

that which was planted upon the hills. The difference in the yield, he said would be but trifling, and he thought practically there was but little argument in favor of drill planting.

Mr. Witmer thought hill planting was preferable, because the farmer can put into the ground just as many grains as he desires.

Mr. Miller said he had tried both hill and drill planting, and he found after the corn was cut that planted by drill was largely in excess of that planted in the hills.

Mr. Engle said that it was generally conceded that the corn drilled into the ground yielded a larger crop than that planted by the other method.

Mr. Bollinger's observation led him to be in favor of row planting. He also believed in a thorough cultivation of the soil, and the application of plenty of manure.

The question was also discussed by other members of the society, and many views were brought forth upon the subject.

The following question was then taken up: "What percentage of land should be planted in tobacco?"

Mr. Landis said the question was an important one to the farmers of Lancaster county. It was of vast importance for the raisers of the crop to know what percentage could be planted and the county retain its standard as the best agricultural county in the country. Too great an acreage should not be laid out in tobacco, else the farmers will soon find their soil deteriorating in value, as it has done in Connecticut.

Mr. Hoover agreed with the preceding speaker. He thought no farmer should cultivate more than six per cent. of his land in tobacco. Some farmers, however, could cultivate ten acres with as little damage to the soil as he who only plants six acres out of every hundred. He did not think the farmers of this county would ever fall into the errors that the Connecticut farmers have done. Our farmers look far ahead, and try every means in their power to keep the soil good.

Mr. Brosius said he did not apprehend any danger in the future from the cultivation of tobacco. The farmers are very careful of their soil, and he saw numerous fields that were last year planted with tobacco, this year growing wheat.

Mr. Engle thought there was no doubt that the raising of tobacco was of great benefit to the county, but he could not see the advantages that accrued to those using the weed.

Mr. Miller did not think more than three per cent. should be planted in tobacco.

Mr. Reist said Lancaster has been a tobacco growing region for the past 25 years, and he thought the soil compared as favorably now as it did then.

A motion was made to the effect that it is the sense of the society that five per cent. of the average of the farm land be sufficient to be put out in tobacco.

The question was amended by making it three per cent. The amendment was lost, and the original motion carried.

The question of the amendment to the by-laws, noticed in our last month's report, was then taken up, and the amendment was, on motion, adopted.

Mr. W. L. Hershey presented to the society for distribution some rye, oats, barley, wheat and clover seed sent to him from Germany.

J. C. Linville presented to the society some fine specimens of Romanté apples.

On motion of Cooper, the 8th, 9th and 10th of September were selected as the days upon which to hold the proposed fair of the society.

The following questions were referred for discussion at the next meeting. "At what stage of the growth of corn should the stirring of the soil cease?" Referred to Jacob Bollinger.

"Does fermentation increase the nutritive properties of feed?" Referred to H. M. Engle.

"What are the relative values of timothy and clover hay as feed?" Referred to Peter Hershey.

"What is the best period of growth for cutting grass or hay?" Referred to Calvin Cooper.

The president appointed Mr. Peter S. Reist and Dr. S. S. Rathyon to fill the vacancies in the Board of Managers caused by the resignation of Messrs. Landis and Miller.

On motion adjourned.

POULTRY ASSOCIATION.

The Lancaster County Poultry Society met stately in their room in the City Hall, at half-past ten o'clock on Monday morning, May 3.

The following members and visitors were present: J. B. Lichty, city; William Schocberger, city; Frank Griest, city; Frank R. Diefenderfer, city; C. A. Gast, city; J. W. Bruckhart, Salunga; John A. Stober, Schenect; J. B. Eshleman, West Hempfield; Rev. D. C. Tobias, Lititz; John Schum, city; H. H. Tshudy, Lititz; Chas. Lippold, city; J. B. Long, city; Ferdinand Schaeffer, city; J. M. Johnston, city.

The president, Mr. Warfel, being absent, Hon. John A. Stober was called upon to preside.

The minutes of the preceding meeting were read and approved.

Mr. A. E. Bare, of East Cocalico, was elected a member of the society.

