FARM AND GARDEN

WINTER CROPS IN ONTARIO.

(Results of Experiments.)

The time between the harvesting and the seeding of winter crops is exceptionally short this year. Many farmers will be unable to thresh their wheat before it is time to sow for another crop Farmers who have already threshed good, pure grain of standard varieties of winter wheat or of winter rye, might advertise their surplus for seed purposes to advantage, both to themselves and to others. Every effort should be made to increase the winter crop area as much as possible. The wheat is greatly needed, and the increased acreage sown with winter crops will lessen the labor required for spring seeding, and also extend the harvest over a longer period next year. Let us aim for one million acres of winter crops for 1918.

Experiments have been conducted at the Ontario Agricultural College and throughout Ontario during the past year with winter wheat, winter rye, winter barley, winter emmer and hairy vetches. The autumn of 1916 was comparatively dry, and the spring and early summer of 1917, exceptionally wet. There was more rainfall in June and July of this year than in any two consecutive months in the past seventeen years.

About two hundred and ninety varieties of winter wheat, and many selections and cross have been grown under experiment at the Agricultural College within the past twenty-eight years. Of the named varieties fourteen have been grown in each of the twenty-two years, and the results of these are of special value. The following gives the average for twenty-two years in yield of both grain and straw per acre, and in weight per measured bushel of a few of the leading varieties. Dawson's Golden Chaff, 50.2 bushels, 2.9 tons, and 59.9 pounds; Imperial Amber, 47.2 bushels, 3.1 tons, and 61.1 pounds; Early Genesee Giant, 45.9 bushels, 3.0 tons, and 60.1 pounds, and Egyphian Amber, 45.5 bushels, 3.1 tons, and 61.5 pounds.

The average results of the fourteen varieties are as follows: Yield of grain per acre, 25.6 bushels for 1917, and 44.3 bushels for the twenty-two year period; yield of straw per acre, 1.9 tons for 1917, and 2.9 tons for the twenty-two year period; and weight per measured bushel, 56.7 pounds, for 1917, and 60.9 pounds for the twenty-two year period.

Of the thirty-four varieties of winter wheat which have been tested for the past five years the highest yields in bushels per acre have been produced by Imperial Amber, 45.8, Kharkov, 45.6, Gillespie Red, 45.2; McBean's Dawson, 45.1; Tuscan Island, 44.9; Grand Prize, 44.7, and American Banner, 44.6.

Those varieties of winter wheat which have produced the largest loaves of bread from equal quantities of flour in the average tests of ten years made in the Bakery branch of the Chemical Department of the college are as follows: Yaroslaf, Banatka, Crimean Red, Tuscan Island, Buda Pesth, Tasmania Red, Egyptian Amber, Kentucky Giant, Rudy, Treadwell, Bulgarian, Geneva and Turkey Red; and those which produced the smallest loaves of bread are the Early Red Clawson and the Abundance.

A cross between the Dawson's Golden Chaff and the Bulgarian has furnished a new variety which in the last five years has surpassed both its parents in average yield per acre, and is about equal to the Bulgarian in bread production. This variety was distributed over Ontario in connection with the co-operative experiments in the autumn of 1916 for the first time under the name of O.A.C. No. 104, and is not yet grown in sufficient quantity in Ontario to be sold commercially. In the co-operative experiments throughout Ontario in the past year, in which five leading varieties were tested the O.A.C. No. 104 proved to be the most popular with the farmers, the improved Imperial Amber coming second in this respect.

The Petkus variety of winter rye has made the highest record both at the college and in the co-operative experiments throughout Ontario. Winter Barley which has been grown at the college in each of the past twenty-four years gave a yield per acre in 1917 of 32.2 bushels, the average for the whole period being about fifty bushels per acre.

Distribution of material for experiments in autumn of 1917—As long as the supply lasts, material will be distributed free of charge in the order in which the applications are received from Ontario farmers wishing to experiment and to report the results of any one of the following tests:

1—Three varieties of winter wheat.
2—One variety of winter rye and one of winter wheat.
3—Spring applications of five fertilizers with winter wheat.
4—Autumn and spring applications of nitrate of soda and common salt with winter wheat.
5—Winter emmer and winter barley
6—Hairy vetches and winter rye as fodder crops.

