

writes thus: "Heretofore many acres of wheat were lost on the upland by freezing out, and none would grow on the lowland. Now there is no loss from that cause."

This may be accounted for in two ways: the drained land is not subject to so great changes of temperature as that not drained, and in the former the roots of the grain go much deeper and take a stronger hold in the soil than in the latter.

It is with great difficulty that our practical farmers can be persuaded that thorough drainage will prevent the bad effects of long-continued dry weather; yet such has proved the case both in practice and theory. All will admit that drains will freely admit air throughout the soil to the depth of the drain, and that this air always contains, even in the driest weather, a large amount of moisture; the air in its passage through the soil will always part with more or less of its moisture, and thus prevent the soil from becoming too dry. From various experiments Schubler found that the ability of soils to absorb moisture from the atmosphere had been much underrated. He found by experiment that one thousand pounds of the following kinds of soil would absorb water from the air in the following proportions:

Loamy soil.....	21 pounds.
Clay loam.....	25 "
Pure agricultural clay.....	27 "
Fertile soil.....	18 "

His plan was to carefully dry the soil in an oven and expose it to the atmosphere for 12 hours, and after repeated trials, he gives the above as the average of the results. When we consider from the above that clay loam will absorb one-fortieth of its own weight of water from the atmosphere every twelve hours, it becomes quite an important consideration to the farmer.

In fact, of such great importance is this one advantage, that it will beyond doubt pay to drain upland of all kinds. Thousands upon thousands of acres of upland have been drained in England, and whole estates of several thousand acres are being drained every year; and with our much more changeable climate there can be no doubt but that the effect would be much greater here, the main drawback being the high price of labor and material here when compared with the same items in England. But while we have so much wet land which needs draining, it is not worth while to consider the question of draining upland at present, but it requires neither a prophet nor a son of a prophet to predict that sooner or later all of our land must be drained in order to bring it up to the fullest state of production.—*Ger. Telegraph.*

BONE MEAL FOR COWS.—Within the last year or two, farmers in this section have experienced considerable trouble and inconvenience from the sterility of their cows. It is believed that less cows are with calf at the present time, in proportion to the number kept, than ever before at this season of the year. Many are inquiring for a reason, and for a remedy of the trouble. One farmer of experience and observation has given the bone meal to cows of this habit, as he believes with beneficial results. A gill is given with other feed three times a day every other week. He thinks it has also proved beneficial with sick animals. A heifer lost her appetite, and grew weak until she lost the use of her legs. Bone meal was administered, and in a few days the heifer was on her feet, and was soon apparently as well as ever. These facts are stated to draw out the opinions and knowledge of those better informed than ourselves, rather than as a statement of value of itself.—*Ex.*

PRESERVATION OF EGGS.—As will be seen from the following paragraph, science has been applied to the preservation of eggs, and if the method proves successful, a great benefit will be gained: The *Journal de Pharmacie de Chimie* contains an account of some experiments by M. H. Violette, on the best method of preserving eggs, a subject of much importance to France. Many methods have been tried; continued immersion in lime-water or salt-water; exclusion of air by water, saw-dust, etc., and even varnishing has been tried, but respectively condemned. The simplicity of the method adopted on many farms, viz.: that of closing the pores of the shell with grease or oil, had, however, attracted the attention of the author, who draws the following conclusions from a series of experiments on this method: Vegetable oils, more especially linseed, simply rubbed on the egg, hinders any alteration for a sufficiently extensive period,

and presents a very simple and efficacious method of preservation, eclipsing any methods hitherto recommended or practiced.

TO PREVENT CATTLE JUMPING FENCES.—The following singular statement was made at a late meeting of the American Institute Farmers' Club, New York:—"To prevent steers from jumping fences, clip off the eyelashes of the under lid with a pair of scissors, and the ability or disposition to jump is as effectually destroyed as Samson's power was by the loss of his locks. The animal will not attempt a fence until the lashes are grown again. Of this we are informed by Samuel Thorne, the great breeder of Dutchess county, who assured us that he had tested it upon a pair of breachy oxen. As it is of great value to him, he hopes it will be tried by others."—*Farm, Stock and Poultry Journal, Chambersburg, Pa.*

The Rotation of Crops.