At the last meeting of the association attention was called to an article in the Germantown Telegraph from the pen of William T. Smedley, of Chester county, in reference to the housing of fowls, and it was made the subject for discussion at this meeting—the discussion to be opened by Rev. D. C. Tobias.

The article was, on motion, read by the secretary, and is as follows.

At the risk of being considered rather inhuman, I feel inclined to dissent from the views of many of our progressives in regard to the housing of poultry. In common with a good many other agricultural enthusiasts, I imbibed some very advanced ideas at the setting out of my career as a farmer. Time has modified most of these views considerably. Among other things, I have recently come to the conclusion that mistaken kindness kills more poultry than it saves. I had always good shelter for my fowls when they choose to avail themselves of it, but some half dozen years ago I put up an approved house for them, with plenty of windows to admit the sunshine, and tightly fitting doors to exclude the cold, and after a time of driving and coaxing finally got them reconciled to their new quarters. Since then I have been wintering from eighty to one hundred and twenty-five hens. But, while under the old regime of roosting where they pleased, sometimes on trees or fences, sometimes under shelter, occasionally a comb got frozen, they were in the main healthy. Under the new order things did not work so well. Though I had what I considered among the hardiest breeds, Black Spanish, many died. Some would linger for days and even weeks, others would drop from the perch at night without giving a hint. Desiring to change for a larger fowl, a couple of years ago I got the Rose-combed Dominiques. Then the mortality became greater. This fine plump breed is not hardy in my hands. A larger percentage of them died than of the Spanish, until the past autumn when the mortality became an epidemic, and they died at the rate of four and five a day. This went on till a friend suggested that I was killing them with kindness; that my pleasant quarters were not healthy for the number I had. Willing to try the hint I closed the house, and though it gave both the tenants and myself great annoyance for a time, I finally forced them to take to other quarters, principally the apple trees, and soon the balance (about seventy,) ceased showing any signs of disease.

My location is high and exposed, but up to the present I do not see that the exposure has harmed them, as they are laying better than for many winters, and much better than those of my neighbors. Now, while feeling very kindly to the dumb creation, I cannot help thinking that we bring on them more diseases by our care than they used to know when they were being what we are accustomed to call "neglected." While on the chicken question, I will mention that several of my neighbors have tried a remedy for chicken cholera, that they feel sure is a sovereign cure for the disease. As it is not my property I do not feel at liberty to make it public.

Mr. Tobias read an essay upon the subject, taking the opposite view of the question. He thought that if Mr. Smedley had better houses built and did not overcrowd them with his fowls he would not have had such bad luck with them. Eighty or one hundred fowls are entirely too many to allow in one flock. Not more than fifty should be allowed together, and even a smaller number would be found advantageous. Mr. Tobias thought the houses should be bright, roomy and airy and they should be kept clean, and disinfectants used frequently. He thought Mr. Smedley's ill success when he housed his fowls was due principally to over-feeding. More are killed by feeding than are carried off by disease.

Mr. Tshudy thought Mr. Smedley, in his article, should have told his readers how many fowls he had and the condition of his chicken house and its ventilation. Had this been done, readers could have been better able to judge of its merits. He agreed with Mr. Tobias in regard to over-feeding fowls.

Mr. Bruckhart's experience was that fancy fowls were liable to many more diseases than the common chickens. He thought the reason for this was that so much more care was taken of the fancy than of the common fowls. He thought the plan of housing them continually was a mistaken idea.

Mr. Lippold agreed with Mr. Bruckhart. When he kept common fowls he never knew what disease was; but when he took to raising games his fowls took cold nearly every fall and winter, and many of them died.

Mr. Tobias reiterated his statement that fowls were not killed by kindness but by over-feeding. They should be treated properly and housed well and the consequence will be found to be beneficial. He thought too much inbreeding would in the end tend to reduce the quality of their blood.

Mr. Bruckhart did not think the question was shelter or not, fowls which were housed died at once. It should be evident to every one that housing them would tend to make them more tender. A fowl which has to stand all sorts of weather would certainly become hardy and more capable of resisting disease.