The size of each plot is to be one rod wide by two rods long. Fertilizers will be sent by express for number 4 this autumn and for number 3 next spring. All seed will be sent by mail except that for number 4, which will accompany the fertilizers.

C. A. Zavitz,

Agricultural College, Guelph, Ont., August 31st, 1917.

CLOVER SEED—WHY NOT GROW YOUR OWN?

In average seasons red clover, that has not been pastured after the first hay crop has been removed, will produce a crop of well-matured seed. Instead of cutting the second crop for hay, pasturing it, or, as it frequently happens, plowing it under, why not allow this crop to mature, why not alseed from it?

By raising your own clover seed, you are obtaining seed from plants which, by their very existence have demonstrated their adaptation to the conditions prevailing on your farm, and in your immediate locality. Such seed, it is quite reasonable to suppose, will produce plants which are equally well adapted to local conditions. For this reason, home-grown clover seed is really more valuable than most of the seed obtainable through ordinary channels of commerce.

Quite often very poor-looking fields of second growth red clover will produce a profitable crop of seed. In many cases fields where the clover is quite thin and say only eight or ten inches high, will yield over one hundred pounds of clean, well-matured seed per acre. Usually, however, an average second growth will produce anywhere from 150 to 250 pounds of seed per acre.

The red clover seed crop should be cut when the heads are dark brown in color, and contain hard, well-developed seed. In harvesting all unnecessary handling should be avoided. Rough handling, frequent turning, etc., will thresh off or break off the most mature heads, thus wasting a portion of the most valuable seed.

Where the crop is less than one foot high it may be cut with an ordinary mowing machine. It is usually advisable to have two men follow the machine with hard rakes, and move each swath out from the standing crop a few feet, so that, on the next round, the cut clover will be out of the way of the horses and machine. By following this practice with short clover, a great deal of seed will be saved that would have otherwise be threshed by the horses' feet and thereafter left in the field.

Where clover is one foot or more in height the most satisfactory implement to use for cutting is the binder. The cord should be removed, and the spring on the knotter slackened so that it will trip continuously. Usually there are two boards that hold the sheaf; these should also be slackened so that the clover will have a free course to the ground. In dropping to the ground, the seed will not shell, and the crop will be left in loose windows, where it will dry quickly, and can be easily gathered with a barley fork.

The length of time that the clover should remain in the field would depend upon the weather. Generally speaking, the crop should be placed in the mow or stack when dry enough to keep well. It can then be threshed when convenient.

RUST OF WHEAT.

Some time ago the Department of Agriculture at Ottawa issued a very timely card-poster with wide descriptive colored border on "Black or Stem Rust of Wheat." The poster in succinct plain language tersely gave advise on the best course to pursue in the preparation of land and seeding to prevent approach of the dread disease which entailed the loss of many millions of dollars to Canada in 1916. A bulletin has new been issued, and can be obtained free by addressing the Publications Branch of the Department at Ottawa, amplifying the advice given in the poster. It is also designed to answer many inquries that have been received and that prove that the theories possessed regarding the disease are frequently astray. The bulletin explains that there are several distinct kinds of rust and defines them. It tells of the cause of rust and of the infection of the wheat plant; gives particulars of the red summer stage and of the black or winter stage of the disease, details the action of the fungus on the host plant, and makes a specialty of describing the relation of stem rust to the barberry. "We regard the barberry in Canada," say the authors of the bulletin, "as a known contributory factor to grain rust. In this attitude we are supported by practically every scientific observer on this continent and we, therefore, would strongly recommend the complete extermination of this shrub, at any rate throughout the regions of the Dominion principally devoted to grain growing. There are other factors contributory to the severity of grain rust over which we have no control—weather conditions for one—but the question of the barberry is one that might easily be overcome. It is one of the principal precautionary measures that should be taken in the interest of the grain-producing regions throughout the Continent of America." The bulletin proceeds to tell in detail of precautions that can be taken to reduce losses from grain rust.

MEDICAL SCIENCE

DISEASES OF THE WAR.

Of course, in the manufacture of—for example—high explosives, several dangerous substances have to be handled, and the industrial risks are greatly increased, while the fact that a large proportion of munition workers are drawn from classes previously quite unaccustomed to factory work of any kind makes the probability of ill effects still greater.

