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BREEDING PAPERS.

NO. I.

The lightest, pleasantest and most profitable occupation on a farm is the breeding of the stock, and yet there is no department pertaining to agriculture, conducted in as slovenly a manner by the majority of farmers.

The nearest male, be it bear, bull, jack or stallion, has the preference. In order to better their circumstances, our Kansas farmers should remember the principle which governs in the rich and prosperous states of Kentucky, Tennessee, Ohio, etc., the practice of which has raised the farmers of those communities into comfortable and often luxurious circumstances.

The principle I would impress, nay, wish to brand indelibly upon the mind, is, that in the breeding of all animals there should be an aim continually before the mind of the breeder, of a given and improved type of the animal he is breeding, which he should strive to reach. And this aim should not be confined to a single effort, but should continue through a series of years, so his flocks and herds may, in time, present a uniform, and as nearly as may be, a thoroughbred type.

In the breeding of cattle for beef use nothing but Durhams; for butter, Jerseys; for cheese, Ayrshires; for all combined, for the farmers cow, Holsteins. Breed to thoroughbred males whenever procurable. By pursuing this plan the farmer will wonderfully soon raise his stock to a pure-bred type; he will enhance his profits and his reputation, and add to his enjoyment of life.

Probably there is no animal raised on the farm with as little objective foresight as the horse, and yet, individually, he is the most valuable of stock, and as capable of an improvement and of an increased value as anything raised.

Farmers, breed your horses for a purpose, try and get good mares, it is just as easy and cheap to raise good colts, and, dear me! so much more profitable. Make up your mind what your mares are best fitted to produce; if you have a mare of large size and no style, she should be bred without question to a Clydesdale or Norman stallion (bred to thoroughbred, the half-breds cannot stamp their progeny with the characteristics of the breed). If she has size and style and action, try and raise a stylish coach or carriage horse. If she be smaller, with style, or simply with action, breed her to raise a fast and stylish road horse or trotter. If she be small, no style nor action, or inferior in any way, don't breed her. Don't breed any half pony mares while you can get a good American mare as cheaply as you can at present.

If you have a mare you are bound to breed and she does not answer any of the first descriptions, raise a mule, it won't pay you to do anything else. Remember the heavy draft, the stylish carriage horse, the stylish or speedy roadster, perhaps trotter, all sell quick for money, sometimes big money. The inferior animal never sells except at a loss to his breeder and owner. I may draw the attention of the readers of the FARMER to this subject again.

N. A. T.
THE KANSAS FARMER AND AMERICAN YOUNG FOLKS sent postage paid one year for \$2.00.

DISEASE AND DECAY. Something About the Germ Theory.

[This paper and the one to follow on the same subject, are condensed from a lecture first delivered under the title of "A Little Leaven," at Hiawatha, last March. The subject seemed interesting and comprehensible to those present, and it is here given to the readers of the FARMER in language as little technical as possible.]

NO. I.

Perhaps the most brilliant achievements of modern times have been the discoveries of Pasteur, the French chemist, that all phenomena of fermentation and putrefaction are biological rather than chemical processes. Before Pasteur, chemists generally held to the view propounded by Liebig, that fermentation and putrefaction were chemical processes analogous to combustion, wherein the splitting up of the molecules of one unstable compound caused such a "shaking of the contiguous molecule as to tumble it down also, causing its atoms to split into new groups; as for example, where common leaven or yeast causes the molecule of sugar to break up into alcohol and carbon dioxide.

About the year 1857, Andrew Crosby, an Irish professor and experimenter, announced that he had succeeded in creating, by his own act, living beings. This he accomplished, it was said, by passing a current of electricity through certain pieces of brick enclosed in a glass vessel, and in which was sugar solution. The announcement created a great stir, and the Lamarckians, warmed with zeal kindled by "Vestiges of Creation," then recently published, presently proclaimed that *Monas Crobiani*, as the new-made stranger was christened, afforded proof positive that the physical forces of nature (heat, light and electricity), acting upon dead matter were amply sufficient to cause the beginning of life. The controversy was at first purely theological; Deists, Atheists, Pantheists and Positivists hurled at each other's heads such a deal of logical hot-shot as kept all scientific and religious literature of the day in an uproar. But it stimulated a vast amount of experiment. Others repeated the experiment of Crosby, and it was at length proved that the "seed" of *Monas Crobiani* existed in the bits of brick he had used, and the new creation was identified with some well-known forms of infusorial life, and the new species was stricken from the list!

But the controversy did not abate so easily. It invaded the French Academy of Science, and there divided that august body of savants into Pan-Spermatists (those who believe that all life springs from a seed or germ of its kind) and the Abiogenesisists (those who maintain that plasmic matter may evolve life, without seed or eggs). The latter was the larger division, and under the able leadership of the late Felix Archimede Pouchet, had nearly annihilated all opposition. The study of infusions of hay, meat, etc., became a rage, and the appearance of living forms in these under circumstances which seemed to preclude the possibility of seed or parental forms was a common affair. But one of the "conditions" which bore the same relations to this subject that "darkness" does to spirit materializations, was, that these infusions must come in contact with atmospheric air: a moment would suffice, or a tiny pin-hole was ample to admit the "vivifying," principles, and the infusions, would, in a few weeks, swarm with infusorial life.

Pasteur refused his adhesion to this doctrine and it was his stubborn opposition and persistent skepticism that has given to the world a new science, Zymology, and has worked a revolution in our ideas of fermentation, putrefaction and decay, and these new ideas have invaded the domain of pathology and medicine and worked a revolution there. The labor of Pasteur has cost him much, but his triumph is great. Twenty years of peering through the microscope have left him a half-blind paralytic, but he has solved the mystery of the silkworm disease, called *Pedrine*, and saved the silk industry of France. He has taught France how to prevent her wines and beers from spoiling, and the vinegar-makers of Orleans have learned from him how to arrest the decay of their vinegar.

Pasteur challenged Pouchet's experiments, claiming that mycelal and infusorial germs were diffused in the air, and that the moment's contact, or the pin-hole perforation sufficed for an abundant "seeding" of the fertile fields; drop these organisms found in his meat and vegetable juices. He repeated the bottle experiment of Pouchet, but the air which he permitted to enter the bottles containing the boiled infusions, had been passed over red hot pounded glass. The infusions kept sweet, but

showed no signs of infusorial life. He generated pure oxygen from red oxide of mercury, and permitted that to enter the bottles containing boiled infusions; no life was produced. He caused the air to traverse pumice-stone moistened with strong sulphuric acid; the infusions kept sweet. Air entered other infusion bottles that had bubbled up through molten nitre, through hot solutions of other strong oxidizing substances, and in his hands the infusions rarely gave signs of life.

"But," said Pouchet, "these chemicals not only destroy germs, but they disturb the polarity (?) of the air molecules so that life is no longer produced; contact with natural air is requisite."

Pasteur, remembering that meat did not readily spoil on top of Mount Blanc, climbed that peak with his bottles of infusion, there boiled them and permitted them to cool in the open air, then sealed them up and brought them to Paris, where they kept sweet, showing no putrefaction nor signs of decay, and no signs of microscopic life appeared within. He now boiled meat in a glass retort, drew out the neck into a long, small-bored tube which was reeled into a coil. The retort was then cooled gradually to prevent the rush of air through the coiled tube. His expectation was fulfilled, the air passing a long, narrow, spiral tube whose sides were moistened by the vapor of the boiling liquor, arrested the germs, and a germless air, uncooked and unchemicked, rested upon the contents of the retort! For months this retort with its contents so exposed to "natural" air was exhibited to the wondering "Abiogenesisists," its juices unclouded and its meat untainted, by the side of the bottles from Mount Blanc. No animalcules, no fungi, no taint, no smell appeared. The problem of fermentation, putrefaction and decay, those benign means by which organic plasma is prevented from undue accumulation upon the surface of the earth, was solved; they were shown not to be chemical processes, but as truly steps in the descending roll of the matter of life to its originals of carbon, oxygen, hydrogen and nitrogen, as any in the ascending scale by which these elements are combined to make up the tissue of the nobler forms of life.

The matter of life, it was found, did indeed exist in unstable equilibrium, its molecules cohering by slight affinities, still it is a combination that is in equilibrium, and as such it is insusceptible of spontaneous change. It required life to wrench those atoms from their mineral bonds and build the molecules composing organic tissue; so it requires life to tear down the organic structure and resolve its form and molecules into the original atoms of the mineral world. All organic tissue with which we are acquainted, if not "saved" or "resolved" otherwise by the arts of man or a rare accident of nature, is devoured by a minute world of organisms of whose existence we would be ignorant but for powerful microscopes. Upon our flesh after death a world of countless species of animals and plants will prey, devouring, digesting, assimilating and excreting it until we are again resolved into the air, water and dirt from whence we were built.

When Pasteur had triumphantly promulgated all this in substance before the Academy, the last of the French Abiogenesisists sought to confound him by a sort of Achillean puzzle.

"Will Monsieur permit me to ask him what becomes of the bodies of these little devourers? What is the ferment of the ferments? How are they resolved into air, water and earth, that the building side of the cycle may have this matter for rebuilding?"

Pasteur was puzzled. He did not venture any theory; he said, "I will try to discover; I have given the life history of the microzymes, you now ask me to tell what becomes of them after death, but I must ask you to wait until the next meeting of the Academy."

At the next annual meeting of the Academy, Pasteur was brought in upon a couch, for one side was now paralyzed. His answer was read to the question, "What is the ferment of the ferments?"

He showed that when barley is malted its starch is first converted into sugar by a soluble ferment which does not multiply; the sugar is then converted into alcohol and carbon dioxide (carbonic gas) by the growth and multiplication therein of several microzymes (little fungal) forms of vegetation; that when it no longer contained sugar or there was generated so much alcohol as to be incompatible with mycelal life, the dead bodies of

these yeast plants fall as a white curdy precipitate to the bottom. And now another race of beings spring into life. A scum gathers on top, and the microscope reveals that a forest of vinegar-making plants are now at work on the alcohol. When the alcohol is all converted into vinegar, the vinegar plant rests if the liquor is strong, for vinegar too is antiseptic when strong. But acetic acid being more volatile than water, the liquor is soon weakened, the "mother" or fungus again commences work on the vinegar. At length the vinegar is gone, the "mother" settles down to the bottom along with the dead yeast plant and now putrefaction sets up. Bacteria and ovibiontes begin the work of devouring the nitrogenous matter of the dead yeast plants and vinegar plants; the liquor becomes alkaline from escaping ammonia; putrid odors appear, such as belong to decaying meat.

When the liquor no longer contains food for these infusoria, cannibalism appears, the stronger eat the weaker. But a final residue die for lack of proper food, and their bodies fall to the bottom. This mass is attacked by visible moulds, and the bodies of these moulds again by bacteria in a reciprocal devouring until there is nothing left but a handful of mineral matter, and a few spores or seeds of the species that grew there, and when dried up these are borne away by the winds to be sown in fresh fields. So in the decay of meat. Its inner portion is first pervaded by rod-like bodies called vibrios; upon the outer portion is at work a form called bacteria, these devour as long as it is food for them, and at length, die while their bodies with a certain residue of matter not assimilable by these species, fall to the bottom; there they are attacked by moulds visible and invisible, until as before there is left a little carbonaceous matter, a little mineral salts, and the germs and earthy skeleton of the various infusorial species engaged in the work of destruction.

This is in substance the answer of Pasteur though other examples were given and other species named, and it certainly presents us with a striking example of the economy of nature, whose every molecule built up was scores destined not only to turn the wheel of life as it ascends in complexity, but also in its descent to the great mineral sea to do work as well. If in the midst of life we are in the midst of death, so in all death and decay we are in the midst of life.

