

LESSON V.-August 3, 1913.

The Plagues of Egypt .- Psa. 105: 23

Commentary.—I. Israel in Egypt (vs. 3-25.) 23. Israel also came—Joseph's 23-25.) 23. Israel also came—Joseph' entrance into Egypt has just been men tioned and his promotion in the king-dom, and now the coming of Israel, or Jacob, is recorded. The merest outline of these important events are given by the psalmist. Sojourned—Dwelt as a temporary resident. Land of Ham — Egypt. 24. He increased his people greatly—God gave great prosperity to the descendants of Jacob, notwithstanding their later oppression (Exod. 1: 7, 12, 20.) Stronger than their enemies— The secret of Israel's increase in num-bers and power was God's good hand upon them. Seventy souls went down into Egypt, and their numbers had become about two million. 25. He turned their heart to bate his people—It was his goodness to Israel which called forth the ill will of the Egyptian court, and so far the Lord caused it; and, moreover, he made use of this feeling to lead on to the discomfort of his people, and to which they had evidently become greatly attached. Thus far and no further statement of the statemen ther did the Lord turn the hearts of the Egyptians.—Spurgeon. The Egyptians followed the bent of their own evil dispositions in hating the Hebrews. God does not move men to exercise their wicked propensities. Circumstances are permitted to come to them which excite them to evil, but the act is the result of their own volition. To deal subtilly—To deal descritfully and destructively. The Egyptians had attempted to destroy the

male-cisildren of the Hebrews, and to op-press the slaves so greatly with hard work, that their increase would be checked. The plans of the Egyptians failed, because God was on the side of

the Hebrews.

II. Deliverers raised up (v. 26.) 26. He sent Moses ... and Aaron—The Lord had the men in readiness and all he had to do was to commission them and thrust them forward. They were two for mutual comfort and strength exen as the apostles and the seventy is our Lord't day were sent forth two and two. The men differed and so the one became the supplement of the other, and together they were able to accomplish more than if they had been exactly The main point was that they were both sent, and hence both clothed with divine might.—Spurgeon. Moses was now eighty years old and eighty-three (Exod. 7:7.) The former had received his training in the court of Pharaoh and in the desert of Midian, and the latter had been all his life associated with his people in Egypt. God has ever had his servants at hand to meet the great crises that have arisen work, and he has often called them from most unexpected Whom he had chosen—God has always chosen those whom he would commission to do special work for him. When Ananias had serious misgivings about obey-ing the vision which directed him to Saul n Damascus, the word came to him, "Go thy way: for he is a chosen vessel unto me to bear my name before the Gentiles, and kings, and the children of Is-rael: for I will show him how great things he must suffer for my name's (Acts 9: 15, 16.) Further we read As they ministered to the Lord, and fasted, the Holy Ghost said. Separate me Barnabas and Saul for the work whereunto I have called them" (Acts 13: 2:) David was chosen and anointed King of Israel in a most critical time in that nation's history, and it was necessary for him to undergo bitter trials and se work assigned him. Moses and Aaron were chosen for a special work and the ecomplishment of that task called forth thre best qualities there were in them.

III. Divine judgments (vs. 27-30). 27. His signs His signs ... and wonders—God's marvellous tokens of power which were sent upon the Egyptians. The psalmist does not enumerate all the plagues, for the fifth and sixth are omitted; nor does he mention them in the order in which they are recorded in Exodus. The first three plagues were the waters turned into blood, the frogs and the lice, and included the land of Goshen, as well as the rest of Egypt. The plagues come through the use of Aaron's rod, and the magicians imitated the first two, but could go no further. Pharaoh was not moved by these plagues, which were loathsome rather than destructive or painful. The next three, in which no rod was used, caused loss and pain. They were flies, murrain and boils, and did not include the Hebrews. By this plague of the Pharaoh was slightly moved. The of flies Pharaoh was slightly moved. confessed his sin, and made a promise, only to break it. In these Moses' rod was used. The plague of hail, locusts and darkness afflicted the Egyptians, but not the Israelites. The toplague, the death of the first-born. Egyptians to thrust the Israelites out of the country. There is no means of knowing the exact length of time occupied by these signs and wonders but it was probably but a few months ending about April first. These plagues were all miraculous in their nature. While some of them were similar to visitations likely to come to that land brought about, they were emphatically with which they were forefold and brought about they were emphatically