The rotation system, which good tillers fix, Embraces five seasons, and sometimes full six; When one crop succeedeth, through many long years, Each harvest decreaseth and dwaneth the ears.

If herds of neat cattle or sheep be thy care, Then grass in rotation must form a good share. When corn, barley, clover, and turnips, and wheat

Comprise the rotation, field peas will be meet.

Ere plowing and sowing, the tiller should know What crops the ground liketh the better to grow. First, break up thy grass land plant it with corn; The field, the next season, let barley adorn.

Succeeding the barley, sow buckwheat or oats; Then harvest a pea crop to nourish your shotes. Oft plowing and teasing and weeding the ground, With liberal compost scattered around,

And sprinkled with ashes, to make the land sweet, With lime and some bone-dust to fatten the wheat.

The next in rotation a crop of red clover; When blossoms are fragrant then let the plow cover.

A six-years' rotation now beareth the sway, And showeth the tiller a progressive way; A six-years' rotation will cattle increase— Will multiply bushels and debtors release.

A six-years' rotation, when fairly begun, Will harvest two bushels where now groweth one.

In six years' rotation, as all will agree, Two years' yield of clover is better than three.

When poor soil needs succor, to keep the land clean, Grow clover and sowed corn to turn under green; But where fertile muck and light soils abound, Arrange the rotation as suiteth the ground.

To Keep Milk Sweet.

A teaspoonful of fine salt, or of horse radish, in a pan of milk will keep it sweet for several days. Milk can be kept a year or more as sweet as when taken from the cow by the following method:—Procure bottles, which must be perfectly clean, sweet and dry; draw the milk from the cow into the bottles, and as they are filled immediately cork them well, and fasten the corks with pack thread or wire. Then spread a little straw in the bottom of a boiler, on which place the bottles, with straw between them, until the boiler contains a sufficient quantity. Fill it up with cold water, heat the water, and as soon as it begins to boil draw the fire and let the whole gradually cool. When quite cold take out the bottles and pack them in saw-dust, in hampers, and stow them away in the coolest part of the house.—*Southern Farmer.*

FULTON AGRICULTURAL FAIR.—The Fulton County, Ills., Agricultural Society will hold its annual Fair at Canton, October 11th, 12th, 13th, and 14th. Entries are free and open to the world. The premium list is on a more magnificent scale than that of any other country society in the United States, so far as we have noticed. We append a few specimens: Fastest trotting horse, mare or gelding—best 3 in 5, 1st premium, \$500; 2nd premium, \$100; 3rd premium \$50.

CARROTS FOR HORSES.—The value of carrots for horses is thus stated in Youatt and Spooner's valuable work on the horse, and similar statements are made in other horse books. They say:

"The virtues of this root are not sufficiently known, whether as contributing to the strength and endurance of the sound horse, or the rapid recovery of the sick one. To the healthy horse they should be given sliced in chaff. Half a bushel will be a fair daily allowance. There is little provender of which the horse is fonder. The following account of the value of the carrot is not exaggerated: This root is held in much esteem. There is none better nor perhaps as good. When first given it is slightly diuretic and laxative, but as the horse becomes accustomed to it, these effects cease to be produced. They also improve the state of the skin. They form a good substitute for grass, and an excellent alternative for horses out of condition. To sick and idle horses they render grain unnecessary. They are beneficial in all chronic diseases connected with breathing, and have a marked influence upon chronic cough and broken wind. They are serviceable in diseases of the skin, and in combination with oats they restore a worn out horse much sooner than oats alone."

As the writer of this cannot expect to add anything to the weight and importance of the statements made by the high authorities above quoted, it is only necessary to say that, after growing and feeding carrots many years, he has not the least doubt that it will pay every good farmer to provide a good supply for his horses while they are kept on dry feed. Not that it is necessary to always feed half a bushel a day, for in many cases one or two bushels a week will answer a good purpose; but in the spring when many give them physic, no doubt half a bushel a day can be fed to good advantage. The great point is to have enough, so as to feed all that experience and good judgment shows the horse needs to preserve and promote health and keep in good condition.