But in our rapacity on this beautiful provision of Divine Providence, let us not forget to consider the contra side. It is to this provision that we find it so difficult to keep our dairy meat and bread and butter and eggs from being devoured, or, as our housewives say, "spoiled." The microzymas are not content to eat us after death, patiently waiting at the end of life's walk for our coming. No! They rush down its paths and grapple with the newborn babe in a life and death struggle for the survival of the fittest. They invade the folds of all the animals, ministering to all our wants, spreading there contagion, and death.

C. W. J.
Atchison, Kansas.

PLAIN TALK ON FAMILIAR SUBJECTS.

NO. VI.

Dyspepsia is aggravated by bad teeth, and bad teeth are induced by dyspepsia. The constant use of very hot or very cold food and drinks, or of sweet and sour things, may injure the teeth and cause their premature decay; but the injury resulting simply from the contact of solid or liquid substances of any kind with the enamel of the teeth is trivial in comparison with the injury caused by the exhalations arising from a foul stomach.

Dentists say if teeth are kept clean they will not decay. But how are they to be kept clean when there is a disordered stomach beneath them? Imagine one's mouth filled daily and nightly with the noxious gases that emanate from a fermenting cess-pool, and you have a faint conception of the odors that proceed from a disordered stomach, and constantly fill the mouth of a dyspeptic. Is it any wonder that teeth continually enveloped in such a fetid atmosphere should decay, and the gums become soft, spongy and sore? The teeth and gums like all other parts of the human system require exercise to give them strength and keep them in a sound and vigorous condition, and when children are taught to avoid crusty bread and hard baked bread, they soon get to dislike everything that obliges them to use their teeth and gums, except in the feeblest manner, for fear of hurting them; hence, these

organs become enfeebled and incapable of properly masticating and preparing food for the stomach; and it in turn becomes enfeebled and deranged and retallates upon the teeth, causing them to decay prematurely. There is a very intimate relation between the teeth and the stomach, and people with weak stomachs, as a general rule, have bad teeth, as those with bad teeth, have dyspeptic stomachs.

When the teeth are judiciously exercised on solid, wholesome food, the gums become firm and healthy, and every thing that goes into the mouth can be properly chewed before it passes to the stomach.

Have the stomach in proper working order and the salivary secretions become healthful, the breath sweet, the gums firm, and the teeth sound, and easily kept clean and white. Keep the teeth and gums in a healthy condition by proper and sufficient exercise, and the vital force that is expended in getting rid of the immense quantities of cold water the average men and women pour into them for the purpose of washing down their meals from inability to properly chew them, will be saved and used for the legitimate work of digestion. And thus will the teeth and stomach, instead of being at war, co-operate and aid each other.

W. P. E.
Topeka, Kansas.

A VISIT TO THE AGRICULTURAL COLLEGE.

Having an hour to spare, during a visit to Manhattan, we spent it interviewing the Agricultural college and farm. On leaving, we were strongly impressed with the fact that however much disposed to find fault with or underrate this institution some men may be, it would be both creditable and profitable to the farmers of the state if they made an effort to inspect their "University" often than they do.

We had not the fortune to meet a "professor," and ocular demonstration made a sorry show at satisfying our thirst for explanations, information and results of experiments. The farm and grounds have an air of thrift, good management and practical business. The new barn is in every way worthy of commendation and is a worthy model for the farmers of the state. Evidently all the internal arrangements were not complete, but quite enough to prove to old and new school farmers that stock of all kinds can better serve the purpose of their existence under such civilized conditions than having to pick their living from snow drifts in the shelter of a straw stack.

Nor, methinks would John Cattleman object to feeding in the dry warm house, or milking out of the snow and cutting now eastern if he had to tend three times as many head of stock.

The specimens of stock are mostly of the right kind for the ordinary farmer. I am convinced that it is time and money wasted to keep breeding and fattening the Texans, or even our greatly improved "natives," when from these Darhams and Aberdeens a thirty-three months steer can as easily be brought to dress ten to twelve hundred of prime beef as the grade Texan to nine hundred at four years old, but the grade from these two is better yet for beef qualities, and without in the least disparaging our present stock this is what the western stock-raiser must and will come to in the near future.

In hogs, the specimens are also good, especially the Berkshires. We expected to find a greater number and variety in this department and to learn what breed proves best for the average farmer. As with the cattle our experience gives the grade Berkshire and Poland-China the very first rank for pork-growing.

The building itself reflects great credit on some one, built and fitted up in a thorough and substantial manner with the view of having convenience, comfort, and health, it proves that the faculty have not soiled their fingers with a nuisance or "steal" of the public money and also that in a state so rich in material as Kansas no stock-raiser has an excuse for being without a good barn.

On reaching the Industrial Department, Mr. Stewart met and escorted us through the whole so that we made diligent use of his polite attentions in hearing and answering questions.

Verily the world moveth. The last generation knew nothing of such seats of Agricultural lore. And it seems to me the present one (in Kansas) barely appreciate the full value of those houses on the hill.

If the faculty and farmers would agree to hitch teams and pull true together there is hardly a limit to the improvements they can effect within the next decade.

A. M.
Wakefield, Kan.

HORTICULTURAL.

The January Meeting of the Douglas County Horticultural Society.

EDITOR FARMER: Our regular meeting for this month came upon the 19th inst., which proved to be one of those misty, drizzly days which have thus far been so characteristic of our winter weather. The attendance was consequently much less than usual. The election of officers was postponed until the February meeting. Vice-President Martin Sedgwick in the chair.

The first subject—Orchards—was discussed with a good deal of freedom. The general tone of discussion was directed to varieties best suited for market.

N. P. Denning remarked that while the Wine Sap and Genet were of excellent flavor, they sold in market for fifty cents per bushel, while the Ben Davis and Willow Twig sold for seventy cents, and he found that size and not flavor ruled in our markets.

Mr. Watt spoke in favor of the Rome Beauty as being one of the best apples for all uses on our list, and said if he was going to plant another orchard he would select only varieties which were large and of a red color. He had found that size and color sells an apple. He made this exception, however, the Lowell, and Cooper's Early White. This speaker has realized more for his fruit the present season than any other one, on account of shipping in bushel crates, nicely selected and well packed. His market was at Denver.

Secretary G. C. Brockett thought the Rome Beauty, though yielding a fine, showy apple on young trees, deteriorated badly on older trees.

J. McGhee thought differently, and cited his experience with this apple as out-doing both the Wine-Sap and Genet in productiveness and early bearing. His orchard he reported to be on rich, bottom lands.

Mr. Denning thought the Rome Beauty improved by top-grafting. Some members reported this apple as already past its prime, while others had it still solid and sound; still others spoke of its symmetrical shape, being as round and smooth as though turned in a lathe. The tree, too, was one of the best and trimmest trees to handle of all others in the nursery, being shaped much like an inverted umbrella, and all the trees follow the same pattern precisely.

Secretary Brockett reported all the fruit buds in a healthy, sound condition.

W. P. Denning inquired if it would do to plant blackberries now? Brockett and others thought it a favorable time, while others would add a slight mulch over them.

In answer to what varieties to graft for the Kansas market, the president replied that the Ben Davis still seemed to be the coming apple.

A committee of three was appointed by the chair to revise the premium list for the next county fair. One hundred and fifteen dollar was devoted to horticultural premiums in said fair.

Mr. S. B. Pearson was selected as chairman of that committee.

The president remarked the lack of permanent interest in our meetings by the young men and women of the county, and thought they should be encouraged to be present at every meeting, and take part in the proceedings.

After adjournment the society repaired to the physical science department to experiment with the telephone which now connects the city with the University. The conversation was kept up at a brisk rate for quite awhile, and the singing and joking afforded us no little merriment.

J. S. Lawrence, Kansas.

SOUTHEASTERN KANSAS HORTICULTURAL SOCIETY.

The fourth annual meeting of this society was held in Humboldt on the 9th and 10th of January, 1918. The attendance from abroad was good, and the people of Humboldt left nothing undone to make the meeting pleasant and profitable to all in attendance.

The address of welcome was delivered by Hon. John R. Goodin, after prayer by Rev. W. A. Dotson.

An essay was read by G. W. Ashby, on "The English Privet as an Ornamental Hedge Plant," which was discussed by many of those present. This is the common privet, and was thought to be the best plant known for the purpose named in the essay; not as a stock-proof hedge, however, for it is harmless.

The culture of bluegrass was also discussed, and from the experience given by several present, it was deemed a success in southern Kansas. It can easily be grown from seed sown in the early spring and in the fall, provided the season is reasonably good for growth, and the weeds are kept well mown for the first year until the grass gets a start. The proper amount of seed to sow is from two to four bushels per acre. No other grass or small grain should be sown with the bluegrass seed, and the mowing close and frequently the first season was considered very important.

The reports from those present proved that pears do well in many cases. None of the sweet varieties of the cherry succeed. The Wild Richmond is about the best. The Wild Goose and Miner plum are the only kinds beside the common wild ones that survive the attacks of the curculionid.

If those who are planting trees in Kansas will heed the advice of those who have expe-

rience in the state, they will save themselves much disappointment.

Garden vegetables received a portion of the society's attention. Celery seems to be one of the hardest things to grow that has been tried. Asparagus is easily grown and does best planted in long rows, the plants being set a foot apart and cultivated thoroughly. This is much easier and better every way than planting in beds.

Mr. James Truitt, of Kentucky, sent about ninety varieties of apples to compare with the Kansas specimens. As they had been gathered early in the fall they did not compare favorably. Mr. Truitt certainly deserves the thanks of the society, which was tendered him, for his interest shown in the horticulture of Kansas. He expects soon to be a resident of the state.

The constitution was so amended that the next annual meeting of the society will be held on the first Wednesday and Thursday of December, at such place as may be deemed best by the board of directors.

The society will also hold a fruit show next fall in connection with one of the fairs within the district. The district includes fifteen counties in the southeastern corner of the state.

The officers elected for the ensuing year are H. E. Vandeman, of Geneva, president; D. B. Skeels, of Galesburg, vice-president; G. W. Ashby, of Chanute, secretary; C. C. Kealey, of Humboldt, treasurer; C. H. Graham, of Le Roy, J. B. Torbert, of Humboldt, and S. B. Roth, of Chanute, trustees.

The evening meetings were enlivened with good music by some of the best musicians of the city.

H. E. VANDEMAN.

Geneva, Kansas.

ORCHARDS AND THEIR CARE.

I suppose anything that may be of benefit to those engaged in the raising of an orchard will be acceptable to the readers of the FARMER. Many methods have been recommended to prevent the ravages of rabbits, all more or less good so far as they go, but none of them sure protection. It is well to trap and kill all that can be reached in these ways, but one or two sharp, old fellows not caught, will, in a very short time, do an immense damage to a young orchard. The most effectual way is to wrap the body of the tree with something from the ground up from one and a half to ten feet. Some use old rags, some paper, some corn stalks; we find long blue grass the cheapest, most expeditious, and a perfect safeguard. Commence at the ground with the stem of the grass, wrap around until you reach the desired height, then double the end under the same as for binding grain. I presume there are more trees destroyed in orchards by rabbits than in any other way, and it is impossible to save an orchard without extreme watchfulness and care. A wise statesman has said, "Eternal vigilance is the price of liberty;" this is equally true of a great many other things, and also true that vigilance is the price of an apple orchard. We usually plant two and three-year-old trees, cultivate in corn beans or potatoes until the trees are from eight to ten years old. Most of the time throwing the earth to the trees thereby mounding up, which gives good drainage and also aids the trees to withstand the hard winds better than they otherwise would. After this my choice is to sow red clover as the trees will have become so large that a cultivated crop will not amount to much, there not being room to work well with a team, and the shade of the trees will prevent the growth of a crop. The clover will not make a stiff sod as do the grasses, thereby injuring the growth of the trees, but will have an opposite effect, keeping the ground loose and holding the soil sufficiently to keep from washing. The clover pays well in a good crop of hay and fine pasturage. Every few years, if thought necessary, the ground in an orchard can be broken up and harrowed down, it will then reseed itself.

