

Science

VI. Feb. 9, 1919.

Commentary.—I. Jethro received by Moses (vs. 1-22). 1-11. Jethro, Moses' father-in-law, the priest of Midian, was also called Hobab, Reuel and Raguai. He honored the true God (v. 10). He heard of the great displays of divine power in behalf of the Israelites, whose visible leader was Moses, and he came to Sinai to visit his son-in-law, bringing Moses' wife and two sons with him. As Jethro approached the camp of Israel, Moses went out to meet him and greeted him with the warmest of Oriental friendships and ceremonies. He told him of the marvelous deliverance of the Lord for him and his people, and also of the difficulties he had met in his great work. Jethro gave thanks to God for what He had done for Moses and his people, and declared the superiority of the God of Israel over all other gods.

12. Father-in-law.—This term is applied also to other relatives by marriage. Took a burnt offering.—Jethro offered sacrifices to the true God, and Aaron and the elders of Israel joined Moses in a feast in honor of his father-in-law.

II. Jethro's counsel (vs. 13-23). 13. Moses set to judge the people.—As he was leader of Israel, it was natural and proper that difficulties arising between individuals should be brought to him for adjustment, and he assumed this burden unhesitatingly. The cases to be settled were so numerous that much time was required to complete the work, and some of the people had to wait long for their turn to come. 14. Why sittest thou thyself alone.—Jethro's keen mind grasped the situation at once and saw a better plan for dealing with the Israelites' difficulties than the one Moses was following. His question suggests the course that he would recommend. He could see a way to relieve Moses of much labor and care and to relieve the people also. 15. Because the people come unto me.—This appeared to Moses to be a sufficient reason for his spending his time in meeting their demands. 16. I do make them know the statutes of God.—Moses was doing a great work in teaching his people the laws of God and his will concerning them, and he felt his responsibility. 17. The thing that thou doest is not good.—Jethro makes bold to criticize Moses' course, not because Moses was not doing his work well, but because his self-imposed task was too arduous. 18. Thou wilt surely wear away.—This people—Moses would wear himself out in trying to meet all the demands of the people, and the people would become wearied with waiting. 19. Hearken now.—God should or desire of interfering with God's plan, but he wished to suggest a way in which God's design could be better carried out. For the people to God-ward.—Moses would stand between God and the people, receiving communications from him for them. Thou shalt teach them.—Moses would give his chief attention to instructing the people. He had been going in the past, but being relieved of the important details in judging, he could give more attention to teaching the people "the work that they must do." 21. Provide out of all the people.—There were those among the Israelites to whom could safely and wisely be entrusted duties which had been performed by Moses himself. The language indicates that great care should be exercised in the selection of the men and their qualifications are specified. Able men.—They were to be capable men, worthy men. The expression implies moral and physical efficiency, rather than intellect, intellectual ability, it is required (Ruth 3; 11; Prov. 12; 4); and often "valiant" (1 Sam. 14; 52); "Shah as fear God.—Men who not only believe in God in an intellectual way, but are devoted to Him and His service, men of truth.—The men to be placed in the position of judges must have high regard for truth. They must tell the truth themselves and insist on truthfulness in others. Having no covetousness.—Hating unjust gain.—R. V. No one who would accept of a bribe should be entrusted with the duty of passing judgment in any case. He should be one that despise the gain of evil, that shakeeth his hands from the holding of bribes" (Isa. 33; 15). Rulers, Chiefs, princes, overseers, thousands, hundreds, etc.—This minute classification of the people is thoroughly in accordance with the Semitic character, and was retained in later ages. The numbers appear to be conventional, corresponding nearly, but not exactly, to the military or civil divisions of the people.—Speaker's Com. 22. Let them judge the people.—The principle of delegation in the Lord's work is strongly set forth. Here was an organization suggested to meet the many demands made by the people. Class could receive attention promptly.—Every great matter, unto thee.—As was proper cases of importance were to be referred to Moses. 23. And God commanded thee so.—Jethro and God command thee so.—Jethro was careful to suggest that his plan should receive consideration only as it might be consistent with God's will. He was able to endure.—Thus relieved, Moses could bear the strain that would come upon him as Israel's leader.

III. The counsel heeded (vs. 24-27). 24. Moses hearkened.—Moses recognized the soundness of Jethro's advice and was satisfied that it was in harmony with the divine will, hence he put the plan into immediate operation. 25. Moses' capable leadership that he knew men and was able to select men suitable for the tasks to be performed. He made his selection from "all Israel" and doubtless secured the very best for this service. 26. At all seasons.—The matters that came up for settlement were promptly adjusted. Hard cases they brought unto Moses.—Moses had direct communication with God and the cases that were brought to him were judged judiciously.