Darkness-The ninth plague is mentioned first, perhaps, because it was symbolical of the darkness that hung over Egypt. The darkness was so great that it could be felt, and no one moved from his place for three days, but the Israelites had light in Goshen. darkness can not be accounted for by referring it to natural agencies, although the attempt has been made. They rebelled not The Egyptians were ready, while the plague lasted, to let Israel go; but when it was over, they were again unwilling. 29. Waters into blood—This included the Nile and all other streams, as well as the pools and the water brought for domestic uses. The fish, upon which the Egyptians largely subsisted, were destroyed, 30. Frogs-Frogs were abundant in Egypt and were ob-Frogs jects of worship. This plague was especially loathsome, because the frogs came

up and filled the couches and kneading troughs of the people, and their religion forbade them to kill them. The magi-cians attempted to imitate Moses and Aaron in the plagues of the blood and the frogs, and through their jugglery did so to some extent, but their quack art could go no further in producing these signs and wonders. 31. Flies—Various kinds of annoying insects came in great numbers. Lice—The Egyptians were a most cleanly people, bathing several times a day, and were especially averse to such vermin. The priests shave ed the entire body every second day to guard against such uncleanness, 32. Hail -It was not common in Egypt. Flaming fire-Fearful lightning. 33 destruction wrought by the plague of hail was great, 34. Locusts—At the warning of the coming of this plague the Egyptians were alarmed, for they knew how destructive locusts were They came in great numbers. They are They came in great numbers. They are said to cover the ground at times to a depth of two feet. No vegetable life could escape their ravages, 35. All the herbs —All that were left by the hail. 36. Smote also all the firstborn—Warning was given to Pharaoh (Exod. 11. 4-8), that the first-born of the Egyptians would be slain, and yet he would not let Israel go. Chief of all their strength—The first-born were considered the flower and strength of the nation, yet they were all slain.

yet they were all slain.

Questions.—By whom was the presen
lesson written? What is meant by the land of Ham? Name the ten plague in the order given in Exodus. For wha purpose were the plagues sent? Describe the plague of waters turned int blood. Describe the two plagues not in-cluded in this lesson. Give an account cluded in this lesson, the author of the plague of darkness. Who were the magicians and what did they attempt? State what effect each first nine plagues had upon Pharaoh What indicates that these plagues wer miracles? How was Pharaoh's heart affected?

PRACTICAL SURVEY.

Topic.-A divine issue. I. Confronted the court of Egypt.

II. Reached by repeated judgments. I. Confronted the court of Egypt. All these miracles in Egypt were wrought against idolatry. Each plague was a blow at some favorite idol. They were an exhibition of Jehovah's conflict with the great, idolatrous world power God did not begin that succession of disasters without giving due and solemn warning. The superstition of Egypt was made its scourge. The very rever-ence with which their idols had been regarded deepened the chastisement Pharach's real ignorance of Jehovah's character and demands remained unchanged amid all his experiences of Je hovah's power. In the name of the Lord Moses asked Pharaoh to give Israel freedom. Though rejected by Pharaoh that demand could not be ban Pharaoh that demand could not be ban-ished. Unless granted, the divine re-tribution would swallow up every com-fort and stay with Pharaoh might sum-mon to sustain him, though he relied upon his own power and that of his gods to meet whatever power might be brought against him. If Pharaoh would not bow to reason, persuasion or evidence, he must bow to power. Every allowance was made for real ignorance but none for wilful unbelief. Seeing the rod of Moses turned into a serpent to devour all the others was a menace to Pharaoh. It told him of a divine