In regard to wind-breaks, forest trees on the southwest of an orchard will give good protection. On the other three sides we think a hedge fence 12 or 15 feet high amply sufficient more than this high is an actual injury. We protect nursery stock by using a remedy recommended by Joseph Savage, of Lawrence, Pare apples, slice and cut into squares of 1/8 of an inch, sprinkle these with arsenic, scatter the pieces through the nursery or any place you may think a rabbit will get it. This is the *Sampson* that slays its thousands, and were it not for this they certainly would almost ruin the growing nursery stock. Where the apple with arsenic is put near the house or stock ranges, all should be taken up in the morning which the rabbits have not eaten through the night.

I am of the opinion that the commissioners of every county, where there are many orchards being planted, would do a wise act and one that would eventually result in a good revenue to the county, by offering the bounty the law authorizes them to do, 5 cents a scalp on the common rabbit, and every one who kills a jack rabbit should have 25 cents. The rabbits are increasing fearfully in this county.

Every one likes a good apple (and who does not) and wants them cheap, and plenty are more or less interested in the destruction of anything that militates against the growing of fruit of all kinds.

WM. PLASKET.

Baldwin City, Kansas.

SUCCESSSES AND FAILURES.

EDITOR FARMER: The days of another year are passing away and all of us are each day reminded there is something to be done.

What is best to do, or how to accomplish the most good, with the least care, expense,

toll and drudgery, are things in which all the industrial classes have a common interest.

It is not likely that all the readers of the FARMER will ever meet and listen to the sound of one voice, but pen and type can give the same information to all, and in this way we may gather the very best fruits of intelligent industry.

We are learning there is one right way of doing, that nearly always leads to success, and very many wrong ways that nearly always lead to failure; that it is better to learn and to know how to do a thing right, though the knowledge is gained in the rudest way or from the simplest mind, than to be able to polish our errors with professional theories.

It should ever be a pleasant task for those who eat bread "by the sweat of their face," to teach and be taught; and if one knows a better way to do than others, let the better way be made known in a plain, practical way. It seems as though no one should be so selfish as to keep useful knowledge hidden within themselves, the diffusion of which would be beneficial to all around.

There is no danger to individual or general prosperity from the giving of useful information, but there is danger from the selfish and sordid minds, that are ever planning and scheming for self, without regard for the rights of others.

It is this spirit, aided and assisted by men who were entrusted and paid by all the people to guard and protect their interests, that has created burdens under which industry has suffered great wrongs.

It will be well enough in the future to watch as well as work, and when our harvests are gathered home, our own families who have toiled and worked and watched through many weary days, may as well enjoy the fruits of their labor as to be compelled to give the greater part for tithes and taxes and forced interests to satisfy the demands of the able financiers, who have financed a country of bountiful harvests and plenty of all the comforts of life, into want and poverty, and many of its people into beggary.

But let us not be discouraged; better days are coming, and the power to right all wrongs, is in the ones interested; it will only require the united action of the ones who wish to do right to purify and straighten out the political condition of things; and the great varied resources of our country are a guarantee for future prosperity.

Our own state with its natural productive qualities, and recuperative powers, its advantages in raising grain, stock and fruit, give so much encouragement for future results, that we are apt to forget and neglect everything else, except the one thing we are in pursuit of.

The writer remembers well when guns, pistols and butcher knives were about the most common implements in Kansas, and these were used mainly to find out whether the colored people should be free or slaves in Kansas, and how the then territory was then looked upon by most people as a worthless desert, fit only for Indians, wild beasts and outlaws from civilized countries, and that all attempts at cultivation and civilization, would be entire failures. Later it was admitted that agriculture might be made a partial success along the Missouri river, but beyond this it would be useless to try. But people kept moving back; the more they saw of Kansas the more they wanted to see, and the farther they went the farther they wanted to go, and as far as they have gone they have had pretty good success considering the difficulties and failures people are subject to in all new countries.

Whether or not people will stop when they get to the "Sandy Desert" has not been fully decided, but the probability is that intelligent industry will profitably use much of the land that even at the present time is considered worthless.

In the early days the person who advocated the planting of fruit trees in Kansas was considered visionary, if he ever expected to gather fruit therefrom, but time and experience has proven that the best of fruit can be raised in abundant quantities.

It is true the failures and disappointments have been many, and the losses have been frequent and severe in all the branches of Agriculture and Horticulture they have been enough to discourage and dishearten the most persistent, but the lessons learned and knowledge gained through these misfortunes may be of more value than what was lost.

Enough has been learned to know it will be interesting and profitable to learn a good deal more, and we may hopefully look forward to the time, when the comforts and luxuries of life, that make homes peaceful and happy, will come easier than scanty necessities come now.

But let no one be deluded by the belief that prosperity will come without an effort of mind and body, or that any one is so great or powerful that they can ignore the great laws that rule and regulate all things, and then be successful.

One great cause of failure is the too frequent attempt to do things, as they are done some where else, where conditions of soil and climate are entirely different, the persistence in this has caused many to make up their minds that large tracts of really good land, are worthless for cultivation. They will plant things unsuited to the condition of surrounding circumstances, and the result is they make up their minds that the country is no account, while the skilled and practical grower knows it is only the fault of the person.

It is pretty well settled in the minds of those who have studied and worked and made in-

telligent practical application, that the elements of earth and air, can be utilized almost anywhere to supply the wants of man.

But as it is necessary to know how and what to do, it is a matter that should receive more attention than it does and if part of the time devoted to the study of uselessness and follies that lead to contracted views and dissipated habits, was given to the study of the laws of a Great Creator, as they are plainly written on all organic structure, there would doubtless be less adversity and more happiness and prosperity; more success and less failure.

LUKE MOORE.

Atchison, Kansas.

STOCK-FARMING IN KANSAS.

NO. II.

The system of stock-farming generally recommended and pursued here, involves merely the pasturing of stock out on adjacent unfenced lands near the farm or homestead, during the grazing season, and providing hay by mowing the wild grass of the prairies, and stacking sufficient quantities near the corral for winter use. Corn for winter feed is purchased from tenant farmers, and those who make grain-raising the chief end of farming. Very little farming, proper, is carried on by many who devote their attention to stock.

Let us combine the two systems and pursue the business systematically. The man who contemplates this, secures a productive farm in a good section of country, and the vicinity of Topeka presents advantages equal for this purpose to any other part of the state. The size of the farm may be made to square with the purchaser's means and his ability to manage, and the number of stock he proposes to handle. A hundred acres of corn, if well cultivated, will produce 4,000 to 6,000 bushels. Another portion of the farm will be devoted to millet, and a portion to wheat and other crops, which will be varied by circumstances, as no cast-iron rules are admissible to a well-conducted system of crop-growing. The point must be steadily kept in view that the principal use of the farm is to provide winter food for the stock, which is the selling and chief money crop. The corn should be cut off and the fodder secured from the weather by placing it in large shocks, before the tops become dry or touched by the frost. This will require considerable labor, but the amount and excellence of the feed this system will secure, will largely outweigh the expense of the work. This system of securing corn-fodder and gathering the corn-crop, recommends itself in the matter of safety to the stock, which, when allowed the range of dry stock-fields, are almost certain to gorge themselves with the dry husks, so as to cause the loss of several animals during the winter.

When the corn is intended for feeding to cattle, the labor and expense of husking may be dispensed with by pulling the ears from the stock and binding the fodder in convenient bundles. In preparing the ears for feeding, use sharp hatchets, chop off the hard, woody butt which attached the ear to the stock, and the ear into two or three pieces, then the husks, preserved from the weather and the corn, are mixed, which will be found to be a much better and more wholesome food than either fed separate, while the fodder stocks that have been cut and cured when the sap was in the blades, are among the most nutritious and wholesome foods that can be provided for cattle.

Every farmer who has had any experience in feeding cattle in the older states, where everything that will add to the food and comfort of stock is scrupulously cared for, knows the value of straw in winter. Cattle fed on grain will consume large quantities of straw, especially in damp, "giving" weather when corn-fodder is rejected.

For covering sheds and providing cheap shelter for cattle, straw is invaluable and much superior to hay; also for spreading over the muddy yards, and thus contributing to the comfort and the health of the animals.

While the straw comes into profitable use for stock, the grain from a hundred acres of wheat, with proper cultivation, which embraces deep plowing, early sowing if possible, with the ground reduced to a fine tilth, and the seed deeply drilled in, should, in a reasonably good season, yield 2,000 bushels. To achieve this result, the ordinary frontier farming must be abandoned, and the rich food that has been consumed by the stock during the long, feeding period, all be utilized in the manure, and every shovelful hauled from the yards and spread on the ground intended for wheat. The constituents of the grain which has been passed through the stock, when returned to the soil will respond to the farmer's call in fields of waving grain the following season.

Without further pursuing details, we will suppose the crops of a well cultivated farm are such as are intended mainly for feeding to stock, cattle, hogs or sheep, or all of those combined, have been secured, and the necessary arrangements for winter feeding made. As a necessary adjunct to the home farm, a ranch or range has been selected in a neighborhood adapted to the purpose of summer pasture. When a summer pasture alone is desired, a temporary corral may be formed by enclosing a sufficient area of ground in a sheltered place and convenient to water, by a wire fence. Here the herders could have their tent or shanty, and the stock be secured at night to prevent straying. This summer pasture may be located many miles from the farm. A few acres in a favorable location, where land is cheap and the range good, can

be purchased. No outlay for buildings or fencing would be required, save the trifling expense of a small enclosure to secure the stock at night. Having provided feed and shelter on his farm, for the proper care of his stock, the herd is driven home when the pasture has failed, and the process of converting the principal part of his farm produce into conveniently portable and salable beef and pork, can be completed in the winter months.

A farmer in the Atlantic states who can turn out for the butcher twelve to fifteen head of beefs from a farm of 150 acres and clear \$20 a head, considers he is doing a prosperous business. Their manure he calculates pays him for the grain they consume, and he is keeping up, by this means, the fertility of his fields. How much more should a Kansas farmer make by the same amount of labor, with a virgin soil free from all obstacles to cultivation, with a summer pasture for almost nothing and of unlimited extent, his farm almost wholly devoted to the production of winter food for his stock, with the price of beef and pork almost as high as in the eastern markets?

It should pay liberally to keep a herd of cows. The number would have to be governed by the circumstances incident to the farmer's plan and scope of operations—from which to raise calves. The cows would necessarily be good, grade animals, and with the services of a thorough-bred stock-bull, he could raise calves, by allowing them to run with their mothers through the season of grass, which at three years old ought to make beefs that would sell for fifty dollars a head.

In these sketches of what seems to me to be the true course to pursue in Kansas farming, I have avoided giving many details, and have aimed to present a general outline of the system, while every capable farmer will readily fill out the plan proposed.

E.

Topeka, Kan.

HOW TO KEEP FARMERS' SONS ON THE FARM.