Questions.—Who was Jethro? By

what other names was he known? Who did he bring to Moses? How was he received? What was his attitude toward the true God? What did he see Moses doing? What question did he ask Moses? What counsel did Jethro give Moses? What kind of men did he counsel Moses to choose? What was the result?

PRACTICAL SURVEY.

Topic.—Co-operation in the Work of the Kingdom.

I. Wise counsel accepted.

II. Responsibility shared.

III. Co-operation essential.

The training of the chosen nation for its high destiny was a gigantic task. A people divinely directed and delivered, and miraculously sustained should have displayed increased faith in God and fortitude in difficulty. The murmurings of Meribah mingle with the echoes of Miriam's song of triumph and mark their slow progress. The era in national discipline and doomed himself to extinction. In the lesson we have

I. Wise counsel accepted. The defeat of Amalek was followed closely by the visit of Jethro, the priest of Midian and father-in-law of Moses. The greatness of the latter is expressed in the readiness with which he accepted the counsel of his Gentile kinsman. Himself divinely commissioned and instructed, he did not scorn advice from humbler sources or neglect the warning against the squandering of resources which eighty years had left undiminished. He was supreme judge in Israel and upon him rested the whole weight of judicial administration. The task was too great both for himself and for the people and occasioned delay as well. "The people stood by Moses from the morning unto the evening." He was not to vacate the judicial office, but to distribute its responsibilities, reserving to himself its highest exercises, and higher duties pertaining to its moral and spiritual aspects rather than the legal.

II. Responsibility shared. The result of Jethro's counsel was a system of jurisprudence which insured equity and lightened the burden of administration both for Moses and the people. The wisest administrator in church or state is he who most readily recognizes and effectively employs the abilities of subordinates. Not only did the new order lessen the burden, but inspired the nation with fresh life and vigor. The pulsation was felt everywhere. New interest was awakened and the people elevated. All the talent in the church should be enlisted by wise and discriminating leadership. This is inseparable from true and permanent progress. There, if everywhere buried talents, which, if evoked, would become effective agencies for righteousness. Genius may assert itself and clear a space for its exercise, but it is equally true that sound ability lies dormant because it is not called into responsible exercise. "When Saul saw any strong man, or any valiant man, he took him unto himself" (1 Sam. 14:52). Every person in the church should be actively engaged.

III. Co-operation essential. To cooperate means to work together, to associate in mutual effort for one end. It is not doing the same thing, but different things with one purpose. No man can succeed alone. The variety of endowment indicates the design. "The weakest has a gift that every other needs." Moses was to remain the living link between God and the people. "Be thou for the people to God-ward," and in this relation be wrought most effectively with as well as for the nation. Christians are workers together with God.—W.H.C.

Warts will render the prettiest hands, unsightly. Clear the excrescences away by using Holloway's Corn Cure, which acts thoroughly and painlessly.

FARM GARDEN

THE CATTLE SITUATION.

The Toronto Live Stock Exchange, compound of members exclusively interested in the buying and selling of live stock, wish to set before the producers of live stock the following facts:

1.—The close of the war, instead of diminishing, will greatly increase the demand for food, and particularly for meat. It is already evident that the chief reason for the capitulation of the Central Powers was that they had not food to go along with.

2.—The products of the Canadian farms are cereals and food animals. At the present time, the demand for both is unlimited. The first demand is for cereals. All the world can immediately set itself to the raising of cereals. One crop will greatly ameliorate the famine; two crops will probably restore wheat reserves to normal.

In regard to live stock, this is not the case. The building up of cattle herds, particularly involves a programme of years. Even if the foundation stock and the fodder were immediately available in Europe, the cattle herds could not be restored in less than five or six years, but all European countries—combatants and neutrals alike—are stripped both of live stock and of fodder. An unlimited demand will exist for years, both for breeding stock and for meats.

3.—The situation is therefore as follows:

Prices of grains will probably decline on a scale which will restore them to normal in 2 or 3 years.

Prices of live stock will decline on a much slower scale. Normal prices will probably not be restored for 10 years.

During these 10 years, the advantage to the farmer of marketing his grain through the medium of live stock will be greater than at any previous time in a generation.