Mr. Schum agreed with Mr. Tobias. He did not

believe in housing fowls, only at night. During the day they should be allowed to run around the yard.

Mr. Long also found the same trouble with his fowls when he had a defective house. It should be warm, dry and have plenty of ventilation. This should be only used for roosting in.

Mr. Stober related some experience he had in regard to over-feeding. His fowls have feed continually at their command, and he found them to thrive very much. He did not think it harmed fowls to over-feed them.

Mr. Lichty thought the idea of doing injury to fowls by having the flocks too large was long ago exploded. In support of his statement he read an extract from Wright's book on poultry, which described numerous large flocks, in none of which disease had made its appearance.

Mr. Long desired to know whether the prevalence of chicken cholera among fowls made the young chicks liable to it.

Mr. Stober had considerable experience with the chicken cholera, but he never knew the chicks to take it at the time older fowls had it, but when they grew to be larger, he found them to die by the score.

Mr. Tshudy had found that cholera was no respecter of "age, color or former condition." He found his fowls to die off from the age of four days until they were full grown.

The following question was proposed for discussion at the next meeting: "What is the proper food for old and young chickens during hot weather?" Referred to Mr. Tshudy.

There being no further business, the society, on motion, adjourned.

THE BEEKEEPERS' ASSOCIATION.

The Beekeepers Society of Lancaster met Monday afternoon, May 10, at the Black Horse hotel.

In the absence of the president Mr. I. G. Martin was called to the chair.

The following members were present: I. G. Martin, Earl; Elias Hershey, Paradise; John H. Mellinger, Strasburg; John Eitemiller, Strasburg.

Mr. Martin said he went into winter quarters with thirty-two colonies, and they all came through well; he lost none and was not obliged to feed any this spring. The bees were strong and active, and nearly ready to swarm. The prospects for a good crop of honey are at present very promising. He wintered his bees in their summer stands, and has done so for several years, his experience teaching him that this is the best plan.

Mr. Hershey said he wintered thirty-one colonies, all of which got through safely except two, which died of starvation. The remaining colonies are all in good condition and the prospects are promising for a good crop of honey. He had no swarms at present, but had heard of some.

Mr. Eitemiller wintered twenty-six colonies and lost seven. The rest are all in very good condition, and almost ready to swarm. Prospects for a heavy harvest are good.

Mr. Mellinger went into winter quarters with sixteen colonies on their summer stands. He used no packing, and only lost three colonies—whose queens had died in the fall.

The question being raised as to the best plan of introducing queens, Mr. Mellinger said his method was to take out the old queen and place the new one at once in the hive.

Mr. Hershey had also followed the same plan with much success.

Mr. Mellinger thought that a better plan was to remove the old queen three or four days before introducing the new one. He also takes away the old queen cells.

Mr. Martin said he placed the queen to be introduced in a wire cage. He then removes the old queen and at once introduces the new one in its cage. After allowing it to remain in the cage twenty-four hours he opens it and allows the queen to come outside the hive on a comb. If the bees are kind to her he does nothing more, but if they do not want to accept her he places her in the cage again for the same length of time. This he does until she is accepted. Since he has tried this plan he has not lost a queen.

Mr. Eitemiller said he removes the old queen first. The new queen he places in a cage and plugs up the apertures with honey and comb, and hangs it in the hive, where he leaves it three days. At the end of that time if the queen has eaten her way out, all is right, but if not, he then lets her out quietly, so as not to disturb the hive. He tried this plan on fifteen colonies and did not lose a single queen. He always introduced them in the latter part of August.

In reference to the best plan of getting bees to work in section boxes, Mr. Hershey said his experience was to give them a comb foundation,

Mr. Martin said that when he had colonies which refused to work up the upper stories of his boxes, he took a section already filled with comb, and placed in it the bees who refused to work, and he always found they would then work toward the upper story.

The question was raised as to whether it is profitable to invest in what are known as "dollar queens"—queens that have only commenced to lay—and the

general impression among the members was in favor of so investing, provided the queens were purchased from reliable parties. A reliable dealer will only have pure queens, as he will not breed when he has hybrid drou's about his place.