This is a fertile theme for our agricultural journals. We see it discussed in every paper, the burden of which is that home should be made more attractive. It is not our object in this article to say anything against the esthetics of rural life, all of which are very essential. But why should farmers' sons be kept on the farm? If their talents fit them for other callings at which they can make more money, do you suppose the attraction of home, if made ever so attractive, would keep them? Now we know of no good reason why farmers' sons should always stay on the farm, any more than merchants' sons should always stay in the store, or that lawyers' sons should always be lawyers, and so on through all the various trades and professions. In all countries men of ability naturally gravitate to where there are the best opportunities for preferment, and to better their condition. This is a law of natural selection, and it can only be controlled by changing the present condition of things. Now, for instance, take a rural district where there is a member to be chosen to the legislature, or some other responsible office, if there is a lawyer in that district he is the first choice. A merchant, a banker, or a member of any profession, will be taken up before a farmer or farmer's son. Even a political loafer and "dead-beat" stands a better chance than an honest tiller of the soil; and when the farmers themselves do this they have no one else to blame; neither can we blame those higher in authority for using the appointing power in the same way. Of all the tens of thousands that the President appoints to office, how many are taken directly from the farm? so few that it is hardly worth making an exception. Therefore we have never been able to see wherein the National Grange and some of the State Granges were conserving the interests of the farmers by asking that the commissioner of agriculture be made a cabinet officer. It is simply asking that a certain politician be given a larger salary, and at the same time we are opposed to high salaries and high taxes. Yet there is actually no preference to the farmer or his son through the appointing power of the country, and what is worse, none through the votes of the farmers themselves; and then with this state of facts and the other state of facts that the financial prospects of farmers are such, through infamous laws, that they are in fact reduced to serfdom, whether they know it or not. Is it any wonder that a farmer's son who has any spirit, or a grain of intelligence, will seek those positions in society where all the chances are for bettering his conditions? And who can blame him?

Let us reverse this order of things and then we will have no complaint about farmers' sons going into the professions. Let us elect a President from the farm, a practical farmer; let that President appoint nobody to office, from the highest to the lowest, but farmers and farmers' sons; let the people do the same—elect nobody to office but farmers' sons, and then let our laws be changed so as to discriminate as much against all other classes, and in favor of the farmer, as they are now against him, and then we shall see farmers' sons stay on the farm. Not a mother's son of them would leave. Besides, in this reverse condition of things, the financial condition of the farmer would be such that he could fix his home in that beautiful style that we are told is necessary to keep the farmers' sons at home. Now we don't say this can be done. We know it can't until the farmers and mechanics of this country know how to vote; and whether they ever will learn, when their mental faculties are prostrated through physical exertion to make a mere subsistence, is a question that time alone will solve. N. G. Lawrence, Kan.

January 30, 1917.

Patrons of Husbandry.

OFFICERS OF THE NATIONAL GRANGE.—Master: John T. Jones, Barton, Ark. Secretary: O. H. Kelly, Louisville, Ky.

KANSAS STATE GRANGE.—Master: Wm. Sims, Topeka, Secretary: F. B. Maxon, Emporia.

COLORADO STATE GRANGE.—Master: Levi Booth, Denver. Lecturer: J. W. Hammett, Plattville.

MISSOURI STATE GRANGE.—Master: H. Eshbaugh, Hanover, Jefferson county. Secretary: A. M. Coffey, Knob Noster.

ARKANSAS STATE GRANGE.—Master: John T. Jones, Barton, Phillips county. Secretary: J. B. Williams, Daryl's Bluff.

TEXAS STATE GRANGE.—Master: W. W. Lang, Marlin. Secretary: R. T. Kennedy, Mexia.

LETTER FROM THE MASTER OF THE KANSAS STATE GRANGE.

EDITOR FARMER: In your issue of the 23d inst., I find a communication headed "State Co-operative Association," and signed "N. C.," in which your correspondent complains of the compensation of officers of said association, as fixed at the last meeting of the stockholders, and predicts bad results from the action complained of.

I was not present at the meeting referred to, and cannot say why the provision was made, and trust that no advantage will be taken of it by any officer, until the association shall have been fully established and the success of the enterprise assured. I, for one, most certainly shall not present any claim for services rendered or expenses incurred prior to that time.

Your correspondent further complains that our "state association, as now organized, is wrong, because it is not intended as a wholesale house for the supply of local, retail, co-operative stores." In this he is surely in error. The state association, as I understand it, is intended for just that purpose. It is proposed to establish a wholesale supply house for local, retail co-operative associations, in the profits of which they are to share in proportion to their trade.

I agree with your correspondent in believing that it would be better if the local associations could furnish the capital and own the stock; but this they do not, at this time, seem to be in a condition to do, hence individuals are called upon to lend a helping hand, until such time as their local associations shall be able to furnish their requisite amount of capital, when the individual members will, it is believed, transfer their stock to such associations. When this is done, as it no doubt will be, all differences will be settled.

Your correspondent asks my opinion of his plan. I would answer that it is good, and substantially the same suggested by me in the state grange in my remarks upon that subject, and differing only in details with the plan under which we are now trying to perfect our organization. We all agree on the main question of organization, now let us sink our little differences as to time and details, and accept the plan adopted and give it our support.

WM. SIMS.

HUSBANDRY NO. 2.

EDITOR FARMER: The "Clothhopper Club" met again last night. The reports of the officers were read, but as they did not seem to interest any of the members present, I do not think that a report of them here will add much to the interest of your paper. Farmer Dobson then read the following lecture:

"The harvest is past, the summer is ended; so far as the year 1877 is concerned. The wheat is stored in the granary waiting to be sold, converted into flour or sown next spring. The cribs are piled high with the 'yellow corn,' that may be sold for 15 to 18 cents per bushel, or double that amount if fed to hogs or cattle. Nothing to do but chop firewood, feed, (yourself and the rest of the hogs,) and go to town every Saturday. The summer and harvest of 1877 is past; but that of 1878 is approaching, and even as this early day demands the attention of the prudent farmer. Patrick Henry in his celebrated speech said 'men may cry peace, peace; but there is no peace.'

Without trying to immortalize my name oratorically, or put on much style, allow me to say: men may cry rest, rest; but there is no rest. Eternal vigilance is the price of corn, wheat, oats and 'garden sass.'

Allow me to ask you a few leading questions as Bradley would say.

Have you examined your plows, and are they sharp, and every bolt, tap and brace in its proper place? Is your harness mended and oiled? Is your harrow and rake supplied with teeth?

There are many other little preparations that should be attended to before farming begins in earnest. The farmer has only about three months in the year in which to make his principal crops. The other nine months are spent in harvesting, selling or feeding, and preparing for the next crop. It behooves us who depend on farming for our support, to be prepared for work in the spring, and when the time comes for work to put in our "best liks." We have no time for preparation when planting and cultivation require our best efforts and undivided attention. A good general, on the eve of a great battle, will inspect the arms of the men under his command see that they are in shape to do effective execution; condemn and throw aside such as are defective, and if possible will procure arms of the most approved make, those that will do the most execution in the shortest space of time. He will not allow the time for battle to

arrive and find his men poorly armed—with rusty guns and defective locks.

A battle will soon begin between the forces under General Farmer on the one side and General Green on the other. A field of corn will be claimed by both, and starvation to the one, or death to the other will be the slogan that will rend the sky.

Now brother farmer do not let the enemy surprise you. See that your arms are in shape to scatter death in the ranks of your enemies. They are legion. *Jim's sons* will be out in force and the old man will be with them. *Mr. Grass* with all the brass and persistence of a book agent will never give up until under the ground; pig-weed that if left alone would break the jaw of an old hog; lamb's-quarter large enough to be a quarter of an old sheep and burrs that 'sticketh closer than a friend.' Then arm yourselves for the fray, and—'Awake! Arise! shake the dew drops from thy mane, and march on to battle and to victory!'

After the reading of the above farmer Blobson read a "pome" written by himself for the occasion. Enclosed find the last two verses as a specimen.

"'Twas ever thus from childhood's hour,
I've seen my fondest hopes decay;
I never raised a better calf,
But what 'twas sure to stray away."

But, should one change her mind and stay,
For neighbors to look at and wonder;
'Twas sure that when she had a calf,
She'd hook and kick like thunder."

The president fined Brother Blobson a peck of peach-blow potatoes for the profanity contained in the last line, after which the club adjourned to meet again. Truly yours,

NIPPOC.

Hill Spring, Kansas.

THE SILVER QUESTION.

EDITOR FARMER: It occurs to me that there is a good deal more said about the Bland bill as it is called than there is any necessity for. This Silver Question is one that has taken hold of the minds and hearts of the people as I never saw any other question, (I mean west of the river.) There was no such unanimity of feeling at any time during the war upon any subject as is now manifest upon the re-monetization of silver, and Congress may as well pass it and President Hayes may as well sign it, for if it falls now a congress and a president will be elected who will obey the behests of the people. More than this, there is yet time to lead and control this great tidal wave of public opinion so that the financial integrity of this country will not be seriously injured, if our statesmen are wise; but if this silver bill be now defeated; if the people have any reason to believe that the action of the president or of congress is in favor of the money lender and against the mass of the people, you will then see not only silver re-monetized, but added thereto the greenback monstrosities of Pendleton, Voorhees, and Valandigham if not indeed open and barefaced repudiation.

It must be remembered that there are being added to our list of voters, thousands of young men who took no part in the late war; who know nothing personally of how that debt was created and who feel none of the personal obligations resting upon them that thousands of our older citizens do, and whose votes are more apt to be controlled by the present effect upon their pocket. I can see daily, public opinion growing weaker upon these financial obligations of the government. Party ties are as bands of straw, it only needs the rallying cry of the demagogue based upon some catch-penny idea, to hurl confusion into the ranks of present political parties. It is not now a question of whether this "Silver Bill" is wholly right or not; the true question for the statesman of the hour to decide is, how can future mischief be best averted? how can public opinion best be controlled? I answer, pass a silver bill that will secure the interests of the masses of the people; one that will not be unjust to the bond-holder if possible, but right or wrong make silver again the current coin of the realm.

This view of the question may shock some, they may argue "that if the silver bill is not right, inherently right, it should not become a law." That view is sound from a moral standpoint, but when I look over the crowds at an assembling at the school houses all over this country and I hear the arguments used, when I hear the threats made against congressmen who prove recalcitrant to the wishes of the people, and the banks and bond-holders accused of being the direct cause of hard times and other ills. I confess that as a lover of my country; as one who wishes to see all the blessings that I have enjoyed under it, and more, handed down to my children, I am ready to say pass this bill, right or wrong.

A. G. CHASE.

Millwood, Kan.

IMPORTANT DISEASES THAT AFFECT SWINE.

The following is one of the Premium Essays issued by the American Berkshire Association. It was written by A. R. Colman, V. S., of Canada, and will be found of great value to our readers.

WOUNDS.

These may be divided into incised, lacerated, punctured and contused. From wounds the pig appears to be particularly exempt, as compared with other and especially in larger animals. This may be owing to the short life usually allotted him, his small size, low form peculiar habits, and his being also generally pretty well covered with fat—thus protecting to a great extent all vital and important organs. Where pigs are kept with cattle, they are sometimes punctured or gored by the horns of the latter. In which case the abdomen

sometimes becomes lacerated, allowing part of the intestine to protrude; this, of course, is often attended with dangerous consequences.

Treatment.—This should be attended to as soon as possible, not allowing the protruding intestine to get cold. If the intestine is not broken, treatment is usually successful. First cleanse the part if dirty, using water about blood warm; then carefully return, and bring the abdominal walls together, and secure by a few stitches, leaving long ends, and allowing these to hang out of the wound; next close the skin by stitches, but leave sufficient opening at the most pendent part, to allow of the free exit of any matter that may accumulate. Of course the animal must be held down by assistants during the operation. Afterwards keep the bowels open by the free use of injections of tepid water. Endeavor to prevent constipation by a laxative and cold diet, such as cooked vegetables, gruel, or the like. It is not advisable to give any drastic purgatives; but if necessary to resort to medicines to relax the bowels, use castor or raw linseed oil, repeated every few hours until the desired effect is produced. If in warm weather, and there is much fever or heat about the injured parts, it would be well to shower or apply cold water, to which might be added a little laudanum, and if the discharge is very offensive, and there appears any tendency to take on a gangrenous character, a little carbolic acid, or chloride of lime, permanganate of potash should be added to the water. A small quantity might be injected into the wound as well as bathing it; but care must be taken not to inject much fluid into the abdominal cavity, on account of the danger to be apprehended from inflammation of the peritoneum or caul. THE ADMINISTRATION OF MEDICINES TO PIGS

A few remarks on this subject might not be out of place in this work. As anyone acquainted with these animals, will readily admit, they are not the most agreeable or tractable of quadrupeds; especially when anything is necessary to be done for or with them that does not exactly suit their will or pleasure. On such occasions they often display an amount of stubbornness, obstinacy, perverseness and pig-headedness in general, most trying to the patience, especially if one has not a rather large share of that virtue. But it will not be necessary to discuss why a pig is possessed of these qualifications in excess of other animals; it is simply sufficient to know that he does possess them; and, therefore, in dealing with this animal, with reason to aid us, we must endeavor to overcome him and his peculiarities in the best and easiest way, consistent with kindness and humanity, so as to avoid any wanton cruelty or suffering, but at the same time attain our object.

