary impulse.

Solomon's marvelous wisdom, and countless wealth, and wide extent of freedom were given him, not for himself alone, but as an instrumentality for making known the true God and the true religion, as a high mountain on which the altar fires of Jehovah, burning brightly, could be seen by the world lying in darkness. This privilege was the noblest gift of all. Had he continued to use it aright, his missionary activity would have kept him from falling and the glory would have remained to him and to his successors.

12. "Let your heart therefore be perfect with the Lord." Although Solomon was better at preaching than at practicing his own precepts (1 Kings 11: 2), yet in his wisdom he saw clearly that every good he had hoped for his people depended on sincere, heart-deep obedience and love. The more true religion in the nation, the more of every good. God cannot give to a disobedient people the blessings of obedience. "As at this day." He hoped they would not backslide from the feelings and resolves they were making under these powerful religious influences.

13. The Answer to the Prayer.—See 2 Chronicles 7: 1-22; 1 Kings 2: 1-9. As the king concluded, the cloud which had rested over the Holy of Holies grew brighter and more dazzling.

14. The Festival.—Vs. 22, 23. The Feast of Tabernacles was held as usual for seven days; but in this case the festival continued for fourteen days, seven before the feast, and the seven of the feast, with two additional days, for the people were not dismissed till the twenty-third day (1 Kings 7: 22, 23; 2 Chron. 7: 2, 3). These were peace offerings, and were mostly eaten by the people. The vast number of people required a large amount of food. See on lesson 11, of this quarter.

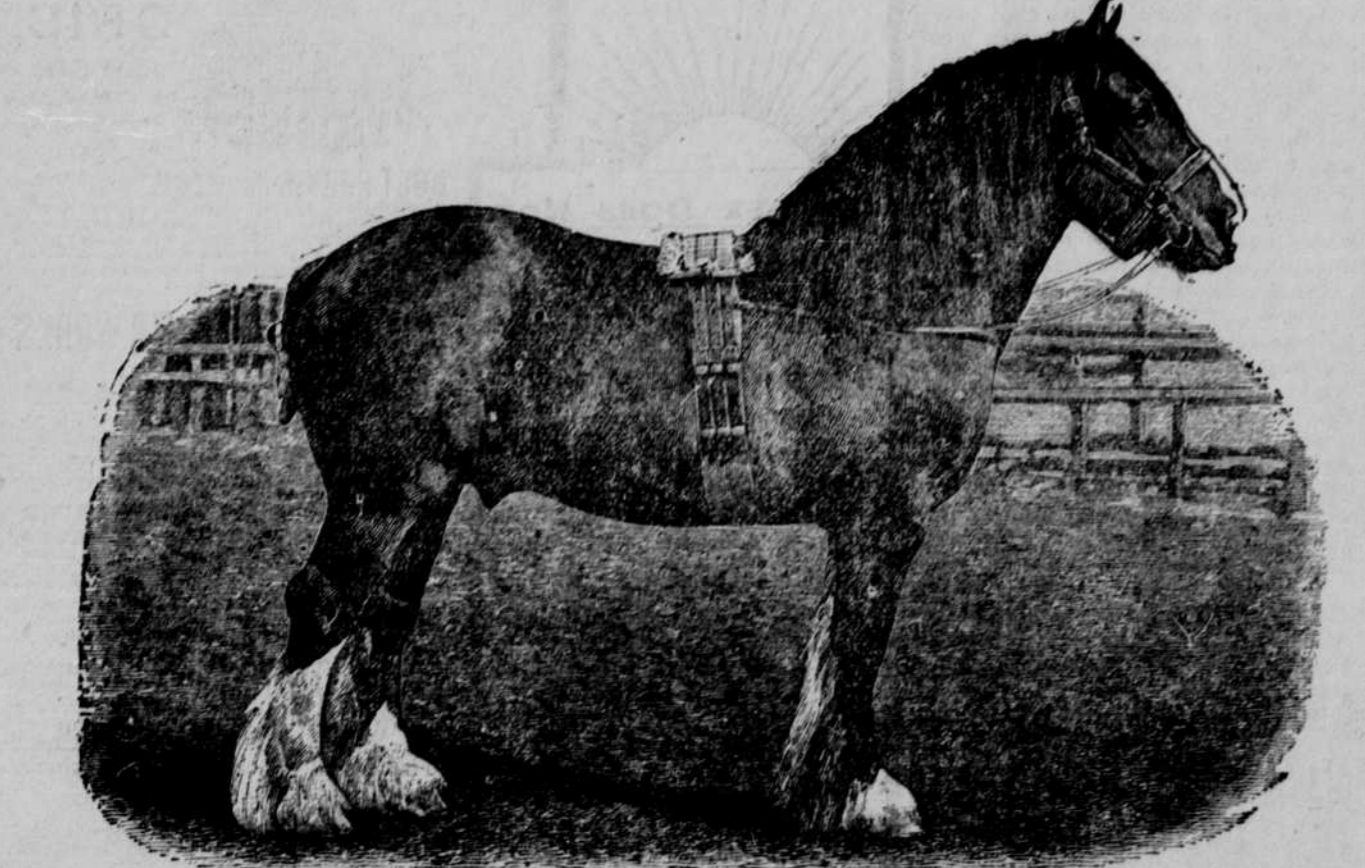
NOTES OF THE DAY.

In Germany every inn has its rooms set apart for dancing, and nearly every village its dancing club.

In making champagne the grapes are squeezed six times, each pressure making wine of different quality.

It is stated that in Belgium alone there are at the present time 600,000 splendidly trained racing pigeons.