The society adjourned to meet on the second Monday in August.

FULTON FARMERS' CLUB.

The Club met at the residence of Solomon L. Gregg on April 10.

William Lee, a visitor, exhibited the bean of the French locust. John Grossman, also a visitor, exhibited two apples for a name. They were as fresh looking after keeping through the winter as if just taken from the tree. E. H. Haines pronounced them to be the Tewksbury Winter Blush, and says they will keep a year. Mr. G. distributed some scions of this and another variety of apples, which he calls the Spoon Flower. The fruit of the latter variety, he says, is varied in color, and begins to ripen very early, and continues to ripen through the summer. The tree is a full bearer and a vigorous grower.

Asking and Answering Questions.

E. H. Haines: Do the members think it better to make worm, or post and rail fences, taking into consideration the cost of land, timber, etc.?

Montillon Brown always likes to have a good post and rail fence between his cattle and his crops. The cattle are apt to rub worm fence down. A neighbor of his some years ago had some bad cattle in the field adjoining his. He did not feel easy with a worm fence on the line; so he replaced it with a good post and rail, and found that he could sleep much better at nights.

Joseph R. Blackburn would prefer post fence if locust posts were used; chestnut posts cost too much, considering the short time which they last; would prefer worm fences to post and rail if chestnut posts were used, as he could use rails in them that were far too rough for post and rail.

S. L. Gregg thought worm fence the cheapest; besides they can easily be removed to clean up the row. Where land is worth over one hundred dollars an acre, post fence would be cheapest, because they occupied less ground.

John Grossman is almost a "no-fence man." He likes post and rail fence around the farm, but don't think it profitable to have inside fences. Cattle could be kept in the yard, and a boy hired to cut and haul feed to them for nearly the same expense that it would take to keep the fences in repair. In this way the ground they occupied could be farmed.

C. S. Gatchell: Will water, thrown into a cistern by an hydraulic ram, get cool ten feet under ground? No one present had tried the experiment.

William Lee said that he had found that it took from ten days to two weeks for rain water to get cool in a cistern.

Montillon Brown: Has any one known an ox or steer, when foundered, to get stiff in the limbs like a horse?

Joseph Griest and others have known it to occur. E. Stanford: Is wet or dry feed the best for cows? The majority preferred wet feed, although some of them fed dry, because it was less trouble.

Viewing the Premises.

After dinner the club took a short stroll over the farm, in order to inspect the manner in which it was conducted, the quality and condition of the live stock, etc. After returning to the house a few criticisms were given, mostly of a favorable character. One of the members had observed a grove of young locust where the trees were standing entirely too thick; many of them should be dug up.

Literary Exercises.

"The Old Way and the New" was read by Alle Gregg.

Mabel Griest read from the *Household*, "How we Dipped Candles."

Mary A. King read "A Free Seat," an instructive account of the visit of a stranger to the church of Christ. After walking up and down the full length of the aisle, without any one inviting him to a seat, he went out and brought in a stone, on which he sat down. Pew-doors were immediately thrown open and seats freely offered him. The stone is still kept by the congregation to remind them of the day when Christ came late.

"The Old Farm Gate" was recited by Carrie Blackburn.

E. H. Haines read a report of experiments in fertilizers.

Day Wood read from a State agricultural report an article by Professor Leslie on "South Carolina Rock."

C. S. Gatchell read an account of "The Bloomingdale Creamery."

The question: "Is the Experimental Farm of sufficient value to the State to pay for the money invested?" was next taken up and discussed. On this question the club was about equally divided in opinion, several thinking that the experiments were valuable only in the locality of the farm, while others took the ground that we are all benefited by them. If we were not, it was probably our own fault. The farm was a thing that we should all be proud of.

After appointing a committee to furnish literary matter for next meeting, the club adjourned to meet at Wm. P. Haines's, Fulton township, 8th of next month.

LINNEAN SOCIETY.

