## TALMAGE'S SERMON.

"THE KING'S HIGHWAY" THE LATEST SUBJECT.

Golden Text; "And an Highway Shall Be There, and a Way, and It Shall Be Called the Way of Holiness"-Issiah XXXV., 8-10.



2, 1896.—Rev. Dr. Talmage's sermon for today was a picture of the road that many have traveled and others are trying to get on and is no more appropriate for the capital of the nation than for all

places. The text chosen was Isaiah xxxv., 8-10: "And an highway shall be there, and a way, and it shall be called the way of holiness; the unclean shall not pass over it; but it shall be for those: the wayfaring men, though fools, shall not err therein. No lion shall be there, nor any ravenous beast shall go thereon, it shall not be found there; but the redeemed shall walk there; and the ransomed of the Lord shall return, and come to Zion with songs and everlasting joy upon their heads; they shall obtain joy and gladness, and sorrow and

sighing shall flee away." There are hundreds of people in this house who want to find the right road. You sometimes see a person halting at cross roads, and you can tell by his looks that he wishes to ask a question as to what direction he had better take, And I stand in your presence conscious of the fact that there are many of you her who realize there are a thousand wrong roads, but only one right one; and I take it for granted that you have come in to ask which one it is. Here is one road that opens widely, but I have not much faith in it. There are a great many expensive toll-gates scattered all along that way. Indeed, at every rod you must pay in tears, or pay in genuflexions, or pay in flagellations. On that road, if you get through it at all, you have to pay your own way; and since this differs so much from what I have heard in regard to the right way, I believe it is the wrong way. Here is another road. On either side of it are houses of sinful entertainment, and invitations to come in and dine and rest; but from the looks of the people who stand on the piazza, I am certain it is the wrong house and the wrong way. Here is another road. It is very beautiful and macadamized. The horses hoofs clatter and ring, and they who ride over it spin along the highway, until suddenly they find that the road breaks over an embankment and they try to halt, and they saw the bit in the mouth of the flery steed, and cry "Ho! ho!" But it is too late, and-crash!they go over the embankment. We shall turn and see if we cannot find a different kind of a road. You have heard of the Appian Way. It was three hundred and fifty miles long. It was twenty-four feet wide, and on either side of It was made out of rocks cut in hex- into play? No. After this Rible agonal shape and fitted together. What a road it must have been! Made of smooth, hard rock, three hundred and fifty miles long. No wonder that in the construction of it the treasures of a whole empire were exhausted. Because of invaders, and the elements, and Time -the old conqueror who tears up a road as he goes over it-there is nothing left of that structure but a ruin. But I have to tell you of a road built before the Appian Way, and yet it is as good as when first constructed. Mil-

tions more will come. The prophets and apostles, too, Pursued this road while here below; We therefore will, without dismay, Still walk in Christ, the good old way.

First, this road of the text is the King's highway. In the diligence you dash on over the Bernard pass of the Alps, mile after mile, and there is not so much as a pebble to jar the wheels. You go over bridges which cross chasms that make you hold your breath; under projecting rock; along by dangerous precipice; through tunnels adrip with the meltings of the glaciers, and, perhaps for the first time learn the majesty of a road built and supported by covernmental authority. Well, my Lord the King decided to build a highway from earth to heaven. It should span all the chasms of human wretchedness; it should tunnel all the mountains of earthly difficulty; it should be wide enough and strong enough to hold fity thousand millions of the human race, if so many of them should ever be born. It should be blasted out of the "Rock of Ages," and cemented with the blood of the Cross, and be lifted amid the shouting of angels and the execration of devils. The King sent his Son to build that road. He put head and hand and heart to it, and after the road was completed waved his blistered and over the way, crying: "It is finshed." Napoleon paid fifteen million france for the building of the Simplon road, that his cannon might go over for the devastation of Italy; but our King, at a greater expense, has built a road for a different purpose, that the banners of heavenly dominion might come down over it. Being a King's highway, of course it was well built. Bridges splendidly arched and buttressed have given way and crushed the investments from earthly to heavenly passengers who attempted to cross them. But Christ, the King, would build no such thing as that. The work ione, he mounts the chariot of his love, and multitudes mount with him, and he his physical health fails?" God will drives on and up the steep of heaven amid the plaudits of gazing worlds. The work is done-well done-gloriously done magnificently done.

come miry and foul because it has not been properly cared for; but my text says the unclean shall not walk on this one. Room on either side to throw away your sins. Indeed, if you want to carry them along you are not on the right road. That bridge will break, those overhanging rocks will fall, the night will come down, leaving you at the mercy of the mountain bandits, and at the very next turn of the road you will perish. But if you are really on ASHINGTON, Feb. this clean road of which I have been speaking, then you will stop ever and anon to wash in the water that stands in the basin of the eternal rock.