power opposed to his, which he would do we:l not to provoke. II. Reacher by repeated judgments. After the miracle which furnished sufficient evidence that Moses and Aaron were ambassadors from God, a series of judgments begth. There was something peculiarly appropriate in the first judgment felling ment the Nils River. ment falling upon the Nile River. It had been made the instrument of de-struction to the infants of Israel to subdue the strength of that nation. That judgment was a prophecy of the utter ruin of Egypt. It was a decided blow at Egyptian idolatry, since the people regarded its waters sacred, to have it become a mass of revolting putridity Yet Pharaoh "turned and went into bis solved not to face the of duty or heed the demand of Jehovah. As the changing of the waters of the Nile into blood showed that all the ele ments of nature were under God's con-trol, so the coming of frogs as a reconplague proved that the animal kingdom was under his control. Because of their animal worship the Egyptians dared not kill the frogs, though they destroyed al their comfort a second blow upon the absurdity of idolatry. Hatred for the Being who was thus coercing bim caused Pharaoh to maintain resistance. Rage and pride overpowered reason as well as conscience in Pharaoh's breach promise to Moses. The third plague of ice caused the magicians to give up th contest. The fourth plague of flies was not permitted to trouble Israel. This affected Pharaoh and led him to some compromise, though he required Israel to remain in Egypt to offer sacrifice, thing not to be considered either by Ierael or the Egyptians, since I-rael would thus fall short of God's command and the Egyptians would not permit the sacrifice of cattle. In the fifth plague came the loss of property. Thus, dis-comfort was followed by death, though is first bega upon the brute creation. Again Israel escaped the plague. In the sixth plague of boils, the magicians were brought to shame in the presence of those who trusted in them, thus leaving Pharaoh more and more alone in his resistence. The practice of scattering the ashes of human victims to avert evil from the land was rebuked when Mose took ashes from the brick kiln in which the Israelites toiled, and sprinkled them loward heaven in mute appeal for the uelties they had inflicted upon Israel id which descended upon Pharaoh and melties they had inflicted is people as a plague of deep physical betress. The seventh plague in the rain is half and fire brought death to man and beast, and fearful destruction upo nature. Pharaoh's confession was a to Moses and not to Jehovah. It repentance born only of terror. announcing the eighth locusts, Mose presence, indicating that negotiations were near an end. Pharaoh had engaged in a contest from which he could not retire without submission, but he would not grant Jehovah's demand for the re lease of Israel. The minth plague of great darkness came unannounced, and proved a complete stroke against sunworship. It was a fitting scourge to come upon a people whose minds were darkened to the perception of God.

T. R. A.



TORONTO MARKETS

202001120	
FARMERS' MARKET.	
Dressed hogs, heavy 12 00	12 50
Do., light 12 75	13 25
Butter, dairy, lb 0 25	0 28
Eggs, new-laid, dozen 0 27	0 30
Spring chickens, lb 0 25	0 30
Fowi, 1b 0 19	0 21
Spring ducks 0 20	0 25
Turkeys, lb 0 22	0 25
Apples, bbl 2 50	3 50
Potatoes, new, bush 1 00	0 00
Beef, forequarters, cwt 7 75	8 75
Do., hindquarters, cwt. 11 75	13 00
Do., choice sides, cwt 10 50	11 25
Do., medium, cwt 8 25	9 75
Do., common, cwt 6 75	8 00
Mutton, light 8 00	10 00
Veal, common, cwt 9 00	10 00
Do., prime, cwt 11 00	14 00
Lamb, cwt	19 00
SUGAR MARKET.	
	:

	amb, cwt
1	
1 1	Sugars are quoted in Toronto, in ags, per cwt., as follows:
, F	xtra granulated St. Lawrence \$4 40
1	Do. do. Redpath's 4 40
	Do. do. Acadia 4 20
1	o 1 vellow 4 00
8	In barrels, 5c per cwt. more; car lots,
	c less.
-	LIVE STOCK.
0	Receipts-1 022 cattle: 221 calves: 1,595

In barrels, 5c per cwt. me	ore;	car	101:	5,
5c less.				
LIVE STOCK.				
Receipts-1,022 cattle; 221	calv	es;	1,59	5
calves; 1,683 sheep. Butcher cattle, choice		to	6 5	
de de medium	5 90	to	6 4	40
do do common	4 25	to	47	
Butcher cows, choice	5 00		5 3	
do do medium	4 50		4	
do do conners	3 50	to	4 3	
Feeding steers	5 25	to	5 7	
Stockers, choice	2 50	to	3 1	
do light	2 00 40 00	to	75 (
Milkers, choice, each		to	75	
Springers			5 (
Sheep, ewes			3 !	
Lambs	0 05		8	
Hogs, fed and watered				
Hogs, f. o. b				
Calves		to	8	00
Carves				

OTHER MARKETS

WINNIPEG GRAIN EXCHANGE.