In administering medicines to swine, it is by far the best way, if it can be accomplished, to mix and give it in their food; but this cannot always be done. The animal may not be able, either from weakness or other causes, to take it, or the medicine may be of a character not adapted to be given in that form, for either in taste or smell, it may communicate to the food such an unpleasantness that the animal will positively refuse to touch it, although it might readily take food if the medicine was not mixed with it, for the senses of smell and taste, especially the former, are well developed in the hog.

The medicines best adapted to be mixed with food are sulphur, Epsom salts, castor oil, raw linseed oil, the different preparations of potash, sulphate or hypo-sulphate of soda, gentian, ginger, etc. When medicines are given in food, the latter should be less in quantity than that usually given, but better in quality, so as to disguise the taste and smell of the drugs, and also to insure its being well taken. Afterwards, if necessary, and the animal requires more food, it may be given; but if the taste and smell of the medicine are not very well disguised, and the food nice, a sick pig will rarely touch it.

Medicines of small bulk, and emetics, or in all cases where a speedy and certain effect is desired, are best given in solution as a drench. When it is not desirable or possible to administer medicines mixed with the food, drenching must be resorted to. Persons not accustomed to handling hogs will generally have their patience sorely tried at first, and find it very disagreeable and hard work; but like everything else, after a little practice, it will become a much easier task.

To drench small pigs, let an assistant seize the animal by the ears, and slightly raise it, keeping the body secured between the legs. It is well also to get them into a small compartment; they are then easier caught and handled.

To drench a large hog, take a cord, tie a running noose at one end, slip it into his mouth and back of the tusks, or canine teeth. Secure the other end to a post, fence-rail, staple, or any firm and convenient place, or let an assistant hold the end. When a hog is secured in this way, he will always pull back, thus keeping the cord tight, and it is then not difficult to drench him. Take a piece of hard wood and shape it into a stick, flat at one end, and about an inch and a half wide, stand on the right side of the pig, reach over and insert the flat end between the teeth on the left side of the mouth, and then, by turning the stick edgewise, the mouth will be opened sufficiently wide to admit of the introduction of a portion of the neck of a bottle, and also to prevent the latter being broken by the teeth. Insert the bottle on the right side of the mouth, but be careful to allow only a small quantity of the contents to enter the mouth at one time until swallowed; then there is no danger to be apprehended

from choking. On no account allow the whole contents of the bottle to empty itself into the mouth and throat in one continuous stream; otherwise strangulation will be the inevitable result.

The prescriptions given in this work are mostly from the smallest to the largest doses, being adapted to small or large animals, say from fifty to two hundred and fifty pounds. It must be left to the operator's discretion and judgment to suit individual cases. If the desired effect of any medicine is not produced after one or two doses, it should be given in smaller quantities and at shorter intervals until the effect is obtained.

(CONCLUDED.)

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FOR Choice Merino Rams and Ewes. Also Importers Canada Cotswolds at Moderate Prices. A. B. MATTHEWS, Kansas City, Mo.

J. M. ANDERSON, Salina, Kansas, Pekin Ducks, J. Partridge, Cochins, fowls, and White, Guineas. Write to me.

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HALL BROS., Ann Arbor, Mich., make a specialty of breeding the choicest strains of Poland-China, Suffolk, Essex and Berkshire pigs. Present prices less than last card rates. Satisfaction guaranteed. A few splendid pigs, lills and boars now ready.

W. M. HASTIE, Somerset, Warren Co., Iowa, breeder of Short-horn cattle, Cotswold and Leicester sheep. Stock for sale. Correspondence solicited.

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SAMUEL ARCHER, Kansas City, Mo., breeds Spanish Merino Sheep as imported by Atwood and Hammond, from the Humphrey's importation in 1892. Also Cheshire Wapiti Hogs, premium stock, and Light Brahma Chickens, both bred pure by me for eight years past. Send for circulars. 100 RAMS FOR SALE this year.

R. F. AYRES, Louisiana, Mo., breeder of Short-horn Cattle, Berkshire Swine, and South-down Sheep. Stock for sale, and satisfaction guaranteed.

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Elmwood Flock of Cotswolds, From Imported Stock. Young Stock for Sale.

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KANSAS HOME NURSERY A. C. & H. C. GRISBA, Proprietors, Lawrence, Kansas. We offer for sale home-grown Fruit and Ornamental Trees, Grape Vines, Quinces, Small Fruits, Shrubs and Evergreens. Apple Seedlings at low prices; apple grafts put up to order.

STRAWBERRY PLANTS.—The new ones at reduced rates. Send for price list to SAMUEL MILLER, Sedalia, Mo.

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FLOWERS.—All lovers of Plants should send for Catalogue of Geraniums, Auchsals, Verbena, Roses, &c., to ROBERT S. BROWN, Kansas City, Mo. Box 1158.

VILLA NURSERY AND GREENHOUSES.—Grape Vines from 15 dollars per 1,000 and upwards, excellent plants. Greenhouse plants at lowest eastern prices. Address A. SAUER, Kansas City, Mo.

KAW NURSERY, WYANDOTTE CO., KANS. General Assortment of Nursery stock. Especially Apples and Cherry Trees, Grape Vines and other small fruit plants. Address G. F. BERENBAUM, Box 972, Kansas City, Mo.

Dentists.

A. H. THOMPSON, D. D. S., Operative and Surgeon Dentist, No. 189 Kansas Avenue, Topeka, Kansas.

DYKER'S BEARD ELIXIR 44 It will remove the beard and mustache, and the hair will grow again. It is the only preparation of the kind. It is sold by all druggists and is the only one that will not irritate the skin. It is the only one that will not irritate the skin. It is the only one that will not irritate the skin.

GOLD WATCH and CHAIN only \$30.00. Cheap as in the World. Sample WATCH and CHAIN FREE to Agents. Terms and Catalogue Free. Address P. O. VICKERY, Augusta, Maine.

AGENT S.

Mica Lamp Reflectors, 35c. \$2.00 a Dozen. Nigger Head Match Safe 35c. \$2.00 a Dozen. Patent Pocket Stove \$1.50. Send for Circulars.

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In their own localities, canvassing for the Fireside Visitor, (enlarged) Weekly and Monthly. Largest Paper in the World, with Mammoth Colored Pictures and Illustrations. Terms and Catalogue Free. Address P. O. VICKERY, Augusta, Maine.

The Kansas Farmer.

J. A. HUDSON, Editor & Proprietor, Topeka, Kan.

TRANSIENT TROUBLES.

Most of us have had troubles all our lives, and each day has brought all the evil that we wished to endure. But if we were asked to recount the sorrows of our lives how many could we remember? How many that are six months' old should we think worthy to be remembered or mentioned? Today's troubles look large, but a week hence they will be forgotten and buried out of sight.

"If you would keep a book and every day put down the things that worry you and see what becomes of them it would be a benefit to you. You allow a thing to annoy you just as you allow a fly to settle on you and plague you; and you lose your temper (or rather get it; for when men are surcharged with temper they are said to have lost it); and you justify yourselves for being thrown off your balance by causes which you do not trace out. But if you would see what it was that threw you off your balance before breakfast, and put it down in a little book, and follow it out, and ascertain what becomes of it, you would see what a fool you were in the matter."

The art of overlooking is a blessed art, but the art of overlooking is quite as important. And if we should take time to write down the origin, progress, and outcome of a few of our troubles it would make us so ashamed of the fuss we made over them that we should be glad to drop such things and bury them at once in eternal forgetfulness.

Life is too short to be worn out in petty worries, frettings, hatreds, and vexations. Let us banish all these and think on whatever things are pure, and lovely, and gentle, and of good report.

THE AMERICAN YOUNG FOLKS.

The efforts we have made to establish a low priced boys' and girls' paper has been more than ordinarily successful. To make a paper instructive, entertaining and amusing, free from the vicious blood and thunder of many papers made for youths, and place its price within the reach of every family, has been our aim, and the large success attending its introduction in all western states proves the field to be unoccupied. The following extract is from a pleasant, private letter of Judge Nichols, of Cherokee county:

"I think the YOUNG FOLKS is not entirely adapted to what the world calls young folks but has a far more general application to all that class of people whose hearts are always young and who never grow old. Just such hearts as I can readily imagine exists in the persons who control the well-filled columns of the AMERICAN YOUNG FOLKS.

It is a paper the west ought to be proud of, and being especially a Kansas project, no Kansas family ought to be without; and I earnestly add, no American family who lives in America, can do without."

SEND IN YOUR CLUBS.

Form your clubs and send them in at once, so as to commence with the year. Every number will be worth preserving. More than 100 men, as fruit-growers, breeders, grain and produce farmers, west of the Mississippi river, have written us that they will positively contribute for the farmer during 1878.

Facts and Figures from Kansas.

SADDLEBAG NOTES.

NO. VIII.

As this is the time of the year when farmers are looking up authorities on the fruit question, in order to decide what varieties are the best to plant, and believing that the opinions of practical orchardists are of more value than theories set forth by nurserymen, I shall endeavor in this article to give the readers of the FARMER some views from practical horticulturists in Wabunsee county based upon many years of actual experience in fruit raising.

The orchard of Mr. Silas Brittain, near Keene P. O., consists of 150 bearing apple-trees, situated on low, bottom land, but sheltered by timber upon the north and east sides. There are twenty-six varieties in the orchard. A majority of trees have been set out sixteen years. Last season 400 bushels of apples were sold from this place at an average price of .85 cents per bushel. Some kinds of apple-trees are more liable to sun-scald than others, viz: Genet and Early Harvest. The Smith's Cider is the best bearer that Mr. Brittain has; the trees having had to be propped up every year for the past five years. The following is a list of his six best varieties: Early Harvest, Fall Pippin, Smith's Cider, Wine-Sap, Seek-no-further and Baldwin. Mr. Brittain strongly recommends a shade of some kind on the southwest side of such varieties as are the most liable to sun-scald.

Thos. Barker, Esq., another farmer living near here, considers the Keewick's Codlin the best apple of the season that he raises. It is good for cooking in June when it is only half grown, and is the best apple to be eaten out of hand in July and August.

Near the old settlement of Wabunsee, in the northwestern part of the county, are some very fine orchards. Most of them have been set fifteen years or more. Fruit from some of these orchards were exhibited at the Centennial and were also in the collection that received the gold medal at Philadelphia a few years before.

The orchard of Mr. M. S. Combs, near here,

consists of sixty bearing trees, set out eighteen years ago. The orchard is situated on a northern slope. Mr. Combs selection is: Early Harvest, Penna. Red Streak, Wine-Sap and Genet. The pear seems to thrive and prove somewhat remunerative at this place. The price received for pears the past season was \$3.50 per bushel at wholesale.

The Hon. S. A. Baldwin has a small orchard set out about eighteen years ago. I found some bad cases of sun-scald here. The orchard is situated on what is called second-bottom land. Mr. B. considers the Fameuse, Wine-Sap and Genet the best varieties that he raises.