4.—Farmers of Canada will not be able to take advantage of this situation unless they have the Live Stock to sell. They can place themselves in this position only by keeping their breeding stock this fall. Therefore, farmers, keep your cows and your sows. Every breeding female held over this fall will bring rich dividends in the years to come. If Canada produced 10 times her present supplies of cattle and hogs, there would be a profitable market for them all.

5.—In regard to feeders for the present, it seems now as certain as anything can be that there will be a profit in the feeding deal this season. We unhesitatingly recommend farmers to tie up as many cattle as they can feed.

ACTION OF PLANT FOODS.

In considering the part played by the plant foods, nitrogen, potash and phosphoric acid in the growth of the plant, it must be kept in mind that all the elements working together are essential to maximum crop production and that even when these are present the results obtained by their use are often very materially affected by cultural and climatic conditions.

It is generally conceded, however, that:

Nitrogen exerts its greatest influence on the amount of foliage, the flowering process, maturing, color, growth, quality and disease resisting power of the plant.

Potash is apparently essential to the formation and transference of starch and other carbohydrates, has an important part in the development of leaves and woody parts of stems, stiffens the stem, stalk and straw, assists in the development of the fleshy parts of fruits and makes the plants more resistant to the attacks of fungous diseases.

Lack of potash results in weak plants, while excessive amounts delay the maturing of the crop.

Phosphoric acid in available form favors rapid development of the young plant, hastens maturity, increases the proportion of grain to straw, assists in developing the grain and is necessary to the development of protoplasm without which there could be no plant growth.—Purdue Experiment Station.

SOIL ELEMENT DEFICIENCY.

This is the age of scientific farming. The farmer who proceeds scientifically keeps his soil built up to its maximum productivity. To do this he must know the cause for deterioration, what the soil contains and what it lacks, and what crop they are by nature best suited for. Below are given some general principles that will do well to remember.

Clay Soils are generally deficient in nitrogen and phosphorus, but contain potassium. The tendency is for clay soils to bake and get hard, and the addition of a little lime is calculated to correct this.

Black Soils are strong in nitrogen, but sometimes short of phosphorus and potassium. Such soils usually need drainage.

Sandy Soils are generally deficient in potassium. Roughly speaking they are short on all the soil elements. Here is another case where lime will prove a sweetener and will help to retain moisture.

PLANTS THAT POISON STOCK.

It is impossible to say with exactitude how much damage results from cattle and live stock generally eating poisonous plants. It is, however, certain that the waste thus caused amounts to serious proportions annually. Cattle, sheep and swine are taken ill, and frequently die from trouble attributable to the consumption of poisonous plants when other things are supposed to have been the cause. If it were the custom in all cases of this kind to call in a veterinary surgeon to investigate it would be discovered in many instances that the consumption of poisonous plants was at the foundation. Some of these plants are common to every province of the Dominion, others are only to be found in sections of the country. The Agricultural Gazette of Canada in the September and October numbers deals with this matter in a very lucid way, and supplies accounts of the most troublesome of these weeds in seven out of the nine provinces.

In Ontario it would seem that there are only two poisonous weeds that cause farmers serious trouble. These are spotted cowbane or water hemlock (*Delphinium maculatum*) and the common horsetail. Both these plants are found in low places, or in sandy land which has a poorly drained subsoil, the cowbane being especially poisonous to cattle and the horsetail to horses. There are other poisonous plants found in the province, such as sneezeweed, sheep sorrel, lambskill, stinging willie, and purple or corn cockle. The last-named is hurtful particularly to young chickens.

NOTES.

Some farmers seem to think that a colt will make up as a horse the growth that it does not take as a colt. As a matter of fact, a cold or any other young animal, that is not kept growing, is very likely never to become as hard and strong as it would have been had it arrived then young. The colt should receive the proper kind of feed and be fed liberally. The feed should be nutritious and palatable. Among the best cold foods is fresh pasture grass. This should be supplemented with timothy, corn, oats, bran, alfalfa or clover hay.

Where it is possible to do so, the colts should be kept in the stable away from flies during the day, given all the alfalfa or clover hay they will eat, and one pound of the following grain mixture to each 100 pounds of colts: Six pounds of oats or corn, three pounds of bran and one pound of cottonseed meal.

The condition of the sow has more to do with the proper care of her litter than the size. With the large sow there is a promise in her appearance that she is equal to her demands. The smaller she is, the more likely she is to grow fat, and then if she proves to be a good breeder and mother, keep her as long as she does her work faithfully and well.