Aye, at almost every step of the journey you will be crying out: "Create within me a clean heart." If you have no such aspirations as that, it proves that you have mistaken your way; and if you will only look up and see the fingerboard above your head, you may read upon it the words: "There is a way that seemeth right unto a man, but the end thereof is death." Without holiness no man shall see the Lord; and if you have any idea that you can carry along your sins, your lusts, your worldliness, and yet get at the end of the Christian race, you are so awfully mistaken, that, in the name of God, I shatter the delusion.

Still further: The road spoken of is a plain road. "The wayfaring men, though fools, shall not err therein.' That is, if a man is three-fourths of an idiot, he can find this road just as well as if he were a philosopher. The imbecile boy, the laughing stock of the street, and followed by a mob hooting at him, has only to just knock once at the gate of heaven, and it swings open; while there has been many a man who can lecture about pneumatics, and chemistry, and tell the story of Faraday's theory of electrical polarization, and yet has been shut out of heaven. There has been many a man who stood in an observatory and swept the heavens with his telescope, and yet has not been able to see the Morning Star. Many a man has been familiar with all the higher branches of mathematics, and yet could not do the simple sum: What shall it profit a man if he gain the whole world and lose his own soul?" Many a man has been a fine reader of tragedies and poems, and yet could not 'read his title clear to mansions in the skies." Many a man has botanized across the continent, and yet not known the "Rose of Sharon, and the Lily of the Valley." But if one shall come in the right spirit, asking the way to heaven, he shall find it a plain way. is my light and my salvation. Whom The pardon is plain. The peace is plain. Everything is plain. He who of my life. Of whom shall I be afraid?" tries to get on the road to heaven I go a little farther on the same road through the New Testament teaching and meet a trumpeter of heaven, and will get on beautifully. He who goes I say, "Haven't you got some music through philosophical discussion will not get on at all. Christ says: "Come lip and taking a long breath, he puts to me, and I will take all your sins his mouth to the trumpet and pours away, and I will take all your troubles forth this strain: "They shall hunger away." discussing it any more? Is not that more, neither shall the sun light on plain? If you wanted to go to some them, nor any heat, for the Lamb city and I pointed you out a highway which is in the midst of the throne shall thoroughly laid out, would I be wise in lead them to living fountains of water, detaining you by a geological discus- and God shall wipe away all tears from sion about the gravel you will pass their eyes." I go a little distance farover, or a physiological discussion ther on the same road, and I meet a the road was a path for foot passengers. about the muscles you will have to bring maiden of Israel. She has no harp, but pointed you the way to heaven is it wise had rusted from sea-spray; and I say for me to detain you with any discus- to the maiden of Israel: "Have you no sion about the nature of the human will, or whether the atonement is limited or unlimited? There is the bals clap as Miriam begins to discourse: road-go on it. It is a plain way. "This is a faithful saying, and worthy of all acceptation, that Christ Jesus came into | rider hath he thrown into the sea.' the world to save sinners." And that is you and that is me. Any little child here can understand this as well as I can. "Unless you become as a little and the brightest, and the fairest in all child, you cannot see the kingdom of heaven-who are they?" And the anlions of souls have gone over it. Mil-God." If you are saved, it will not be swer comes: "These are they who came as a philosopher, it will be as a little child. "Of such is the kingdom of heaven." Unless you get the spirit of little children, you will never come out at their glorious destiny.

Still further: this road to heaven is a safe road. Sometimes the traveler in those ancient highways would think himself perfectly secure, not knowing there was a lion by the way, burying his head deep between his paws, and then, when the right moment came, under the fearful spring the man's life was gone, and there was a mauled carcass by the roadside. But, says my text, "No lion shall be there." I wish I could make you feel your entire security. I tell you plainly that one minute after a man has become a child of God, he is safe as though he had been ten thousand years in heaven. He may slip, he may slide, he may stumble; but he cannot be destroyed. Kept by the power of God, through faith, unto complete salvation. Everlastingly safe. The severest trial to which you can subject a Christian man is to kill him, and that is glory. In other words, the worst thing that can happen a child of God is heaven. The body is only the old slippers that he throws aside just before putting on the sandals of light. His soul, you cannot hurt it. No fires can consume it. No floods can drown it. No devils can capture it.