The diseases incident to what are called the "dangerous trades" arise from the handling or inhaling of a variety of poisonous or irritating substances, the over-use or over-strain of certain nerves or muscles in the use of the special machinery, over-concentration and, in general, exposure to unusual physical conditions.

A number of the metals are poisonous at some stage of their manipulation, amongst them antimony, used in burnishing rifle barrels, as well as in making many alloys, and in the cleansing of red rubber; arsenic, very widely employed in such different industries as tanning hides and making shot, making paints and oilcloth, plating dark metal and dyeing; brass, which is poisonous both by the fumes given off from it in its manufacture and by the mechanical action of its particles in lathe work. Gold and silver are among the harmless metals in themselves, but many of the processes connected with the use of gold are dangerous from the other materials used. Sulphuric acid, benzene, mercury, lead, and cyanide of pottassium are all used in various combinations with gold.

Lead, phosphorus and mercury are perhaps, the three most dangerous of the metals.

The poisonous fumes, gases and vapours are very many, and the same substance may appear as a solid, a dust or a fume, and in the state of fume or gas it may affect the worker

The Russian Debacle. A steadfast Russian soldier uses his rifle on runaways. He caught them in the act.

at home as well as in the factory if he lives in the near vicinity of his work.

COOL ROOMS.

Unless there is a free current of air in the room the atmosphere will always be stuffy and unpleasant, even though by the thermometer it may be low in temperature. But in very hot weather a certain amount of care should be taken to admit—so far as possible—only the coolest of the outer air, and to this end it is desirable to keep the windows and outer doors on the shady side of the house thrown wide open, while those on the sunny side should only be open (in the case of windows) at the top or bottom for a short distance. The sunny windows should be screened from the direct sun-rays by blinds, preferably outside "sun blinds," which leave a space between olind and glass. Where inner blinds or curtains are the only ones practicable a frequent spraying or sprinkling of them with cold water will help to keep the air in the room cool and fresh. Of course, as the day goes on and the sun gets round, the windows and doors must be adjusted to suit it, the above principles being followed throughout.

THE SICK CHILD'S NURSERY

It is of great importance that the room in which a child lies ill or convalescent should be suited to its purpose. The child is more impressionable, both mentally and physically than the adult, and it must have the most favorable surroundings if it is to make good progress.

The room should be bright and cheerful, but not crowded with furniture or draperies. It should be prepared or distempered a light color, and should have plenty on ventilation. It should be quiet, and therefore, other things being equal, it is usually best placed at the back of the house. If its aspect is sunny, arrangement must be made by means of curtains and blinds to be able to subdue or altogether exclude the light. But in convalescence sun and air are more helpful than medicines, and the sun will seldom need to be shut out altogether.

Light, cheerfully patterned curtains and draperies should be used, all of which must not only be washable but frequently washed. A fireplace is essential, and a coal or wood fire is much to be preferred to a gas stove.

The child's room is best at or near the top of the house, away from household noises and traffic. The little patient will get a great deal of its quiet-sleep when the house is still busy and noisy, and it is important that this sleep should be undisturbed. It should, however, never be out of earshot of some person at any time of the day or night. If no one actually sleeps in the same room an attendant should occupy the next room, and the doors of both rooms should be left open.

CHILDREN'S JOINTS.

People who have to do with children will do well always to bear in mind that a child is not exactly like a small-sized adult. The child is a creature in process of formation; his bones are soft and "green," easily warped and made crooked; his joints are loose fitting and his cartilages elastic. It is dangerously easy to injure a child by playing with him roughly, and especially dangerous is it to lift children by the limbs. A favorite trick with some people is to catch a child by its hands and swing it in the air, and it is easy in this way to dislocate the small weak wrist. If the child must be lifted by the arms at all it should be grasped round the forearms below the wrist, the strain being thus divided between the shoulders and elbow—both better fitted for it than the wrist. Better still is it not to do the trick at all.

It is of grave importance that all young children should have plenty of of suitable active exercise whilst their bones, cartilages and joints are forming and knitting. Exercise and strain of a natural kind are necessary to stimulate the process, if this stimulus is withheld it slackens and diminishes. But the strain should never be excessive, nor should it be confined in its application, but should, as far as possible, call on the whole frame in turn.