The value of cabbage leaves as fertilizer is doubtful. They contain nearly 90 per cent. of water, so that even if all the dry matter had fertilizing value, the quantity ordinarily so small as to be of minor importance. In any case, the refuse should be plowed under on fields designed for the culture of crops other than cabbage or its relatives.

Frequently horses are taken off pasture and put into the rush season and expected to do as much work as horses that have been on a grain ration and worked regularly all summer. It is not logical to expect such results, and it should be remembered that enough feed to supply the required energy is necessary if results are expected.

the digestion and speed up the machinery of the body generally. As well as its positive value, the walk has a negative one, in that it keeps the walker cool by the open air, instead of being heated with the heat of hundreds of others in a confined space.

Another of the townsmen's bad habits is that of keeping windows shut but this does show signs of abating the last few years. The windows of all offices, living-rooms and sleeping rooms should be open at least part way during the whole of the year and in all weathers. It is easy to arrange for ventilation without draughts, and it is most essential to good health.

Walking home from work is only really advisable where the day's employment is absolutely sedentary. When the body, as well as the mind, is fatigued, it is often more harmful than good to put a further strain on it at the end of the day. It is almost always good, however, to take a short walk in the late evenings, after food and rest, to ensure a good and peaceful night's sleep, coming back to bed in an airy, well-ventilated bedroom. The countryman scores over his town cousin by being forced to take his fresh air and exercise whenever he goes from place to place. He has none of the facilities for physical idleness which surround the townsmen, when he goes anywhere he must walk, ride or drive. When he opens his windows he fills his room with clean fresh, scented air, full of the smells of trees, earth and plants instead of petrol, fried fish, street dust and smuts. Often his day's work is itself in the open air and of a healthy kind, and he goes home at night physically tired but with all his bodily faculties in perfect condition. He sleeps well and digests well, and "nerves," those errors of the townsmen, are unknown to him.

COLD FEET AND HANDS.

Coldness of the feet and hands is a very common trouble in the winter months, and though it is unusually rare to be done to remedy it, and to prevent the chilblains which frequently arise from it.

The first step to be taken is to procure warm gloves, fully lined, and preferably made in two layers, an outer of kid or leather to keep out the wind, and an inner of wool or fur to provide a layer of warm air to surround the hand. The same conditions are then provided for the feet by wearing roomy and well-fitting boots or shoes, which while leaving plenty of room for a loosely knitted thick woolen stocking yet do not rub and chafe through undue looseness. It is a mixture of pressure and friction that produces chilblains, and both should be avoided. Nothing tight should be worn round the limbs; no tight cuffs or garters or elastic knickerbocker knees. Nothing that can impede the free circulation of the blood must be worn. At least twice a day some sort of really active exercise should be taken, such as half a quarter of an hour's Swedish exercise, a vigorous step-dance, ten minutes' skipping or some such thing. The sufferer should never sit still for long stretches of time, but if his work is sedentary he should break it by a few minutes' exercise every hour or so.

Complete in Itself, Mother Graves' Worm Exterminator does not require the assistance of any other medicine to make it effective. It does not fail to do its work.

MARKET REPORTS

TORONTO MARKETS

FARMERS' MARKET.

Butter, creamery	21 00
Do, country	19 00
Do, extra	18 00
Do, best	17 00
Do, medium	16 00
Do, low	15 00
Do, poorest	14 00
Do, extra	13 00
Do, best	12 00
Do, medium	11 00
Do, low	10 00
Do, poorest	9 00

MEATS WHOLESALE.

Beef, forequarters	18 00
Do, hindquarters	17 00
Carcase, choice	24 00
Do, medium	22 00
Do, common	20 00
Do, extra	18 00
Do, prime	16 00
Do, heavy	14 00
Do, light	12 00
Do, extra	10 00
Do, best	8 00
Do, medium	6 00
Do, low	4 00
Do, poorest	2 00

SUGAR MARKET.

White granulated	10 00
Do, extra	9 00
Do, medium	8 00
Do, low	7 00
Do, poorest	6 00

Toronto Cattle Markets.

Receipts: 1,022 cattle, 181 calves, 2,053 hogs and 161 sheep.