01	pen. Hi	gh. Low	. Close.
Wheat-			
July 97 1/8	981/8	9734	977/8b
Oct 91s	911/8	90%	91b
Dec 891/2a	895%	891/4	891/2b
May 94%	947/8	945/8	94%b
Oats- July 33%	33%	333/4	333/4 b
July 33% Oct 361%	361/8	36	361/8c
Flax-	1052/	1007/	1951/b
July 1237/8	1253/8	1237/8	1251/8b
Oct 1277/8	1291/4	1277/8	1291/4

MINNEAPOLIS GRAIN MARKET.

Minneapolis.— Close: Wheat— July,
85 7-8c; Sept., 88 1-8c; Dec. 91 to 91 1-8c;
No. 1 hard, 90 1-8c; No. 1 northern,
88 3-8 to 89 5-8c; No. 2 do., 86 5-8 to
87 5-8c.—
Corn—No. 3 yellow, 60 1-2 to 61c.
Oats—No. 3 white, 38c.
Rye—No. 2. 56 to 57 1-2c.
Flour—Unchanged.
DILLTHERAIN MARKET MINNEAPOLIS GRAIN MARKET

DULUTH GRAIN MARKET. Duluth.— Close: Linseed, \$1.40 1-2; July, \$1.39 1-4; Sept., \$1.41 bid; October, \$1.41 1-4; November, \$1.41 1-4 bid; De-cember, \$1.38 3-8 bid. Wheat—No. 1 hard, 90 5-8c; No. 1 northern, 89 5-8c; No. 2 northern, 87 5-8 to 88 1-8c; July, 88 3-8c nominal: Sept., 89 5-8c; Decem-

88 3-8c, nominal; Sept., 89 5-8c; December, 91 5-8c bid; May, 96 3-8c bid. CHEESE MARKETS. Kingston.—At the cheese board here to-day 126 white and 533 colored were offered; 607 sold at 13 1-16c.

Alexandria, Ont.—Seven hundred and eighty-five boxes of white cheese sold to-night at 13 cents.

to-night at 13 cents.

Brockville.—At to-day's cheese board meeting the offerings were 3.210 colored and 1.580 white. The sales were 30 white and 625 colored, at 13c.

A SALE OF SHEEPSKINS. London.-A sale of sheepskins was held here to-day. There was a large atttend-ance and the demand was fair for the 7.200 bales offered. Merinos and shortvooled skins were taken by the trade and the continent at 1-2d lower, while crossbreds sold from 1-2d to 3-4d below the last sales. The following are the offerings and prices paid for cothing and combing :New South Wales, 500 bales, at 3 7-8d to 9d. Queensland, 700 bales, at 4d to 9 1-4d. Victoria, 2.400 bales, at 3 3-4d to 9 1-2d. South Australia, 500 bales, at 4 1-4d to 8 3-4d. Australia, 1,100 bales, at 4 1-8d to 9 1-4d Australia, 1:00 bales, at 4 7-8d to 9 5-8d. Yew Zealand, 1:400 bales, at 4 1-8d to 10 1-8d. Punta Arenas, 1:100 bales at 5d to 10 1-2d.

LIVERPOOL PRODUCE Wheat, spot steady, No. 1 Manitoba,

s 9 1-2d. No. 2 Manitoba, 7s 6 1-2d. No. 3 Manitoba, 7s 6 1-2d. Futures, steady, July, 7s 5 7-8d. October, 7s 3 1-2d. December 7s 4 1-4d. Corn, spot quiet, new kiln dried, 5s

American mixed, old, via Galveston, 5c Futures steady, September Laplata, 4s

October 56 1-4d. Flour, winter patents, 28s. Hops in London, Pacific Coast, £4

5e to £5 158. Beef, extra India mess, 121s 9d. Pork prime mess, western, 107s Hams, short cut 14 to 16 lbs., 82s Bacon, Cumberland cut, 26 to 30 lbs.