INSECT BITES.

Many people are troubled with septic wounds and acute inflammations which started but as the merest bite or sting, of some mosquito or stinging fly. In all these cases the trouble is not the actual wound inflicted, but the poison injected, being either the natural secretion of the insect or some contamination of which the insect is but the carrier. Once this bite or sting has occurred the best treatment consists in the immediate application of a piece of line or linen squeezed out in a strong hot solution of bicarbonite of soda, or of a few drops of diluted ammonia with a hot fomentation on top of it. Afterwards the part should be repeatedly fomented, and under no circumstances rubbed or scratched. Far better, however, than treatment after the event, is prevention, where that is possible. Many substances, especially certain essential oils, are very distasteful to insects and will generally keep them off. Three useful mixtures for dabbing on the face, neck, ankles, hands and wrists, are the following, the recipes for which recently appeared in "Topical Therapy"; Mix together half-an-ounce of oil of cedar, 2 drachms of kerosene, 1 drachm of camphor, 1 drop of oil of birch tar, and 4 ounces of rectified spirit. To this mixture add two ounces of concentrated compound infusion of quassia.

Another useful application consists of a mixture of 3 drachms of glycerine, 5 drachms of camphor water, and half a drachm of hydro-chloride of quinine. A third mixture consists of 20 minims of oil of eucalyptus, 10 10 grains of salicylic acid, 2 drachms of spirits of camphor, half an ounce of solution of ammonia, and one and a half ounces of soap liniment.

SUNLIGHT AND THE EYES.

Strong sunlight, especially when reflected from a light-colored surface, is often extremely trying to the eyes, and if the latter are already weak great discomfort may be caused by it. Of course, if we all lived an outdoor life all the year round our eyes and other organs would probably become used to more extreme conditions, but life within the semi-darkness of the house is quite certain to upset the natural adaptation. In consequence we often have to follow up an unnatural habit of life with another unnatural precaution, and against the glare of a strong sun some such protection as slightly-tinted glasses, a dark veil, or at least a wide and shady hat is usually necessary.

Where the conditions are severe in the extreme, as in the Alps and in the Arctic regions, where the fierce sun shines down on unbroken snow, actual blindness occurs, and is known by the name of snow blindness. It is usually only temporary, and may be avoided by the use of dark glasses, but it is one of the dangers against which mountain climbers have to provide.

SUNDAY AT HOME

IT'S SUNSHINE AND MUSIC.

A laugh is just like sunshine,
It freshens all the day,
It tips the peak of life with light,
And drives the clouds away;
The soul grows glad that hears it,
And feels its courage strong—
A laugh is just like sunshine
For cheering folks along!

A laugh is just like music,
It lingers in my heart,
And where its melody is heard
The ills of life depart;
And happy thoughts come crowding
Its joyful tones to greet—
A laugh is just like music
For making living sweet.

WE ARE THE LORD'S.

I know whom I have believed, and am persuaded that he is able to keep that which I have committed unto him against that day.—I am persuaded that neither death, nor life, nor angels, nor principalities, nor powers, nor things present, nor things to come, nor height, nor depth, nor any other creature, shall be able to separate us from the love of God, which is in Christ Jesus our Lord.—Those that thou gavest me I have kept, and none of them is lost.

The Lord taketh pleasure in his people.—My delights were with the sons of men.—His great love wherewith he loved us.—Greater love hath no man than this, that a man lay down his life for his friends.

Ye are bought with a price: therefore glorify God in your body, and in your spirit, which are God's.—Whether we live, we live unto the Lord: whether we live therefore, or die, we are the Lord's.

POT TO THE LAND!

The walls of the synagogue resounded His voice, the Sabbaths beheld the feeding of famished crowds, the treasures of wisdom were unfolded by the unwearied beneficence of the Son of Man Lo! His greatness shines through His humility. The voice of Jonah, like a blast from the trumpet of God, pealed through the streets of Nineveh, and made its palaces tremble. Jonah impressed his greatness in the minds of the people. But, behold! a greater than Jonah is here. Soloman was a name for glory, the temple blazoned forth his name—but, behold, a greater than Soloman is here.