Mr. James Enlow has a fine young bearing orchard, situated on bottom land well protected on the north, but many trees were sun-scalded. Mr. Enlow's list would consist of Maiden's Blush, Ben Davis, Wine-Sap and Little Romanite.

The Hon. J. M. Blaney, one of the oldest settlers in the county, has thirty varieties of apples in bearing. His list of six varieties would be Early Harvest, Maiden's Blush, Wine-Sap, Swaar, Smith's Cider, and Seek-no-further. Mr. B. also considers the Smith's Cider to be the heaviest bearer.

Hon. Wm. Mitchell has about thirty varieties of apples in bearing. About 400 trees bore the past year, many of them having been set eighteen years ago. Mr. M. strongly endorses the Keewick's Codlin as the best summer and fall cooking apple. His list for general family use would be Early Harvest, Keewick's Codlin, Fameuse, Wine-Sap, Genet and Swaar. The orchard is situated on second-bottom land. Mr. Mitchell had lost many trees by sun-scald. His method for prevention is the "hay-band." Make a hay-band, or rope, and wrap it around the tree from the ground up to the limbs. Let it stay on all the time. In the summer it is a protection against the hot sun and dry, southwest winds and insects, and in the winter it protects the tree from rabbits.

The fruit farm of H. A. Stiles, Esq., at Pavilion, is situated on rolling ground generally facing the east. It is well protected on the north and west by hills, and upon the east by a belt of timber. The orchards, although comparatively young, show that good judgment has been used in the selection of varieties suited to our variable climate. Mr. Stiles is an enthusiast in the business and believes that Kansas will yet make a good fruit State. His list for six best varieties for apples is Early Harvest, Grimes' Golden Pippin, Wine-Sap, Genet, Ben Davis, and Missouri Pippin.

Mr. Enoch Platt near the village of Wabunsee, has about 100 apple trees in bearing. They have been set 18 years. The failures in fruit-raising upon this farm would have deterred ordinary men from setting any more trees, yet this gentleman is contemplating planting another orchard in the spring. His list for general family use is Early Harvest, Maiden's Blush, Wine-Sap, Genet, Baldwin, and Talman Sweet.

Hon. C. B. Lines, the Marshall P. Wilder of the West, has an extensive and well conducted fruit farm in this vicinity. On this farm there is over 100 varieties of apples, 10 varieties of pears, and other kinds of fruit in profusion. The apple orchard consists of 1700 trees, about one-half of which are of bearing age. The list for 6 best apples for general family use, furnished by Mr. Lines, is Early Harvest, Bohannan, Wine-Sap, Genet, Gilpin, McAfee's Nonesuch. The Bohannan is rather a new apple among orchardists in Kansas. The following is the description of this fruit: "A southern fruit of great excellence. Large, roundish, flattened, conic and angular. Fine yellow with crimson cheek. Flesh yellow, tender, juicy, with a fine spicy sub-acid flavor. Ripens in August."

Mr. Lines has one fine large orchard entirely composed of the McAfee's Nonesuch. These trees are very straight and well branched. Upon the south side of each tree I noticed a stout stake which had been driven into the ground, and a wire or stout rope fastened to it and to the body of the tree. It must be remembered by our thousands of eastern subscribers that, among the many disadvantages that fruit men labor under in this state, is the heavy, strong, prevailing winds from the south, which, unless guarded against, will throw the tops of the trees toward the north and northeast. The above arrangement of Mr. Lines is among the best that I have seen for the purpose.

The list of apples recommended by Mr. Lines are of southern origin with the exception of the Early Harvest. The McAfee's Nonesuch sun-scalds quite badly in this orchard. The best variety of Pears as given by Lines, is the Urbanite.

A large number of cattle have died in this county this winter from eating "smut," or from eating cornstalks without having sufficient water. A few sheep have also died from the same cause. In one township alone the deaths among the cattle was not less than 125, one man, Mr. Freeman, lost forty-five head.

W. W. CONE.

Wabunsee, Kansas.

STOCK ITEMS FROM THE COLLEGE FARM.
The college stock of cattle and swine are doing remarkably well. All things considered, I do not remember to have seen a better winter for stock. Our crop of calves is coming somewhat later this year than usual, but their quality more than compensates for their late arrival. Thus far the herd of cattle, has been increased by 4 short-horns, 2 bulls and 2 heifers, 2 Jerseys, bull and heifer, and one Gallop way heifer calf. That grand cow, Grace Young 4th, dropped, one week ago, a fine bull

calf, making her 5th calf (4 heifers and 1 bull), since her purchase by the college in 1873. But this is not all, two of these heifers have themselves produced offspring, bull and heifer, making all told, 5 heifers and two bulls, all beauties, obtained from this cow and her descendants in a little more than four years. If any of the farmer fraternity has anything better than, or equal to this, I hope we may hear from him through the FARMER.

The demand for stalls of all kinds, for breeding purposes has been good for the past season; the inquiry for the college Berkshires having been greatly in excess of the supply.

We ship this morning the fine two-year-old short-horn bull, Collegian, 22427, got by 3d of Oxford 12676—dam, Grace Young 5th Prince to Michael and Pringle, Maple Hill, Kansas.

E. M. SHELTON.

State Agricultural College, Manhattan, Kan.

Farming in Douglas County.

ED. FARMER: In years gone by, the raising of wheat was nearly abandoned in this part of the state on account of chinch bugs, but to the credit of the grasshopper invasion in 1874, we have enjoyed remarkable immunity from these pests. Our farmers have been sowing more and more wheat every year since then, and the results have generally been satisfactory, the yield being from ten to thirty bushels per acre. This year the acreage is very much larger than at any other time within the last ten years. The varieties usually sown are the Clawson (white winter), the Fultz, and the May wheat.

There seems to be some danger from the Hessian fly. While some fields are exempt, others are full of the eggs of the fly, or were last fall. Time will determine results.

There is not much old corn on hand. Oats, rye and turnips are not considered paying crops in this portion of the county, hence they are badly neglected except for home use.

We have plenty of hogs and good ones, being the Poland-China, the Berkshire, and the crosses of these and other good breeds. Those "sapling-peelers," with bristles erect, no longer cross our pathway or haunt us in our dreams. The long poles to which (as the story runs) they were lashed, and held up to the tops of the trees to eat the mast, are no longer to be thought of as potent agents in pork-raising. Hogs are generally healthy, and thriving well. Some hogs have died from what seemed to be sporadic pneumonia; but no well-defined cases of cholera. In nearly all cases of disease the causes have been very well determined, being mostly neglect of proper sanitary measures.

The fruit buds are all right yet, but the peach buds are swollen more than usual for this time of year, and a hard freezing spell of weather might make the use of peaches and cream an obsolete practice in this vicinity before this time next year. M. A. O'NEIL.

From Montgomery County.

Jan. 22.—We have had a very open winter so far; only a few skiffs of snow have fallen, but we have had an endless amount of rain. The roads are in an impassable condition for loaded teams; something that the oldest inhabitants have never known before in this part of the state. Corn is mostly in the crib, and well secured from rain. In the year 1877 the No. of bushels of corn per acre, was below an average—perhaps about 30 bushels to the acre would be a fair estimate for this county the past season, but a larger acreage was planted than usual, hence, a large quantity of corn was produced, and of fair quality. Very little corn is being shipped, as there are enough stock (hogs and cattle) to consume all that was produced. Wheat was materially injured by the black rust. The average yield was not more than 12 bushels per acre; a very low average indeed, for this country.

Good wheat in market is worth \$1.00; corn 20 to 25 cts; hogs \$3.00; milch cows \$30 to \$40 to \$100. There is no vacant government land in this county except a few worthless hilly tracts. The price of land ranges from \$10 to \$30 per acre, according to improvements, and market conveniences.

The county was organized in 1869. Present population is 17,000. Independence is the county seat, and has a population of about 3,500; is located on the west bank of the Verdigris river. The L. L. & G. railroad terminates at the Nation line near Coffeyville, and the South Kansas branch at Independence. There are 12 large flouring mills in the county, and yet there is room for more, as a large amount of wheat is shipped east that ought to be converted into flour here. The Verdigris and Elk rivers furnish ample power to move a large amount of machinery.

P. S. M.

From Dickinson County.

Stock is in good condition, horses particularly. It is gratifying to notice such a change from a year ago: our farmers consider their prospects good for another year, and are now getting in order for spring. This county expects a great number of emigrants in the next few months. We welcome all to a good country, good churches, schools and first-class society. In the last few years we have listened to Drs. Jno. Hall & Armitage of New York, and last week our people had the pleasure of hearing Gen. Kilpatrick's famous lectures, "Irish Soldiers of the Rebellion," and "Sherman's March to the Sea." In February, Mr. S. Colfax delivered his lecture on "Lincoln." I merely mention these matters so that our eastern friends may know that out here in Kansas we enjoy privileges rarely enjoyed by eastern cities of the same size.

J. H.

From Douglas County.

Jan. 21.—Wheat never looked better, and the acreage is twice as much as last year, the yield 15 bushels. There is but little old corn on hand. Oats yielded an average of 40 bu. Cattle and stock generally are looking well; no hog disease has been heard of since last fall. Our fruit crop was good. Douglas county claims to be the banner fruit county in Kansas, and won't lie below the best county in the state for wheat, corn, potatoes, or any thing else that grows. For educational advantages we claim one score ahead. Then those with little means looking for new homes can do better in the way of cheap farms than they can by going to the newly settled counties that have neither our educational nor market advantages. Farms can be had from ten to twenty dollars per acre. Some have lost cattle by pasturing stalks and by letting the cattle remain in too long at first; two or three hours is long enough the first days. I have pastured stalks several years, and consider it no risk whatever by following the above rule.

From Bourbon County.

Jan. 23.—Winter open and wet roads bad at present. Winter wheat is looking well, twice as much sown as last year. Corn ten per cent better than last year, a large proportion is being fed to cattle and hogs. No disease among cattle, some hogs have died with quinsy. Many apple orchards are commencing to bear, and fruit culture is receiving much attention. Peaches were very plenty and thousands of bushels were shipped to distant markets at paying prices. Corn is worth at present, 20c; potatoes, 75c; oats, 15c; eggs 20c; butter 20c@25c; work horses \$150@200 per span; cows \$20@25; farm hands from \$15 @20 per month. Land advancing some in price and more being sold than for several years past.

H. C. P.

From Edwards County.

Jan. 14.—Winter wheat could not look better at this season of the year, the increase of acreage over last year is upwards of 300 per cent, the average yield of last year, taking the reported acreage in the spring; and the threshing returns of bushels threshed, was 18½ bushels fall, 17 bushels spring wheat, 22 bushels rye, 47½ bushels barley, and 40 bushels oats. The actual yield of some fields was 27 bushels spring wheat and 30 bushels fall wheat; one field of 40 acres of barley yielded 1690 bushels; another field of 18 acres yielded 668 bushels. The prices of wheat are 75¢@80¢; oats, corn and barley 35¢@40¢; butter 30¢; eggs 20¢; potatoes \$1.00@1.30. There is an abundance of vacant government land at \$1.25 per acre, and railroad land at \$2.50@3, still remaining within the railroad limits. Some improved farms at \$5@10 per acre are for sale. The average condition of stock is less than ever before, on account of a wet December having bleached and injured the buffalo grass on the range, at least that is the expressed opinion of stock men; there is less "winter grass" than usual.

J. A. WALKER.

From Allen County.