Firm and unmoved are they
Who rest their souls on God;
Fixed as the ground where David steed,
Or where the ark abode.

His soul is safe. His reputation is safe. Everything is safe. "But," you say, "suppose his store burns up?" Why then it will be only a change of securities. "But," you say, "suppose his mame goes down under the hoof of scorn and contempt?" The name will be so much brighter in glory. "Suppose pour into him the floods of everlasting health, and it will not make any difference. Earthly subtraction is heavenly addition. The tears of earth are the Still further: This road spoken of in crystals of heaven. As they take rags s clean road. Many a fine road has be- and tatters and put them through the

paper-mill, and they come out beauti- FARM AND GARDEN. ful white sheets of paper, so often the rags of earthly destitution, under the cylinders of death, come out a white scroll upon which shall be written eternal emancipation. There was one passage of Scripture, the force of which I never understood until one day at Chamounix, with Mont Blanc on one side and Montanvert on the other, I opened my Bible and read: "As the mountains are around about Jerusalem, so the Lord is around about them that fear him." The surroundings were an omnipotent commentary. Though troubies assail, and dangers

friends should all fall, and foes all unite; Yet one thing secures us, whatever be-

The Scripture assures us the Lord will

Still further: the road spoken of is a pleasant road. God gives a bond of indemnity against all evil to every man that treads it. "All things work together for good to those who love God." No weapon formed against them can prosper. That is the bond, signed, sealed, and delivered by the President of the whole universe. What is the use of your fretting, O child of God, about food? "Behold the fowls of the air: for they sow not, neither do they reap, nor gather into barns; yet your heavenly Father feedeth them." And will he take care of the sparrow, will he take care of the raven, will be take care of the hawk, and let you die? What is the use of your fretting about clothes? 'Consider the lilies of the field. Shall he not much more clothe you, O ye of little faith?" What is the use worrying for fear something will happen to your home? "He blesseth the habitation of the just." What is the use of your fretting lest you will be overcome of temptations? "God is faithful, who will not suffer you to be tempted above that ye are able; but will with the temptation also make a way to escape, that you may be able to bear it." Oh this King's highway! Trees of life on either side, bending over until their branches interlock and drop midway their fruit and shade. Houses of entertainment on either side the road for poor pilgrims. Tables spread with a feast of good things, and walls adorned with apples of gold in pictures of silver. start out on the King's highway, and I find a harper, and I say, "What is your name?" The harper makes no response, but leaves me to guess, as with his eyes toward heaven and his hand upon the trembling strings this tune comes rippling on the air: "The Lord shall I fear? The Lord is the strength for a tired pilgrim?" And wiping his Now, what is the use of my no more, neither shall they thirst any song for a tired pilgrim?" And like the clang of victors' shields the cym-"Sing ye to the Lord, for he hath triumphed gloriously; the horse and the And then I see a white-robed group. They come bounding toward me, and I say, "Who are they? The happiest, out of great tribulations, and had their robes washed and made white in the

## blood of the Lamb." THE BICYCLE.

Two Chicago policemen on bicycles ran down and captured a murderer recently.

Babylon, L. I., arrests and fines wheelmen who ride in that place on A gold brick valued at \$150 will be

one of the prizes for the race meet at Louisville. Bicyclists must have their rights. But they must also light their lanterns at night .- New York World.

So far as streets and highways are concerned, the bicycla is the wheel horse of reform.-San Francisco Call. Everybody, including his sister and

his cousin and his aunt, seems to be riding a bleycle.-Syracuse Post, Foolish and careless bicyclists are causing more distress than the trolley or runaway horses.-Los Angeles Ex-

L. A. Johnson, the well-known L. A. W. scorcher, has been declared a professional, and will henceforth race in that class.

Bicycle teas and breakfasts are now quite the rage in Gotham society. This settles any lingering doubt of the wheel's social status. It has received its degree.-Baltimore American.