Short ribs, 16 to 24 lbs., 78s Clear bellies, 14 to 16 lbs., 71s. Long clear middles, light, 28 to 34

Long clear middles, heavy, 35 to 40 Short clear backs, 16 to 20 lbs., 67s 6d. Shoulders, square, 11 to 13 lbs., 61s 6d. Lard, prime western, in tierces ,59s 6d. American refined in pails, 59s 6d. Cheese, Canadian, finest white new,

Colored, new, 63s 6d. Tallow ,prime city, 31s 6d. Australian in London, 36s 4 1-2d. Turpentine spirits, 28s. Rosin common, 11s 3d. Petroleum, refined, 9 3-8d. Linseed oil, 28s. Cotton seed oil, hull refined, spot, 36s

CHICAGO LIVE STOCK. Cattle, receipts 5,000. Market slow.

D		40	9 20
Beeves	4 13		
Texas steers	6 90	to	8 00
Stockers and feeders	5 50	to	7 75
Cows and heifers	3 70	to	8 40
Calves		to	11 25
Hogs, receipts 18,000.		1	
Market strong.			
Light	9 15	to	9 55
Mixed	8 85	to	9 50
Heavy	8 65	to	9 35
Rough	8 65	to	8 90
Pigs	7 60	to	9 30
Bulk of sales	9 00	to	9 35
Sheep, receipts 10,000.			
Market strong.			
Native	4 30	to	5 35
Yearlings	5 60	to	6 55
Lambs, native	5 60	to	7 80
BUFFALO LIVE 87	UCB		

East Buffalo. N. Y. despatch-Cattle receipts 350 head; slow. Veals, receipts 50 head, active and 250 head; scotte and 250 head; scotte and 250 higher; \$600 to \$1.25.

Hogs, receipts 2.400, fairly active and yorkers \$9.80 to \$9.80; pigs, \$9.85 to \$9.90; roughs, \$8.50 to \$8.60; stags, \$7.00 to \$9.50; dairles, \$9.50 to \$9.80; stags, \$7.00 to \$9.50; dairles, \$9.50 to \$9.80; stags, \$7.00 to \$9.50; slaints \$7.50 to \$7.60; yearlings, \$4.00 to \$6.50.

MONTREAL LIVE STUCK. Cattle—Receipts about 1,000; calves 850; sheep and lambs, 900; milch cows

70: hogs, 750.

Trade was dull, there being only two good loads of cattle on the market, and these were not extra. A few of the best cattle sold at about 7 cents per Medium sold at between 5 634 cents, and common from 234 to 434

Cows, \$30 to \$65 each. Calves, 23/4 to 6.
Sheep, about 4 cents.
Lambs, \$4 to \$6 each Lambs, \$4 to \$6 each. Hogs, 101/4 to 101/2c.



NITROGEN AND THE SOIL.

Fields of unplowed land, permitted to run without cultivation. will gradually increase in nitrates, even to the extent of 25 to 30 per cent. This has been re discovered that this was the work of bacteria, that these bacteria secure free nitrogen from the air. which is turned into plain food in the soil. This process been termed "nitrogen fixation.

There is another process of fixation which takes place in the nodules on the roots of luguminous plants. Both of roots of luguminous plants. Both of these processes originate from bacteria, but theer is a difference i nthe organisms. Nitrogen in the soil is not fixed by the bacteria which operates in the nodules, and those that work in the no-

dules of legumes.

The bacteria which produces free nitrogen in the soil are capable of pertheir work rapidly. It has been proved that they are able to fix considerable amounts of nitrogen in a fort-night, provided all of the controlling factors which control their work have been determined, but some of the more

important ones are known."