In the synagogue one day, He opened the roll where it is written, "The Spirit of the Lord is upon me." The literature of the old prophet tells the story of the young prophet. All eyes were fastened upon Him. He robed Himself in splendor that poverty could not hide, in power that demons could not thwart, in beauty that drew the weary to Him, in majesty that made Him conqueror.

Come, let us sit at His feet. When we see power, we accord not a few facilities, and feel safe. His discourse is high, He speaks of the Highest the All Power, the Absolute the I am what I am. He speaks of Himself. "I am the Light of the World, I am the Good Shepherd, I am the Bread of Life. Filled with the fullness of joy."

We read distinctly that He taught with authority. "The Father hath given to the Son to have life in Himself and hath given Him authority to execute judgment, because His is the Son of Man. All things are delivered unto Him. By issuing the final mandate, He virtually annulled the Jewish ritual, and repealed the whole economy, casting it back among the things that were. Great signs followed; what they asked in His name. "That will I do." The mastery of Jesus was freedom; slavery to Him was liberty. No task too hard, no difficulty too great no sorrow too heavy, too low down, too far gone.

Ho! To the land! Shadowed by the wings of angels, sacred to the residence of God. Is it not holy? Did He not do all His mighty works there? It is the glory of all lands. "If I forget thee, O Jerusalem, let my right hand forget her cunning." We mark His footsteps on the sand; we dine with Him on the beach, and the fish and bread are sweet. O, far-famed Galilee!

"It is not that the wild gazelle
Comes down to drink thy tide,
But that 'twas He who saves from hell,
Oft wandered by thy side."

FORGIVE AND FORGET.

Forgive and forget—it is better
To fling every feeling aside,
Than allow the deep cankering fetter
Of revenge in thy breast to abide.
For thy step through life's path shall be lighter
When the load from thy bosom is cast,
And the sky that's above thee be brighter
When the cloud of displeasure has passed.
Though the spirit swell high with emotion
To give back an injustice again,
Let it sink in oblivion's ocean,
For remembrance increases the pain.
—Ilion.

SHE HATH DONE WHAT SHE COULD.

This poor widow hath cast in more than they all.—Whosoever shall give you a cup of water to drink in my name, because ye belong to Christ, verily I say until you, he shall not lose his reward. If there be first a willing mind, it is accepted according to that a man hath, and not according to that he hath not.

Let us not love in word, neither in tongue; but in deed and in truth.—If a brother or sister be naked, and destitute of daily food, and one of you say unto them, Depart in peace, be ye warmed and filled, notwithstanding ye give them not those things which are needful to the body, what doth it profit?—He which soweth bountifully shall reap also bountifully. Every man according as he purposeth in his heart, so let him give; not grudgingly, or of necessity; for God loveth a cheerful giver.

When ye shall have done all those things which are commanded you, say, We are unprofitable servants: we have done that which was our duty to do.

INQUIRY.

(By the late Rev. H. F. Miller.)

I inquire in His temple, full of strength and beauty. I ask how far is the knowledge of God from the love of God; do oceans roll between, or are they joined as continents are joined? I inquire of man, and ask, whence? Yesterday I was nothing; now I am colossal, limited and weak. "Too much noise deafens, to much light dazzles, distance or nearness impede the sight, excessive length or brevity of speech readers it obscure, too much truth appals." Man is in a sempiternal despair of ever knowing either the beginning or the end.

I may come into a congregation and be counted an addition of one; nay, I may have potentialities which make me an important factor in the mission and meaning of life. But when I come into the presence of God, I am in the measureless infinity. I join His company, but I add nothing to Him. I am absorbed, encompassed, enveloped, all functions are suspended, there is no faith, no hope, no prayer, no praise, but the end of all these has been reached. The moon reflects the light of the sun, but I do more—I felicitate, I correspond, I am a child at home. I become simply a receiver: a rever in the fulness of inconceivable delight.

I stand at the door and ask why is my knowledge, stature, powers, numbers limited? I stand at the door of the universe and wonder at the infinity of world, each having its own firmament, its planets, its earth, in due proportion. I am lost in these wonders, astounded alike at the smallness of man and the greatness of God. I am nothing in respect of infinity, everything in respect of non-existence. I don't exist, I live, I am from God! this one fact lifts me among the immortals. In my true mission I occupy a small space. Who placed me here, by whose order, by whose management has the place and time been destined to me?