It is much to be regretted that the big guns in agricultural humbug of this vicinity are doing their utmost to injure the Provincial Exhibition, and the reputation and position of the Provincial Board of Agriculture. Politics is at the bottom of it.

CALIFORNIA HORSES.—Two Yankees have started a drove of horses from Los Angeles to the eastern world, to be driven 850 miles to Salt Lake, then put upon the cars for the east. They were raised on the ranches near Los Angeles, and cost the Yankees about \$20 a head. If this venture succeeds an unlimited supply can be had from the same quarter, one single rancher having 3000 more of the same sort to sell. It is but a few years since droves of horses were taken across the plains from Illinois to San Francisco.

DURABILITY OF POSTS.—A southern correspondent of the *Prairie Farmer* sets cypress posts so tall that when the bottom decays in the ground they are reversed—a practice not uncommon in the north. He has found in every instance that the tops thus set last much longer than the bottoms—often more than twice as long. We suggest whether the thorough seasoning of the tops before they are put into the earth has not largely to do with the durability. Posts set green are a long time in drying, and often become partly sap-rotten before the seasoning is completed, if ever done; but the upper ends seasons quickly, become hard and sound, and when set in the earth resist the action of influences producing decay for a much longer time than partly decayed posts. Try the upper end first, and observe the result.

Youth's Department.

We would feel obliged to our numerous contributors to this department of the paper, if they would endeavour to confine themselves to subjects as closely allied to the farm and garden, and whatever is connected with agriculture, as possible; as it is to these subjects our paper is devoted, being unsectarian and non-political.

Answers.

TO ENIGMAS IN LAST NUMBER.

1—Hum-bug. 2—Im-port-ant. 3—But-ter-fly. 4—Thou-sand. Dam-age 6—Pro-test-ant. Correct answers to 4, 5 and 6 by J. Lawson, Elginburgh. The others not answered.

TO CHARADE.

"Farmer's Advocate." Correct answer by S. Lawson, Elginburgh.

TO RIDDLE.

The letter "S." Correct answers by J. F. Kane, Maidstone; Miss Selby, London; and J. Lawson, Elginburgh.

TO PUZZLE.

T. F. Kane, Maidstone, sends an explanation of the Puzzle:—"The horse's head turned to his manger."

TO ANAGRAM.

Correct answers by Reuben Mozier, Pelham; J. F. Kane, Maidstone; and Thomas Selby, London.

Tobacco and tobacco reek
If you are well will make you sick;
Tobacco and tobacco reek
Will make you well if you are sick.

TO FLORAL ANAGRAM.

1—Petunia. 2—Syringa. 3—Verbena.—
4—Tulip. 5—Snapdragon. 6—Dandelion.—
7—Anemone. 8—Violet. Correct answers to 4 and 8 by J. F. Kane; to them all by Miss Minnie Selby, London.

Anagram.

Rehet si a sourilog danl no ghil,
Arf obvea het raryts ysk;
Lal singth reeth era raif dna ribgth,
Andl fo eaubty—Dnal fo thigl.

Riddles.

I am never seen, but talked of oft,
And for me all men list;
Care, joy and grief I often bring,
Yet never did exist.
And what is strange, to me some look
For better things in store.
While others, in a different mood,
Dread my approach the more.
And near, however I may come,
I never do appear,
Yet still without me could not have
Either day, week, month or year.
Good men look for me all, with hope;
All guilty men with dread.
Yet while all wish me for to see,
I seem only live when dead.

I am never found with grief,
Yet always with sorrow;
Keep company with yesterday,
Shun always to-morrow.
I dwell with the present,
But never with the future,
Give strength to all nourishment,
Yet yield nothing to nurture.
Am found not in earth,
But seen in the skies;
Ne'er accompany the truth,
But found always with lies.
In the sea I am met with,
But not in the water;
Am at work with the fisherman,
But give no help to his daughter.
Am a part of all pieces,
Dwell not in a whole;
Not found in the body,
Yet exist in the soul.

Every lady in the land
Hath twenty nails upon each hand;
Five and twenty on hands and feet,—
This is quite true, and fit, and meet.