Jan. 16.—The fruit crop of last year was very large, of peaches the largest ever known, thousands of bushels lay in the orchards and rotted. Apples were very plenty, more than ever was raised in the county before, and as fine as any state can show. At our Horticultural Society, on Thursday last, Dr. Dornberg, of Humboldt, had on exhibition apples two years old, in good condition, of the Ben Davis species. A gentleman of Kentucky sent ninety varieties of Kentucky apples to the Southwestern Kansas Horticultural society; the collection is chiefly valuable for its new varieties. Mr. Truitt is the gentleman's name, and received a vote of thanks from the society; he contemplates coming to Kansas. I think our fruit will be short for 1878. I have been told peaches have been killed in some localities. Rose bushes have leaved out it has been such warm, wet weather this winter; I am afraid the fruit will all be out short. Apples sold last fall in the orchards for 40 and 50c per bushel, at present price 80¢@1.00; dried peaches 4¢@6¢ per lb. Blackberries sold for 12¢@15¢ per quart, grapes 4¢ per lb.; gooseberries 8¢; cherries 10¢. Allen county has some as fine orchards as there are in the state; Dr. Dornberg has 80 acres of bearing trees, apples and peaches.

J. E. S.

From Reno County.

Jan. 15.—If only one from each county would send an item each week how it would swell the columns of the FARMER. I should like to see it in the hands of every tiller of the soil, and read articles from those that can speak knowledge on the best breed of horses for general purposes, the most profitable hogs and stock of all kinds. We have an unusually good prospect for a good wheat crop, with a large acreage sown. Stock is doing well but prices are not remunerative; there are certainly fortunes in the buffalo grass and wide pastures if men of means would bring on the sheep to utilize it. It has been demonstrated beyond a doubt that the water power of the county is boundless; there are three streams traversing the county that could run a factory for every mile of stream. We need rope, woolen and paper factories, machine shops, etc. Would some of the readers of the FARMER tell me whether blue-grass is a success in this state, and this far west, when and how to sow it, and where to get reliable seed? Has any one tried white clover? Can any one tell me where I can obtain that tool called the "Buckeye hog tamer," for preventing hogs from rooting, I think it superior to rings.

Z. A. DILLEY.

From Saline County.

The wheat crop of 1877 was very uneven on some farms it was very good, and on others almost an entire failure. The whole crop was sown too late on account of grasshoppers, but this will not account for the difference in the yield. Some late sown fields yielded better than others sown earlier, where the preparation of the land and the seeding was the same; the yield however was about the average of the last three years. The quality is not as good, and the price being low the farmers are not happy. The corn crop is the most abundant that we have had for years, and the acreage is large. The stock is all fat, the cribs are all full, large piles decorate the prairie, and no one has done husking yet; nominal market price 15c. The oat crop was excellent, immediately after harvest the price was 20c, but as soon as corn was fit to feed the sale stopped and now we have no market. These are our leading field crops; barley and rye are only sown in small patches for feed or pasture. A very large amount of grass was cut but very little hay was saved in good order; the season was so wet that what was not lost in the field spoiled in the stack. We have been so used to good weather that few people take pains to stack well and season the stacks properly to resist storms. We hope the past season will be a lesson to them as we mean it shall be to us. A portion of the county is largely engaged in raising broom-corn; I will endeavor to get the statistics in regard to this corn at some future time. WM. FELTER.

Markets.

New York Money Market.

New York, January 28, 1878.
GOLD—Strong and higher; opened at 101½; advanced to 101½; closed at 101½.
SILVER—Bar, 61.17½ in greenbacks; 61.15½ in gold; coin, 1 per cent. discount.
BONDS—Government Steady. Railroad Quiet and firm. State Steady.
STOCKS—Dull, irregular and in the main weak, without important feature.

Kansas City Produce Market.

KANSAS CITY, January 28, 1878.
WHEAT—Lower; No. 3, firmer at \$1; No. 4, 88c; rejected, 83½c. No. 2, spring, 80c.
CORN—Steady; No. 2, 31½¢@32c; rejected, 25c.
RYE—Steady No. 2, 40c; rejected, 35c.
OATS—Nominal.
BARLEY—Nominal.

Kansas City Live-Stock Market.

KANSAS CITY, January 28, 1878.
CATTLE—Receipts, 115; shipments, 118; firm and little doing; sales, native shippers, \$4.10@4.47½; cows, \$3.50; bulls and stags, \$1.50.
HORSES—Receipts, 1,378; shipped two car loads; all sales, packers, at \$3.50@3.55.

New York Produce Market.

New York, January 28, 1878.
FLOUR—Easy; very moderate demand; superfine western, \$4.35@4.75; common to good, 4.30@5.35; good to choice, \$5.30@6; St. Louis, \$5@5.25.
WHEAT—Heavy; demand moderate; No. 2, Chicago spring, in store, \$1.34½@1.35; No. 2, Milwaukee spring, \$1.28; No. 1, spring, \$1.42; No. 2, white, \$1.35; No. 2, spring, \$1.32.
BARLEY—Dull.
CORN—Ungraded mixed western, 46¢@56¢; steam-mixed, 54¢@54½¢; steam yellow, and white, 55¢; No. 2, in store, 59¢.
OATS—Heavy; No. 1, 30¢c. mixed western, 36¢@38¢c; white, 35¢@39.
POPEE—Dull and heavy.
SUGAR—Dull and heavy.
MOLASSES—Quiet and unchanged.
RICE—Quiet and steady.
EGGS—Steady; western, 12¢@12c.
PORK—Mess, dull; \$11.75@12.12½.
BEEF—Steady; plain mess, 10¢@11c; extra, 12¢@13c.
MIDDLES—Western, long clear 57¢@58c.
LARD—Prime steam firm; \$7.60@7.65.
BUTTER—Firm; western, 80¢@82c.
CHEESE—Firm; 7¢@13c.
WHISKY—Dull; \$1.00@1.05¢c.

St. Louis Produce Market.

St. Louis, January 28, 1878.
FLOUR—Dull and unchanged.
WHEAT—Dull and lower; No. 2, red, \$1.34; ditto, No. 4, \$1.44¢@1.44½¢; No. 2, spring, \$1.13 bid.
CORN—Quiet; 41¢@41½c. old.
OATS—34¢c.
RYE—Dull; 56¢ bid.
WHISKY—Steady; \$1.03.
BUTTER—Unchanged.
EGGS—Unchanged.
PORK—Dull; \$11@11.12½.
DRY SALT MEATS—Quiet; and weak, car lots, loose, \$3.70@3.80; \$5.00@5.65; \$5.70@5.75.
BACON—Firm; clear ribs, \$6.50@6.75; \$6¢@6.10.
LARD—Dull; opened at \$7.25.

St. Louis Live-Stock Market.

St. Louis, January 28, 1878.
HOGS—Active, but lower; light, \$3.40@3.65; packing, \$3.75@3.80; butchers' fancy, \$3.90@4.10; closing weak; receipts, 10,000.
CATTLE—Steady; fair demand; prime to choice shipping steers, \$4.90@5; fair to good, \$3.90@4.50; fat to choice butchers' \$3.40@3.50; good to choice cows and heifers, \$3.25@3.65; feeding steers, \$3.55@3.70; stockers, \$2.50@3.80; receipts, 500.
SHEEP—Scarce, firm and wanted; extra heavy shipping muttons, \$4.50@4.65; good to choice, \$4@4.35; common to fair, \$2.75@3.60; receipts, 500.

Chicago Produce Market.

CHICAGO, January 28, 1878.
FLOUR—Steady and unchanged, western extra, \$4.50@5.75.
WHEAT—Fair demand and lower; No. 1, spring, \$1.08; No. 2, spring, \$1.01½@1.01½¢ cash; No. 3, spring, 95¢c.
CORN—Dull, weak and lower, 38¢@39c; cash or January.
OATS—Dull, weak and lower, 23¢c cash or February.
RYE—Dull and lower; 49¢c.
PORK—Inactive and lower; 47½¢@49c.
LARD—Good demand and lower, \$7.15 cash.
BULK MEATS—Butcher; shoulders, \$8.74½; short ribs, \$9.50; short clear, \$5.68½.
WHISKY—\$1.05.

Chicago Live-Stock Market.

CHICAGO, January 28, 1878.
HOGS—Receipts, 28,000; steady; closed firm; mixed packers, \$3.75@3.90; light, \$3.80@3.90; choice heavy shipping, \$3.90¢.
CATTLE—Receipts, 3,900; choice, fair supply, \$4.85@5.60; fair to good shipping, \$4.24@5; feeders and stockers quiet and steady, \$3.50@3.75; butchers' strong; steer, \$3.25@3.80; cows, \$3.50@3.60; bulls, \$1.50@3.
SHEEP—Receipts, 1,400; nominal; common sold at \$3.50@3.75.

Atchison Produce Market.

ATCHISON, January 30, 1877.
WHEAT—No. 3, fall, \$1.18; No. 4, do., 80c; No. 2, spring, 80c. No. 3, do., 80c, rejected do., 70c.
RYE—No. 2, 40c.
OATS—No. 2, 16c, white, 17c.
BARLEY—No. 2, 25c No. 3, 20c, rejected —.
CORN—No. 1, the ear, 25c, shelled, 23c, new corn, 24c.
FLASHED—\$1.00.

Leavenworth Produce Market.

LEAVENWORTH, January 30, 1878.
WHEAT—No. 2, not quoted; No. 3, \$1.00@1.01; No. 4, 90c; local demand good, but prices subject to a decline.
CORN—Market price for choice white \$2.85¢; yellow, 25¢@27c; shippers paid \$2.87¢.
POTATOES—Early Rose, 40 to 45¢; Peach Blows, 50 to 60c.



Literary and Domestic.

EDITED BY MRS. M. W. HUDSON.

TWENTY-SIX HOURS A DAY.

I—HOW TO GET THEM.

"Well," exclaims tired Mrs. Motherly, "if anybody needs twenty-six hours a day, I am sure I do, and ten days a week into the bargain. The days are not half long enough, and when night comes, the thought of the things I ought to have done, but couldn't, tries me more than all I have done. This very day, when I expected to do so much sewing, has slipped away, while I have trotted around after the children, washing faces, brushing tangled hair, putting on rubber boots and taking them off again in fifteen minutes, and picking up blocks and playthings, and mending unexpected tears in jackets. I have mended twenty court-plaster on 'skatched fingers,' settled twenty quarrels between the baby and the next older, threaded needles for 'make-believe sewings,' and all the time been trying to sew, to dust, or sweep, or make gingerbread, till I feel as if I were in a dozen pieces, and every piece trying to do something different. At night I am so tired that all I ask for is a place to crawl into and sleep if I can, and even that must be with one eye open to see that the baby doesn't get uncovered. Yet there are people so unfeeling as to say I ought to try to get time to read and all that!"

Not so fast, my little mother. It is all true, every word of it, but let us see if it isn't possible to save a little time out of even these busy, wearying days for something higher than mere physical needs.

In order to find out how to save it, let us see what we do with it. Suppose we sort out our work as we do our work baskets, and see if we cannot make a little time by saving it. The first and most important of our duties is the care of the children, including, of course, their physical, moral and intellectual training.

Next comes the housekeeping, i. e., the literal keeping the house in order, looking after its cleanliness and general pleasantness.

Then, cooking or preparing and serving the food, including the care of the table and all that pertains to it. This is really another part of the housekeeping, and perhaps ought to be included in it, except that in some households the details are given over entirely to servants, while in others they are in greater or less degree the work of the lady of the house.

And lastly, the sewing. As regards the care of the children, it is almost impossible that there can be any superfluities. To every true mother, their welfare is first and foremost. Better that cobwebs festoon our parlor-walls, and dust lie in inch deep on our books, than that we neglect our children for anything, no matter how good that thing in itself may be. Missionary meetings at one end of the scale, and balls and fashionable society at the other, are all blame-worthy, if on account of them the children suffer. When "culture" turns them over to the tender mercies of servants, it becomes only a refined form of selfishness.