In England a new occupation has turned up in the cycling line in the person of a professional valuer, who, for a triffing fee, gives his idea as an expert on the value of second-hand wheel=

During the winter the shures of Bouth Africa and South America are alive with penguins that have swam six hundred or eight hundred leagues from the south polar ice fields to the nearest

A machine has been invented that will paste labels on one hundred thousand cans in a day of ten hours. There is an endless procession of rolling cans on a shoot, and each can picks up a label as

Professor Getkie writes in Nature that geologists have been on the whole inclined to acquiesce in Lord Kelvin's theory that the earth is about a hundred million years old, but some blotogists have reduced the estimate to only ten million years.

MATTERS OF INTEREST TO AGRICULTURISTS.

Some Up-to-Date Hints About Cnitivation of the Soil and Yields Thereof-Horticulture, Viticulture and Fiori-



NE of the first things I learned as field work was to husk corn, and my father took pains to encourage me to be a rapid husker. As I took quite an interest in the matter. I studied the various plans used by huskers in hand-

ling fodder, and the movements of the hands, that I might be able to adopt the easiest and most rapid way. A man that works on his knees cannot do the most rapid work, and it is very wearisome to stoop all day. Some plan must there-

fore be adopted to avoid this. I want no rack to be bothered with; when I husk corn, I have no muscle to spare to waste lifting the corn on to such a rack. It would take quite a heavy and strong affair to hold a shock such as we make here-twelve by four teen; fourteen hills square, fourby sixteen, and sixteen hills teen square. The custom a few years was to cut twelve hills square, making one hundred and fortyfour hills to the shock. Then they got to making them a little larger-twelve by fourteen, one hundred and sixtyeight hills to the shock. Now almost all is cut fourteen hills square, one hundred and ninety-six hills to the shock. Probably a few cut fourteen by sixteen, two hundred and twenty-four hills to the shock. But one farmer that I know in this section this year put up his shocks sixteen hills square, two hundred and fifty-six hills to the shock. This latter I believe is the customary size on the Sciota river bottoms, below Chillicothe. When I come to think of it, it would take considerable muscle hoist one of these shocks on to a frame two or three feet high, and requiring it to be ten or twelve feet long and bull strong to hold it. Talk about getting a husker to bother with such an affair while husking! Just the other day I heard a neighbor talking about his corn cut fourteen hills square. That makes six bushels to the shock, and would weigh, when first cut, something like a ton per shock. When it comes to handling and husking such corn as this, a man does well to plan a little to save lifting.

If such a shock is pulled down in two piles, and the husker gets down on his knees to work, getting up and stepping over a bundle when he has it husked, where will he have room for the fodder by the time the shock is husked? When a man works on his knees to husk a pile of corn, his hand is not as free to deliver the husked ears as it should be; neither is the other hand at full liberty to pick up the next ear. For a number of years I have not husked much, but I am about where it is done, and sometimes husk a little, and know that the plan I adopted years ago, as the speediest, is

I use the husking peg on the right hand. When I go to the shock, I pull down a good-sized bundle towards my left hand. Sometimes I get down on my knees to husk this first bundle. When it is husked, the fodder is tied and the bundle turned one-quarter around towards the left. This leaves the butts toward the corn pile. The next bunch taken from the shock is thrown with the top across this bundle of fodder. The husked bundles of fodder makes a rest for the bundles to be husked, and saves the husker from stooping.

Now, remember that I am a righthanded man striving to get the corn husked with the least labor possible. The fodder and corn lies before me ready to husk, the tops at my left, resting on the bundled fodder, each stalk within easy reach of my left hand With the left hand I grasp an ear; with the right, at one stroke, the right side of the ear is cleared of husks. The left hand is passed over the top of the ear to clean off the silks, and down the left side, taking the husks to the base, where they are grasped along with the shank and the ear broken off and delivered to the pile with the right land. While delivering with the right hand, the next ear is grasped with the left hand. If the fodder was piled at the right, and the right-handed husker stood with his right side to the fodder, he could not deliver the corn with the right hand and grasp the next ear with the left hand at the same time.

The right-handed man, for greatest freedom of action, must pile the fodder to his left, and the left-handed man to the right, and for greatest ease and comfort should stand as nearly erect as possible. The man working on his knees cannot have the freedom of action that is possible when standing .-J. M. Jamison in Country Gentleman.

Michigan Horticultural Convention (Condensed from Farmers' Review Stenographic Report.)