Export cattle, choice	14 00
Export cattle, medium	13 00
Export cattle, low	12 00
Butcher cattle, choice	10 00
Butcher cattle, medium	9 00
Butcher cattle, common	8 00
Butcher cows, choice	9 00
Butcher cows, medium	7 00
Butcher cows, canners	5 00
Butcher bulls	8 00
Feeding steers	9 00
Stockers, choice	8 00
Stockers, light	6 00
Milkers, choice	8 00
Milkers, light	6 00
Springers, choice	9 00
Springers, light	7 00
Sheep, ewes	8 00
Lamb, wethers	10 00
Lamb, yearlings	11 00
Hogs, f. o. b.	15 25

OTHER MARKETS

WINNIPEG GRAIN EXCHANGE.

Fluctuations on the Winnipeg Grain Exchange yesterday were as follows:—

Open	High	Low	Close	
Oats	0.65	0.66	0.64	0.65
Flax	3.00	3.02	2.97	2.99
Barley	0.82	0.82	0.80	0.80
Wheat	0.82	0.82	0.80	0.80

MINNEAPOLIS GRAIN.

Minneapolis, Minn.—Flour unchanged. Barley, 70 to 80¢. Rye, No. 2, \$1.50 to \$1.51. Bran, 35¢. Flax, \$2.25 to \$2.30.

DULUTH LINED.

Duluth-Lined on track, \$2.25; arrive, not quoted; January, \$2.21 bid; February, \$2.24 bid; May, \$2.22.

BUFFALO LIVE STOCK.

(Canadian Press Wire).

East Buffalo, Jan. 29.—Cattle receipts 300; slow.

Calves, receipts light; steady; \$ to \$17. Hogs, receipts 800; pigs steady; best 20 cents higher; heavy \$17.50 to \$18; mixed, \$17.75 to \$18; yorkers \$17.50 to \$18; light yorkers, \$16 to \$16.50; pigs, \$15.50 to \$16; throw-outs \$12 to \$15.50; stags \$10 to \$13.

Sheep and lambs, receipts 3,000; lambs 15 cents higher; others strong; lambs, \$11 to \$11.75; yearlings \$10 to \$11.50; wethers \$11 to \$12; ewes \$10 to \$11; mixed sheep, \$10.75 to \$11.50.

Exhausted from Asthma. Many who read these words know the terrible drain upon health and strength which comes in the train of asthmatic troubles. Many do not realize, however, that there is one true remedy which will surely stop this drain. Dr. J. D. Kellogg's Asthma Remedy is a wonderful check to this enervating ailment. It has a countless record of relief to its credit. It is sold almost everywhere.

Time for Bud to Go.

A couple of friends came to call, bringing with them a neighbor's pet collicle, who made great friends with Elizabeth, our little daughter. All went well till eight o'clock, when Elizabeth, greatly worried, exclaimed: "I think you had better take Bud home now; his parents will be getting worried over his being out so late."

The House of Illumination.

A visitor to an old English cathedral was told that up in the vaulted carving, there was a wonderful bit of carving, but that he had come at the wrong time of day to see it properly. Only at a certain hour of the morning did the light fall on it and reveal its beauty. Those early workers in stone were content that for the greater part of the time their work should remain hidden and unappreciated, and that it should only appear to the world at some rare moment of illumination.

Best Material for Splints.

Galvanized wire netting is claimed to be the best material for splints. It is strong, light in weight, non-absorbent, and gives free ventilation. The netting is made from wire which is dipped in a solution of zinc and then drawn through rollers. It is sold in various widths and is available in all hardware stores.

"That woman whose folks are not a fully, yet him yet, it was in Bon Thea "Why it took the but I'm s'knive. I'll swear didn't want man's nod was taken out his "But w Eugenie, "My de shrug, "he receiving, and puttin his coat o one who could have "But w "That's ought to a disdain idiot. I t mind y and yet a against h "No bo "Malton "Malton ing up. "None "He was hard up one me d bezzled a Then, aft and than did so. I doubt i, philanth one who ey was easily en saw Keit was Laza across his man with about pos Stewart know how fore Stew the crime notes, an session of it from E dear, ver paid him, doesn't so such a little pla I've made Malton, a of Naball said Kitt been a d Eugenie hurriedly if this rosted," "Then a said Kitt arrest an der half aren't in der. Oh, says the nuder "And y said Eugie "There the great "No, my murderer what am told me, "Maggie, son, dan a discrep "immunity "Yes," the bedst and tell "Mog is daughter Kitt to the lady, Eugenie

Need Help

Urbana, Ill. adu

appeared has made I do all r recom table Co passing t "Mrs. F St. Urb Women "heat fl and "the root and ham's V