I have learned what the sages never knew. Jesus Christ is the aim of all and centre of all. He who knows him knows the reason of all things, and the quality of all things. Sea water is sale, the air is fresh, the rose is sweet, and joy is of God!

I grasp Thy strength, make it mine own,
My heart with peace is blest;
I lose my hold, and then comes down
Darkness and cold unrest.
Let me no more my comfort draw
From my frail hold of Thee,
In this alone rejoice with awe:
Thy mighty grasp of me.
H. T. Miller.

Useful Curtain Suggestion.

The small metal office clips so handy for keeping papers pinned together will be found exceedingly useful for clipping up the curtains at night. The advantage over pins in preventing curtains from blowing out the screenless windows at night is that the clips leave no telltale holes.

Happy is the man who can strike a happy medium between being as good as he thinks he is, and as bad as his wife thinks him.

MARKET REPORTS

TORONTO MARKETS.

FARMERS' MARKET.

Dairy Produce—		
Butter, choice dairy	00 45	30 48
Eggs, new-laid, doz.	0 45	0 56
Cheese, lb.	0 00	0 29
Do., fancy, lb.	0 00	0 35
Dressed Poultry—		
Turkeys, lb.	0 28	0 38
Fowl, lb.	0 25	0 25
Spring chickens	0 30	0 35
Ducks, Spring, lb.	0 00	0 28
Fruits—		
Apples, bkt.	0 50	0 80
Do., bl	3 00	5 00
Blueberries, 11-qt. bkt.	0 00	2 00
Thimbleberries, box	0 17	0 18
Rhubarb, doz.	0 25	0 30
Peaches, Can., bkt.	0 50	1 00
Pears, bkt.	0 50	0 75
Plums, bkt.	1 00	1 25
Cantaloupes, bkt.	0 50	0 75
Vegetables—		
Beans, small measure	0 00	0 15
Cucumbers, doz.	0 20	0 30
Cauliflower, each	0 15	0 25
Corn, dozen	0 00	0 25
Carrots, doz. bchs.	0 00	0 05
Celery, per head	0 00	0 05
Cabbages, each	0 05	0 10
Gherkins, bkt.	1 00	1 50
Egg plant, bkt.	0 65	0 75
Lettuce, doz. bchs.	0 20	0 30
Do., head, doz.	0 50	0 90
Vegetables marrow, each	0 05	0 10
Melons, salmon flesh, bkt.	0 50	0 60
Onions, bundle	0 00	0 10
Do., small bkt.	0 00	0 50
Do., pickling, bkt.	0 00	0 90
Do., silver skins, bkt.	1 25	2 00
Potatoes, bag	1 65	1 75
Do., peck	0 00	0 35
Pumpkins, each	0 10	0 25
Radishes, 3 bunches	0 00	0 10
Sage, bunch	0 05	0 10
Squash, each	0 10	0 25
Savory, bunch	0 05	0 10
Turnips, peck	0 00	0 15
Tomatoes, 11-qt. bkt.	0 50	0 60

MEATS—WHOLESALE.

Beef, forequarters, cwt.	$12 00	$14 00
Do., hindquarters	18 00	20 00
Carcases, choice	15 50	17 50
Do., common	13 00	14 50
Veal, common, cwt.	9 50	11 50
Do., medium	12 50	14 50
Do., prime	19 00	21 00
Heavy hogs	19 00	20 00
Shop hogs	23 00	25 00
Abattoir hogs	24 00	25 00
Mutton, heavy	10 00	12 00
Do., light	17 00	19 00
Lambs, Spring, lb.	0 24	0 26

TORONTO CATTLE MARKETS.

Cattle, choice	10 50	12 25
Butcher cattle, choice	10 00	11 00
Butcher cattle, medium	8 50	9 50
Butcher cows, choice	8 00	8 50
Butcher cattle medium	7 25	7 75
Butcher cattle canners	5 25	6 00
Butcher bulls canners	6 00	9 25
Feeding steers	8 25	9 25
Stockers choice	7 50	8 50
Stockers, light	7 00	7 75
Milkers, choice	75 00	125 00
Springers, choice	75 00	135 00
Sheep, ewes	10 00	12 00
Bucks and culls	7 50	8 50
Lambs	15 00	16 00
Hogs fed and watered	19 00	
Calves	10 00	15 50

OTHER MARKETS.