By caring for the children, I do not mean providing them with plenty of wholesome food and warm, clean clothing merely, but I would also include that indefinable something which, for want of a better word, I must call "mothering." It consists in acts of loving, motherly attention, such as taking up the tired baby toward night-fall, and nestling him in your arms for a little rest, and in calling the equally tired older child from her too-absorbing play, and by quiet conversation soothing her busy brain into a condition for restful sleep, instead of leaving it to toss that weary body through hours of uneasy dreaming. It will lead you cheerfully to lay down the interesting book or fascinating sewing to cover Tommy's ball or to loop up the refractory overkirt on Bessie's doll, and patiently to restore order after your dining-room has been turned into a Pandemonium on a Saturday afternoon by Harry and "the boys." It will help you to teach both plaintiff and defendant in a family quarrel something about the rights of both persons and property, and to show them that there can be honor among children as well as among thieves. These things take time, and plenty of it, but they are a part of a child's birthright.

But some mothers "mother" their children too much, don't they? To be sure they do. There's a difference in hens, even; some cluck and scratch and bustle about with so much maternal eagerness and ignorance as to tread the life out of half their chicks, while others go clucking around in an amiable, comfortable fashion, always spreading their wings at just the right moment to shelter their brood from every real or imaginary danger. These are the hens farmers keep to "set." They are such "good mothers" and their chickens always turn out well. So it is with children. Where every want is anticipated, where a child seldom does anything for itself, is dressed and undressed, rocked and amused long past babyhood, is never allowed to try experiments and make failures, the mother becomes a slave and the child a helpless doll.

There is such a thing as judicious neglect in the care of children. By this I mean a careful carelessness which allows them to look out for themselves as far as they safely can, but yet is always ready to step in at just the right moment. To be sure, their clothes will get soiled and their heads bumped oftener, but they will grow up more sturdy and self-reliant than where they are constantly watched. At first the mother will not save much time by this sort of training. Indeed, it is a good deal easier to do everything for a child than to direct him in his awkward efforts to help himself. For instance, the four-year-old boy wants to wash his own hands, brush his teeth, and button his boots. You know he'll let the water run up his sleeves and spill it on the floor and the wash-stand, but you let him try. He is so proud to think he is helping mamma, that you haven't the heart to tell him he has hindered more than he has helped. And when you find that he has carefully washed the inside of his hands, which were clean enough before, while the backs of them are as dirty as ever, and that his boots are on the wrong feet, you use some ingenious pretext to remedy defects, and then quietly laugh to hear him shout to somebody, "I'm 'most a big boy; I d'essed myself all alone." But what a relief it is, when he is six or seven years old, to have him able to do these things for himself!

But if we cannot save much time from the care of the children, perhaps there is some unnecessary work in our housekeeping. Haven't you ever thought, after some domestic upheaval, such as house-cleaning or a "thorough sweeping," "I don't believe it

pays, after all. It don't look much cleaner than it did before?" But when your husband mildly suggested the same thing, did you not, my dear little hypocrite, freely declare that men never did appreciate woman's work? How would he like his house to be as dirty as a barn? A sweet little lady, one of these model housekeepers, once said to me, "I have just cleaned my spare-room, and, honestly, I don't suppose there have been six people in it since last fall. But, then, I know it's clean, and that's something."

Think of the paint-scrubbing, spring and fall, in places where a fly wouldn't dare to set his foot, and couldn't if he dared, and the sweeping and dusting on regular days, not because the rooms need it, "but, then, you know, it's time for it." I suppose I shall be misunderstood. Next housekeepers will look aghast, and say, "Well, I can't abide dirt any way," intimating that dirt (not dust, that's too mild—but real, unmitigated, horrible dirt) would lie in shovelfuls all about, if they didn't throw soul and body into the search after it. On the other hand, Aunt Easybody, who "runs in" for an hour's gossip with her neighbor in the morning before she dusts her sitting-room, and Fanny Meander, who sits down to alter the trimming on her spring hat, with her bed unmade and her room in disorder, will each sweetly smile and say, "That's just my doctrine." But I don't mean either of you, nor Mrs. Aimless, who devours "Mrs. Southworth" and calls it "culture," while her children make mud-pies in the street. I am talking to these particular, conscientious housekeepers who are working and worrying (principally worrying) themselves into early graves, for fear every nook and corner from attic to cellar will not be in immaculate, speckless, dustless order. It is beautiful to have it so, you say, thinking of Mrs. A's exquisite housekeeping. But Mrs. A. has a corps of well-trained, faithful servants, a house so large and well arranged that all the actual work-rooms are snugly tucked out of sight. The laundry has marched away from the kitchen, the sewing-room, hidden goodbye to the family sitting-room, and the nursery and sitting-room has shyly walked upstairs into a place by itself. Yet some, either alone or with the aid of a "cheap" Irish girl, try in their inconvenient, crowded houses to reproduce Mrs. A's results. It would be a disgrace to her if she didn't do it,—it is almost as much of a disgrace to her that they do, for what costs her only money costs them vitality, and leaves them neither time, strength, nor thought for anything else.

Again, while some of us burden ourselves through superfluous neatness, others do the same thing through excessive elaboration in their housekeeping. You have been ushered into some of these delightful parlors where blossoming plants and vases in brackets, elegantly birds and pictures and bronzes are arranged in beautiful profusion. Now, some one must dust the statues, and water the plants, arrange the flowers, and take care of the birds. There are many ladies who are not so occupied with other duties but that they can find time for these things and for reading and study too. Occasionally a servant may be found who can be trusted to do all this. But there are busy mothers of little children whose minutes are so taken up, that the time thus used may be all that can be spared from imperatively necessary work.

Now, for the sake of a greater good, may I not be better for such persons to deny themselves these things,—or, at least, to substitute for them something else? Don't suppose for an instant, that I would counsel empty barn-like rooms; home should be made just as attractive as possible. But among the host of elegant things there are some which almost take care of themselves. You will see at once the difference between the pictures on the walls and those on easels; ferneries, and stands of growing plants; hanging baskets of autumn leaves and clematis, and these which need to be taken down to be watered every day. These things are meant to express culture and refinement in their owners. There may be times when even these must be put one side, that the mistress may possess the substance of which they are but the shadow.

(TO BE CONTINUED.)

HARNESS OIL.

It is the nature of our sex to sympathize with a man when he is in trouble, and as Lonesome Ben seems to be greatly troubled about his little harness oil for his old harness, I send him the recipe my father used when I was young. Take an old jug, one with the neck broken off will do, and put some cheaper, put a corn cob in the top and you are ready for operations.

Now take the jug to town and buy 1 gallon of castor oil more or less, as suits your fancy; it comes cheaper by the gallon. If you are a granger pay for it when you get it, if you are not and do not have the money, tell the "middle-man" to charge it. If you expect to take the girls to the grange or to meeting, put a little lamp black into it before using, if not leave out the lamp-black, as it costs almost as much as a gill of fresh yeast. This oil is also good for the inner man when you live too long on heavy bread, and for the family wagon of any size or style it is unsurpassed. How awful nice to have all these useful things out of one old jug.

BRIGHT EYES.

DRIED YEAST.

Perhaps Lonesome Ben will be delighted to know that the nankin bag system has occasionally a friend. Of course when a gill of fresh yeast can be procured when wanted, it is not so necessary, but those who live in the country cannot get the fresh yeast when wanted, and dry yeast is such a very convenient. To make dry, hop yeast, take five or six medium sized potatoes, pare them and put them in a quart of water to boil, then tie a handful of hops in a cloth, and boil them with the potatoes until they, the potatoes, are soft; then pour the water while boiling on a handful of flour, mash the potatoes and add them, when cool add a half a pint of bakers' yeast, set it away to rise, when it is light mix in all the corn meal you can and spread it out to dry, a warm windy day is preferable, and if put out in the morning on such a day it will be almost dry by night. When thoroughly dry it should be put away in a dry, cool place. Soak half a cupful in lukewarm water an hour before using. Buckskin gloves can be washed in soap suds, rinsed and dried by rubbing a little, when nearly dry they will become soft. Truly, A SYMPATHIZER.

A BUNCH OF LETTERS.

TO SUSAN: Your idea about the origin of yeast is, no doubt, correct; the Lord gave it to Eve to raise her first loaf of bread and she used it to "raise Satan." That started a fermentation of evils for the whole world. But seriously now, the lack of good yeast, therefore good bread, is fast making of me an irritable animal. I have tried the Vienna compressed yeast, it makes bread very much compressed; I like light bread. At present I am making cakes of just flour and water, and cooking them in a frying-pan, they are not as good as the cakes "my mother made," but they are very satisfying.

Please accept thanks for information about harness oil, I presume the kinds you name are much better than lard oil, but I find lard oil very convenient for frying cakes. I trust you will not do me the injustice to think I am making game of you by asking of you useful information about housekeeping and management of the farm; you have already proved yourself of great service to me, and talk like a sensible, practical-minded woman. I have been thinking daily about what you said of a woman's duties in the household.

It is pleasant to contemplate that while one is busy about the farm, the wife is industriously employed in the house making compressed bread from Vienna yeast, etc.; and after supper the darning is a natural sequence, and her nervous fingers are ready to mend things generally. My friend, you certainly struck the key notes to domestic happiness; pleasant words, a sunny countenance and plenty of pin-money will render a home bright and pleasant, and bring contentment. But then, do you not think that pleasant words and ways and a sunny countenance are the reflex of good bread, a tidy house and home made pleasant by an educated taste in the housekeeper, for the little elegancies and embellishments that make home attractive? I hope to have your views on woman's education for household duties.

Please accept thanks for compliments paid us in your last letter, of being a good-natured fellow, but be careful, you may catch a tartar. Yes, you can do something more for me. Please tell me how to make a paste to put on wall paper, and what colored wall paper to select to go with blue glass windows, and how to take care of a brood of young chickens. I have a thousand things to ask about.

I will close by asking why you left off half your name? I suppose you think plain Susan will fit any other name than Gabriel just as well.

LONESOME BEN.

LONESOME BEN: Having read your enquiries in the FARMER, allow me, through the medium of the same paper, to say that I appreciate your situation, and also your mother's bag of yeast, because my mother kept hers in the same way, and I know of no better way than to keep dry yeast in a tight paper bag, besides, we are apt to think that what our mothers did was right. In all my experience of housekeeping, I never knew of a recipe for making yeast without first having some to start with, but I know that I have read of one in some of our late papers, which are not at hand now, and perhaps some one may send it in. In the meantime I would suggest some baking-powder or some of the self-raising flour, the making of which is a process known only to some millers; I have used it myself and know it to be good.

And now for the dry, stiff, useless mittens I have been told by one who knows, that if you will hold your mittens over a smoke, after first wetting them, and working with your hands until they are dry, they will be pliable and fit for use.

If you are not ready to get married, buy Dr. Chase's recipe book; you will find a recipe for all you want to know, in the house and out doors, and you will get along nicely if you continue your subscription to the FARMER.

AUNT SALLY.

MRS. HUDSON: I read and enjoyed "Darning and Thinking," in a late number of the FARMER, and I agree with the writer of another article, that farmers' wives should not waste their time in idle longings for the excitement of city life. Some, I doubt not, do thus waste their time, but by no means all. I myself often think, as I read of the lectures of some of our noted personages, how much we miss who live too far away to have the benefits of those helps to intellectual enjoyment. But we have thinking women in our country neighborhood; not of the class, however, who go about as noisy declaimers for "Womens' Rights," but those who work and think at home, and are ready to give their sisters the benefit of their thoughts when they meet socially. How much we enjoy those long winter evenings! what a blessing they are to those who have to work hard the most part of the year! Reading aloud is a very entertaining way to spend an evening; then some members of the family can be employed and yet all enjoy the reading together, and it often adds a charm and deepens the impressions made to exchange thoughts on what has been read.

M. M. T.

New Malden.

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