It has been demonstrated that line added to the soil is one of the most imadded to the soil is one of the most important factors, as it greatly assists these organisms in performing their work. These usually operate in that portion of the soil reached by the plow, but a signal of the soil reached by the plow. but, as already mentioned, they may also work in soil that has never been cultivated. They work almost the en-tire year, storing up in the soil this most costly of plant food, without the of the farmer, and without any

In the present condition of farming, and the live stock industry on the farm. one of the most important matters for consideration is the procurement of a difficient amount of concentrated nitrogenous feeds to make a nation properly palanced for the feeding purpose that is in view, and, at the same time, economical enough to be afforded.

In the matter of coarse forage, clover,

alfalfa and the like, afford in different localities valuable feed stuffs of a nitrogenous kind, but in concentrates the amount of nitrogenous foods grown is extremely limited. In order to make the plance that will be productive of the hest results in the feeding of growing stock, in dairy feeding, and even in the economical feeding of corn to fattening chimals, it is generally necessary to pur-chase by by-products resulting from the manufacture of grains and seeds of various kinds, into articles which extract the other elements and leave much the larger portion of the nitrogen as offal or These by-products, such as bran. shorts, middlings, gluten meals, oil meal, cottonseed neal and the like, serve the purpose well, but they cost more money than the feeder can well afford to pay, and they would cost still more if the practice of feeding them was as general as, for best results, it ought to be. The use of these products also violates ar important principle in successful farming, namely, the principle that the fields used on any farm should to the utmost

extent possible be farm grown.

It is hardly necessary to point out
the need for nitrogenous foods to be grown upon the farm and fed out there. It is unfortunate that the range of legumes that will furnish concentrates of this kind is very limited. Practically it comprises only field peas, soin beans and the cow pea. So there cannot be much choice. But, at the same time, the clovers, alfalfa and other legumes that are grown for forage should be furnished more abundantly, for they, toc, are im portant in compounding well-balanced ra tions. In addition they have the fur ther advantage of being soil-improvers and the farmer who cultivates them largely secures a twofold reward.

FARM NEWS AND VIEWS.

A horse will live 25 days without solid food, subsisting on water only. He will live 17 days without either eating of drinking, and only five days when eating solid food without drink-

ing. Stables in which cows are kept should be whitewashed often enough to keep them clean and white. Hot white is a splendid germicide. Add salt wash is a spiendid germidue. And sait to the lime water in order to make it stick better. Whitewash not only kills the germs and seals up the cracks, but it makes the stable more light. Sows that give large quantities of milk should be carefully stinted in what feed for several days as the pipe.

their feed for several days, as the pigs will not be able to consume all the milk, and that which remains will do It should be at least three weeks before the sow has full feed. Toronto concern, was working the From that time on she should be liber. Silver Cliff Mine on an option basis.

There are milk strains of sows as well as of cows, and these should be carefuly guarded against milk fever.

It is an altogether mistaken idea that soil needs rest. Unless it is producing something it is certain to de teriorate. Better a crop of weeds than a bare surface exposed to rain and sun. Some crops are well worth planting and cultivating for their fer-

If it is true that the hog is one the most important sources of profit in raising of beef, it is also true that the hog is one of the most important sources of profit on the dairy farm. There are many waste producers on the dairy farm that can be utilized by the pigs. Among these products are akim-milk, roots and surplus feed of all kinds. Buttermilk that cannot be disposed of would have to be be disposed of would have to be thrown away were it not for the pigs. Whether the dairy be for the produc-tion of milk or of butter, the necessity for having the bogs is about the same, unless where the man has a contract with a city man to take all the milk

Rancid butter is caused by leaving buttermilk in the butter. Buttermilk cannot be worked out; it must be washed out while the butter is in the granular stage. Pour in about as much cold water as there was milk and turn the churn over a couple of times. Strain off this water and wash the butter a second time. Always have the wash water a few degrees colder than the butter, so as to keep the

for hay or when use is to be made of the straw for feed is to cut when the grain is in the tough dough stage. The grain shrinks slightly, does not shatter badly, and the straw is relished by horses, cattle and sheep. Care should be taken to shock securely and protect the grain from the sun and the rain, and, as much as possible, from birds if they happen to be numerous. Oats make excellent feed for horses, and it is worth while to use care in harvest

Ing.

The garden and the orchard are important, and it is not wise to neglect them for the field crops. The garden should not be considered a place to work when there is no other work need-ed, nor should the orchard work be deferred till the "ground in the field is too wet to plow." Make orcharding and gardening features of farm manage-

ment.