The April meeting of the Linnean Society was held in the ante-room of its Museum on Saturday afternoon, the 24th, the president, Rev. J. S. Stahr, occupying the chair. Ten members and four visitors were present. M. L. Davis, M. D., of Millersville, was appointed secretary, pro tem. After organization and collection of dues, the following donations were made to the museum and library and the historical section, which were duly registered and discussed:

A fine specimen of the Southern "Pouched Gopher," from Georgia, through Mr. H. Vonder-smith. This is the *Geomys pinetis* of naturalists, but in the South it is commonly called a "salamander," which shows the unreliability of exclusively common names. Forty specimens of minerals and metals, eight of fossils and twelve of fresh water shells, through A. P. Hostetter, Esq., being a fragment of the J. Vates Conyngnam collection. Five specimens of *caviar*, being the dried roes of the sturgeon of commerce, and largely consumed by the Russians, and also highly relished by the Japanese; part of the contents of the valise containing books left at the mayor's office and presented by his Honor J. T. MacGonigle. A box containing eleven Japanese camels' hair pencils, with bamboo handles and sheaths, from the same.

Two immature dried quinces of 1879, infested by a species of uredino fungus.

Six impressions in wax, of local seals of the Adams Express Company in Lancaster county, and three of the Reading Express.

Twenty volumes of French philosophical and elementary books; one volume English grammar, and seventeen volumes of Japanese historical and literary works, by Hon. John T. MacGonigle. Part 3 for November and December, 1879, of the proceedings of the Academy of Natural Sciences of Philadelphia. Report of the Directors of the Central Park Menagerie for 1879. Nos. 13, 14, 15 and 16, 1880, of the *Official Gazette* of the United States Patent Office. Index to decisions of the same for 1879. Ten catalogues and circulars of scientific and historical books. The Lancaster Farmer for April, 1880. 1 volume, "State of Labor in Europe," by Hon. A. Herr Smith.

Twelve envelopes containing 110 historical and biographical selections, from S. S. Rathvon; a copy of the centennial number of the *Baltimore American* 1873; a copy each of the *Hawaiian Gazette* and the *Commercial Herald*, Honolulu, Sandwich Islands, 1870, from S. S. Rathvon.

The following were papers read: No. 539, by S. S. Rathvon on the "Pouched Gopher," No. 540, by the same, giving a list of the titles and the authors of the books donated by Mayor MacGonigle; No. 541, a very elaborate and interesting historical paper was read by Dr. Dubbs, on "Ephrata Publications," which was unanimously requested to be published; No. 542, "Botanical Notes," by President Stahr, in which he commented favorably upon the fresh impulse that the natural sciences have received from the young men and students of the educational institutions of Lancaster, especially in the departments of botany and microscopy, and astronomy, in which the Linnean is in hearty sympathy. He also laid before the society two plants somewhat rare for this region, namely a specimen of *Trillium erectum* var *album* from near Harnish's Mill, and a specimen of the *Pyxidonthera barbata*, a creeping evergreen, common in the Jersey barrens but rare here.

The committee appointed at the February meeting to inquire and consider the feasibility of publishing a periodical bulletin of the society, reported progress, and was continued.

The following was offered by S. S. Rathvon and unanimously adopted:

Resolved, That a vote of thanks be passed to Mayor MacGonigle and others, for the liberal donations which, through their instrumentality, have been made to the society on this occasion.

The society then proceeded to fill the vacancy in the secretaryship, occasioned by the death of the late Mr. Stauffer, which resulted in the unanimous election of Dr. M. L. Davis, of Millersville, for the balance of the term.

A communication was received from Mr. J. D. Widgate, of Carbondale, Pa., proposing to send the society a suit of the fossils of the coal region. The proposition was thankfully accepted, and the secretary was ordered to reply accordingly.

The donations were large, valuable and interesting; and under the rule of "Scientific Gossip" a spirited interest seemed to be manifested in behalf of the society, and on the whole the meeting was a very interesting one. After an hour or two pleasantly spent in a mutual interchange of views on various scientific topics the society adjourned to the last Saturday in May. The Linnean has maintained its organization intact longer than any other scientific institution that has ever existed in Lancaster.