A conscientious registrar of births and deaths at St. Ives, England, recently certified to the death of an infant aged 1 minute.



CLYDESDALE STALLION PRINCE OF CARRUCHAN.

brown and nearly leafless. The defect of this plan as a general practice lies in the fact that not all property owners or residents can afford to employ a tree sprayer, while others are unwilling, since they deem it the business of the city authorities or do not appreciate the value of tree shade.

Co-operative Effort.—Any effort, therefore, looking toward the arousing of popular sentiment or the banding together of the citizens in the interest of good shade is desirable. A most excellent plan was urged by one of the Washington newspapers the past summer. It advocated a tree protection league, and each issue of the paper through the summer months contained a coupon which recited briefly the desirability of protecting shade trees against the ravages of insects, and enrolled the signer as a member of the league, pledging him to do his best to destroy the injurious insects upon the city shade trees immediately adjoining his residence. This was only one of several ways which might be devised to arouse general interest. The average city householder seldom has more than half a dozen street shade trees in front of his grounds, and it would be a matter of comparatively little expense and trouble for any family to keep these trees in fair condition. It needs only a little intelligent work at the proper time. It means the burning of the webs of the elm webworm in May and June; it means the destruction of the larvae of the elm leaf-beetle about the bases of the elm trees in late June and July; it means the picking-off and destruction of the eggs of the tussock moth and the bags of the bag worm in winter, and equally simple operations for other insects, should they become especially injurious. What a man will do for the shade and ornamental trees in his own garden he should be willing to do for the shade trees ten feet in front of his fence.

New Weeds in Pennsylvania.

Frickly lettuce (Lactuca scariola), this plant has recently attracted the attention of many farmers and gardeners and seems to be spreading rapidly into regions where it had not formerly been known. It is an European species, recorded as being in America as early as 1868. It is closely related to the common garden lettuce, and resembles it very much when in seed. The leaves are long and narrow, clasping the stem with an auricled base; they are prickly along the margins and midrib on the

liable to be affected by it. In consequence of this the disease is sometimes called "bee pest."

In a healthy hive the brood in the combs lies in compact masses, and the larvae are plump, of a pearly whiteness, and when quite young lie curled up at the bottom of the cells, much in the form of a C. When a hive is attacked and the disease begins to develop, the affected larvae commence to move unnaturally; instead of lying curled up and being plump in appearance it becomes extended horizontally in the cell and has a flabby aspect, which indicates death. The beautiful pearly whiteness of the healthy larvae now changes to a pale yellow color, afterward turning to brown; then the dead larva begins to decompose. Although bees remove ordinary chilled or dead brood from the hive they do not usually attempt to carry out that which has died from disease, except under conditions which we shall presently mention. As a consequence the decomposing larvae eventually shrivel up and nothing remains but a dry, brown scale, which adheres to the side of the cell. We would here note that chilled brood should not be mistaken—as it very frequently is—for foul brood. In the former the dead larva turns first gray and afterwards become nearly black (never brown, as with foul brood). The dead larvae are also generally removed by the bees. When the larvae die after the cells have been capped over, cells here and there will be found with cappings indented and darker than those of healthy brood. The cappings, too, are frequently perforated with irregular holes. On removing the capping from a cell and inserting the end of a match the latter, on withdrawal, will have adhering to it as a putrid, rosy, tenacious, coffee-colored mass, all that remains of the dead larva, often (but not always) emitting a most disagreeable stench. Eventually this mass dries up, and nothing but a dark brown scale remains. Later on the bees become inactive, to a great extent losing their desire to fly abroad and numbers will be seen fanning at the hive mouth, from which in very bad cases the disagreeable odor mentioned is emitted, the smell in extreme cases being noticeable at some distance from the hive. Although many theories have been advanced the causes of the disease are not yet quite known. Experience has, however, plainly shown that with foul brood—as in all epidemic diseases—the weak, sickly

2. Would a crop of oats, rye, buckwheat, or clover have prevented the root killing last winter?

3. Would watering the nursery liberally late in autumn prevent root killing?

4. If a partially root-killed tree survives will it ever make a satisfactory tree?

5. Will the roots and trunk of such a tree necessarily become black-hearted?

1. All varieties are subject to root killing if on tender roots too near the surface.

2. A crop of buckwheat sown in nursery or young orchard is a great advantage. A few years ago trees in nursery generally root-killed during a dry, open winter. Ours wholly escaped for the reason—we assumed—that the surface was covered with a rank growth of buckwheat.

3. Not in all cases. We have known the seedling roots to be killed below the graft in open winters when the water level was far higher than has recently been known, and when the surface of the earth was quite moist when winter set in.

4. Yes. In cases where the scion takes root truly hardy sorts will make good trees when every particle of the seedling root is killed.

5. No. Where roots are thrown out from the scion the tree will be perfect. But the tree wholly dependent on the seedling root will, if it survives, feebly have a black-hearted stem.

Specimen Plants.—These should all be housed now, as nothing will be gained by keeping them outside, says American Garden. We prefer to grow specimens inside, because out-of-doors it is hardly possible to keep the foliage in good condition, owing to heavy rains and insect pests. As the nights are cool now, growth will be rapid, therefore have sufficient stakes in the pots to keep the plants in proper form, and to secure them from breaking. Different methods are used for the final tying out of the plants; we prefer wire frames to wooden stakes. Taking the buds is now in order; on specimens I retain all the crown buds I can get to form in September, as they seem to make the finest blossoms. In feeding, change the manure every week.

In consequence of the tick plague there are no milk-yielding cows in Townsville, North Queensland, and only tinned milk is used.