The best way to make the farm more profitable is to get god livestock and produce feed to sustain the animals. Those who persist in selling their crops are facing poverty that sooner or later will be reached.

Remember in using commercial fer-tilizers that nitrogen is the element best needed to stimulate the growth of foli-age, tender branches, etc. Phosphoric acid is needed for kernels of corn, grains of wheat, oats, rye, etc.; potash for rigid stalks, roots and stems; flavor,

color and quality in fruits.

It is a well-known fact that the cow that makes the largest profit is given the best care and most comfortable

It is wrong to expect the cow to yield a large profit simply because she is well bred. She must have feed and care or the breeding will amount to nothing.

Many dairy farmers are working hard

to feed, care for and milk 20 cows every day, when 12 or 15 out of the same herd would pay a decidedly better profit. The idea is to find the cowe that are doing the best work and sell the rest.

The Kansas Experiment Station has an experiment station has an experiment comparing the manufacture of milk from grain and silage ration. It found that the grain ration when used cost \$1.05 to produce the 100 pounds of milk, and when silage was substituted in the same ratio for he the grain it reduced the price to cents per 100 pounds, a difference of 37 cents. It also found that it cost 22 cents to produce one pound of butter fat in the case of where grain was used, and only 13 cents where silage was used to take the place of half that ration. difference of 9 cents again. The profit per cow per year where grain was used was \$24.60, and where silage was used \$58.50. You will notice that it increased the profits from each individual in that her \$34 to cut the corn and put it in the silo

One of the chief causes of the nume ous failures of the clover crop lies in the fact that most of the seed is sown broadcast and is not well covered. To make sure of a stand of clover, the seed must be in the ground instead of merely on the surface.

A cow must first satisfy the needs of her own body before milk is secreted and it has been calculated that 43 per cent, of the food used by an average dairy cow is required to maintain her body. It is reasonable, therefore, to conclude that the maximum profits will result only when the cow is fed all the appetizing food she can digest milate and remain in a healthy condition.

CHEQUES USELESS

And Cobalt Concern is in Serious Trouble.

A Cobalt despatch: As the result of esuing a batch of technically worthless cheques to the number of 65 the Orion Realty and Investment Co., Ltd., faces a serious predicament. The cheques were last month's pay cheques to their employes, and when presented for pay-ment it was found that there were no funds in the bank to meet them.
So far a miner, Fred Stables, is the

only one of the men to take action against the company. Stables has a cheque for \$72.75, and when payment was refused by the bank he put the matter in the hands of George Mitchell, with the result that Inspector Rowell received a warrant of attachment against the company on a carload of concentrates valued at \$11,000 which is received being loaded at Campbell & Davell's, and this shipment was seized by Inspector Rowell fast night.

Other action may follow, as a store keeper in town cashed cheques for oth er employees. The Orion Realty Co., a Toronto concern, was working the old

THE POULTRY WORLD

HUMID WEATHER HARD ON CHICKS The hot weather of summer is now on, and the average poultry raiser finds that many conditions have changed in poultry yard from that of earlier in the season. Late-hatched chicks require but little if any heat in the brooder. The chicks that are mothered by the hen must have roomy quarters for if during must have roomy quarters, for if during the hot nights they do not obtain plenty of fresh air it saps the vigor from them, and, while they may not die, they will not grow as they should, and when fall comes will be undersized specimens. Care must be exercised in the feeding. Many still adhere to the yest reach and if still adhere to the wet mash, and, used, care should be taken to see that it is cleaned up in ten or fifteen minutes when fed, and not allowed to stand and become sour. Do not allow foul places where the watering fountains are kept. In emptying the water scatter kept. In emptying the water scatter it. A light scattering of lime now and then in the poultry runs will be of benefit. The fight on lice should now be doubled, and the poultry house given extra cleaning.

doubled, and the poultry house given extra cleaning.