ENTOMOLOGICAL.

Tobacco Plants—Depredations by Bugs.

Lancaster county is not the only place in which the young tobacco plants are being destroyed by bugs. The Clarksville, Tenn., *Leaf*, of April 23, has the following interviews with planters, showing the extent of the damage by bugs:

M. C. Johnson was found at Hampton station and says: "I sowed fourteen beds; they have eaten the plants clean from thirteen. I have one small bed they have not flushed yet and I don't care a d—. Wish they would eat every plant in the United States. They are eating the plants clean in Pandy woods, something that was never known before. My grange (Guthrie grange) report their plants nearly all destroyed."

W. W. McMurry says: "My plants are seriously damaged, but if I can check them now I think I will have enough to set my crop."

Mr. Henry Reason says: "My beds are as clean of plants as this floor. I examined them this morning and a plant could not be found on them with a forty-horse-power magnifying glass."

Reporter—"What are you going to do about it?" Reason—"I am going a fishing."

E. B. Ross said: "The bugs are eating my plants up. I do not regard my prospects for plants as worth a fig."

O. D. Battle: "The bugs have about destroyed my first sowing. Have burnt, resowed and canvassed."

F. Ewing: "They have destroyed two beds, and the prospect now is the bugs will finish the remainder in a week."

Guffin and Son, cultivating the Busrap farm. These gentlemen were found on their knees at one of their plant beds, and said: "This bed is all we have left; our other two beds are as clean as your hand, but there are right smart left on this one, if we could only stop the cussed things. What's good for 'em?" Reporter—"Well, from your report, I would think that tobacco plants agreed with them finely." G. and son—"Oh! I mean what will kill the d— things?" Reporter—"That is a conundrum that has been going the rounds of tobacco growers for the past two hundred years; when it is solved we will answer your question."

The farmers interviewed plant about 200 acres of tobacco.

[Whether the foregoing is a facetious exaggeration or a fact, we would like to see a specimen of the "bugs" that are capable of eating off a bed of tobacco plants "as clean as the floor." Bugs don't usually eat off anything. They live altogether on liquid food, from the sap of a plant to the blood of an animal. To devise a remedy, it is of some importance to know exactly whether we are dealing with a bug or a beetle. A remedy that would kill a beetle, might have no effect upon a bug—simply because the former in eating the plant would also be likely to eat the poison; whereas, the latter, that introduces its proboscis into the plant to suck out the inner juices, might do so with impunity. If any of our tobacco growers are troubled with insects of the character of those described above, they will do us a favor by sending us specimens. We would like to have them placed on record, for the benefit of posterity.—ED. FARMER.]

About Cut Worms.

A correspondent of the *Country Gentleman* asks the following questions relative to cut worms: I wish to put corn, this spring, into a piece of old sod that lies next to one planted in corn last year. It was terribly infested with cut worms, and about the time they were disappearing, I noticed, in this pasture land I propose to plow, a great many small grey millers or moths fluttering on the grass. Without knowing anything positive about them, I inferred they developed from the cut worms in my corn hills, and were laying in this sod the foundation for another crop of worms. Am I right? If so, what can I do to protect the corn from their ravages? Would it be of any benefit to sow on the inverted sod, just before harrowing it, from 200 to 300 pounds of salt? What would be the effect of sprinkling on the top of each hill a small handful of salt before the corn came up, or around the corn after it came up?

ANSWER: The moth or winged form of the common corn cut worm is about three-fourths of an inch long, and an inch and a quarter with its spread wings, dusky grey in color, and is distinguished by two black spots (one nearly square) near the centre of its fore wings, with a nearly white spot between them. You may judge, from this description, whether those you saw are the same. There is doubtless a strong probability that the unplowed portion of the field will be infested with them, as the plowed portion was last year. The last year's grubs changed to the winged insects in July, and laid their eggs at the roots of the grass. They hatched and fed on a portion of the grass till the approaching cold of winter, when they crawled into the earth and remained in a partly frozen state till spring. By the time the corn was up, they were