WINNIPEG GRAIN EXCHANGE.

Fluctuations on the Winnipeg Grain Exchange yesterday were as follows:

	Open.	High.	Low.	Close.
Oats—				
Oct.	0 66	0 66⅝	0 66	0 66⅝
Nov.	0 65	0 65⅝	0 65	0 65⅝
Dec.	0 63½	0 63⅝	0 63¼	0 63⅜
May	0 66⅝	0 66⅞	0 66⅝	0 66⅞
Flax—				
Oct.	3 17¼	3 17¼	3 13	3 13
Nov.	3 15½	3 15½	3 10	3 10
Dec.	3 11	3 11	3 06½	3 06¾

MINNEAPOLIS GRAIN MARKET.

Minneapolis.—Corn—No. 3 yellow, $1.30 to $1.31. Oats—No. 3 white, 56¾ to 58½c. Flour—Unchanged. Bran—$30 to $31.

DULUTH GRAIN MARKET.

Duluth.—Linseed—$3.30 1-2 to $3.32 1-2; to arrive, $3.30 to $3.31 1-2; December, $3.27 5-8 asked.

CHEESE MARKETS.

Utica, N. Y.—Last week's price for cheese prevailed at to-day' session of the Utica Dairy Board. The total sales aggregated 29 lots of 2,400 boxes, including both large and small cheese. The price was 25c a pound. Butter sold at 43c.

BUFFALO LIVE STOCK.

East Buffalo, Report.—Cattle, receipts 200; steady.

Veals, receipts 200; steady, $7 to $16.25; hogs, receipts 3,500, slow; heavy, $19.85 to $20; mixed, $19.60 to $19.85; yorkers, $19.50 to $19.75; light yorkers, $18 to $18.50; pigs, $18 to $18.25; roughs, $18.50 to $18.75; stags, $16 to 17. Sheep and lambs, receipts 1,000; active, lambs $12 to $18.60; others unchanged.

CHICAGO LIVE STOCK.

Cattle receipts 11,000.
Market weak.

Beavers	7 20	17 50
Western	6 35	15 00
Stockers and feeders	6 15	11 25
Cows and heifers	5 00	12 50
Calves	9 50	15 75
Hogs, receipts 8,000.		
Market slow.		
Light	18 15	19 30
Mixed	18 15	19 50
Heavy	18 15	19 45
Rough	18 15	18 35
Pigs	15 25	18 10
Bulk of sales	18 50	19 35
Sheep, receipts 23,000.		
Market strong.		
Wethers	9 00	12 75
Lambs, native	12 25	18 25

Double Stars.

A double star is one which consists of two stars lying close together and revolving in an orbit. For some time Professor Comstock, astronomer of the University of Wisconsin, has made a particular study of this feature in the heavens.

A new phenomenon is a double star which he noticed was that two bright stars "wobbled" and did not have the usual steady appearance. At length the conclusion was reached that this condition was caused by a dark star in close proximity to the two bright stars. Such a situation was considered impossible at first, but analysis revealed that the two bright stars could thus exist with a dark star without breaking down. Although the dark star has never been seen, there is sufficient proof to justify the belief that it is the cause of this double star's peculiar behavior. It revolves about the double star about once in a little less than twelve years.

Tiny and Tireless.

Heat is not a substance. It is merely the vibration of the molecules composing the material heated. Every material is made up of molecules and each molecule is composed of atoms. Molecules of matter are held together by a force called "cohesion."

At absolute zero, colder yet than liquid air, or minus 459 degrees, all molecules are at rest. As the temperature rises the molecules begin to move to and fro. The higher the temperature is raised the quicker and faster swing the molecules.

Molecules are so minute that there are about one sextillion of them in a cubic inch of air. These at freezing temperature oscillate back and forth at the rate of 1,476 feet a second. The average length of their path between oscillations is about one two hundred and seventy-seven thousandth of an inch. Each comes into collision with its fellows about 5,000,000 times a second.