Poultry during the summer months feel the depressing effects of heat the same as the human family, and extra attention in this respect of keeping them as comfortable as possible will enable the poultry keeper to increase the egg yield, as well as obtain a steady and profitable growth in the growing stock. This means for the growing stock roomy, well-ventilated quarters, kept clean, and not crowded. Separate the cockerels from the growing pullets as soon as possible—the cockerels to be fattened and sold for market as soon as the broiler age is reached, the pullets to be broiler age is reached, the pullets to be kept for winter layers and kept stead-ily growing. Keeping too many in one flock means retarded maturity, and it is here that many poultry keepers are disappointed when the pullets do not lay at the proper time for the breed. It should be remembered that each

and every time, by improper feeding, housing, lice or crowding the chicks are housing, lice or crowding the chicks are checked, it will take that much longer checked, it will take that much longer for them to reach the laying period. Poultry of different ages to do their best should be separated. In feeding, the older crowd or cow the younger chicks, and they do not obtain the food required. At night the younger fowls are crowded and do not get proper rest. These are small things, but they are essentials to follow out, if the best results are to be obtained. Again, the old fowls require different feed than the growing stock. Fresh water plays an important part and is one of the essentials that is most neglected, because of the extra labor involved. The grain can be fed in hoppers or scattered in the poultry yard or house twice a day. The mash is fed or house twice a day. The mash is fed in hoppers, if dry mash is used, or in troughs twice a day if wet mash is used, but to water—properly—one must carry it four or five times a day during the heated term, and it means extra labor. Yet it repays the poultry raiser many times, for water is one of the first essentials during the summer months. Shade should be provided in some form and green food never neglected.

Feed less corn and more oats and wheat in the grains, and in the dry mash a good mixture of 200 pounds of bran, 100 of middlings, 100 ground oats, 60 pounds of high-grade beef-scraps, will be found a good growing ration, as well as laying. Poultry will lay well during the summer until moulting time if given good care, but they cannot prove profitable if infested with lice, unclean quarters, poor feeding and tight houses that sap the vitality from them during the sum-

mer nights. POULTRY NOTES

A pound of disinfectant is cheaper than a germ of disease.

A free use of insect powder is liberally repaid in eggs. Clear drinking water poured into dirty vessels is taking an unfair advantage of

your poultry.

A lazy fowl lays little. A busy chick grows fastest.

Poor food means few eggs; ample food intelligently fed gives maximum results It is a good rule in calculating what the weight of the broiler will be when dressed to get the live weight and deduct from it 12 per cent. The result will be a very close guess of the weight when dressed. The guineas are now hiding their

nests. ienerally they lay between the hours of 10 o'clock in the morning and 2 o'clock in the afternoon. By the way, guineas are great bug and worm hunters, and as they do not scratch can safely be allow ed in the garden.

In dressing poultry, especially ducks, it is profitable to save the feathers. It will require the feathers of about five chickens to weigh a pound, and those of ten ducks to gain the same weight. A pound of geese feathers will require four geese. The feathers from dry picked turkeys command a better price than do those from fowls that are scalded. They should be marketed late in the fall, during the winter, or early spring. The famous spring chicken must be hatched not later than this month, and hatched not later than this month, and

placed on the market when from two to placed on the market when from two to three pounds in weight.

The turkey crop brought out this month should have good growth by No-vember, in the case of male birds reach-ing ten or twelve pounds.

Just about this time there is consider-

able complaint that the wing feathers of the chicks of the Leghorn variety in par-ticular grow so fast that they droop, causing great loss of vitality. Some poultrymen pull out the large wing feathers as soon as the chicks droop, but this is a risky operation as it is possible this is a risky operation, as it is possible to injure the socket where the feathers come. The safest thing to do is to clip the tips of the wing feathers when the chicks are ten days old. This sends the strength back to the body, just on the same principle that we trim the vines of trees in order to add strength to the

parent body. SEVEN YEARS FOR BURGLAR. A Cobourg despatch: Charles Rogers, who figured in a number of burglaries in this vicinity in addition to entering the house of Mr. Kennedy at Precious Corners, where he was captured by the latter's son. William, was sentenced to day by Judge Roger to seven years' imprisonment on the charges of burglary and maining. In his encounter with Rogers young Kennedy was hit over the In his encounter with

head with a chisel.