Mrs. M. S. True of Adrien read a saper on red raspberries. She related a little of her experience in growing raspherries and other fruits. A few years ago it would have been thought an unusual thing for a woman to under take such a work, but now it is looked opon in a more sensible manner. She had tried various fruits, but had had the best success with her red raspherries, which are Cuthberts. One difficulty with these was that they sprouted badly, but this had been largely obviat-

ed by putting on sawdust. Mr. James Kirk addressed the convention on the subject of gooseberries. About thirty years ago he had some seeds from England, which he planted and produced a few plants. He had been

ly concluded that the best way to fight it was by thorough cultivation. He uses helibore for the worms. They should be kept free from weeds and have a good mulch through the summer. He would give all gooseberries the same treatment. Some persons get fine plants and set them out where they have the full glare of the sun, but that is not the way to get gooseberries.

Discussion then followed on blackberries, raspberries and gooseberries. Mr. Willard-I have figured out that blackberry crop of Mr. Kellogg's, and find that he got a good deal out of it. As to the gooseberry, my experience is that it is one of the paying crops. One of the most profitable crops I ever raised on my farm was a crop of gooseberries. Many think that it is a hard crop to grow to perfection, but I think that with the assistance of the spraying pump we can succeed. They do best on a cool, low, heavy soil, and the only instance where they have suffered from mildew with me has been on high sandy land. Now we will have some trouble with blight as long as we use the English gooseberry, and the English is the best. Of course, there are new and large gooseberries coming out all the time, but all that are of a good size have more or less English blood in them. Nearly all of those English gooseberries make wood too slowly to please the Americans, for we want to make money fast and want the bushes to reach maturity at an early

Q .- What about the Red Jacket? Mr. Willard .- It is pretty good, but I think the best gooseberry is the White Smith. In this country it is not so much quality that we want as quantity. The English, on the other hand, demand a gooseberry of good quality.

Q .- How do you like the Houghton? A .- It is too small.

Q .- How is the Downing? A .- It is a good berry, but the market wants the large English gooseberry. Some of our American nurseries have tried to get a large American berry, but it has not yet been done. They have succeeded in getting large berries only by infusing the English strain, and with it the liability to mildew. I bought 20,000 White Smith gooseberry bushes from England and put them on rich, sandy soil. They cost \$11 per hundred, and I got only one crop of berries from them. They mildewed and I had to dig them up. I had them on the wrong kind of land. Afterwards I got more and put them in a clay soil.

Q.-What have you to say about the practice of picking gooseberries by stripping off the berries, leaves and all and running them through a fanning

A .- I would not have any berries picked in that manner, because it takes away the foliage, which is needed to ripen the wood and develop the buds for the next year.

Q .- What is the quality of the Columbus?

A .- I can't say, for we do not allow hem to get ripe enough to tell what the quality would be. We pick them green.

writer in Fodder.-A Hauling ing board and then arran with cleats nailed to it, to be used to walk up on the wagon with an armful to the board would drag it from one shock to the other, making it unnecessary to carry it. Fodder should be hauled when it is damp or foggy, but a good time to haul it is when you have time and are ready. If the weather is dry it is best to keep off the load as much as possible. By walking up the running board at the rear end, and building up the load as you work backwards, ten to twelve shocks can be put on, and there will be no running over it to break up the blades. Begin unloading from the rear end of the load, and it does not waste much. House, stack like grain, or set it up against a ridge pole.

The Growing Colt .- Corn is the poorest grain food for a growing colt, and is usually as expensive as those which are much better. Oats and bran are probably the best for a growing animal, especially one that is raised for work instead of meat. Feed good, bright corn fodder and bran and oats, or if these are expensive or difficult to get, feed oil meal, mixed with the corn meal to balance the ration. Have a warm stable, but see that it is well ventilated, and give a clean, warm bed at night, water and salt regularly, and in all pleasant weather let them out a few hours each day for exercise; but when severely cold or stormy it is best to keep them in the stable all day.-Ex.

A Good Suggestion.-The aim of the skilled shepherd is to keep his flocks to health, but if some of them should lose it, in writing to a veterinarian for advice he should describe not only all the symptoms of the disease and give the result of all the autopsies made, but give in detail his treatment of the flock. the kind of land they run upon, whether dry upland or marshy meadow, and also shrinkage in weight for a few days, how he feeds them through the winter. The veterinarian will want all the facts in the case, fully and clearly stated, in order to make a correct diagnosis and prescribe the proper remedies.- Ex.

Lice On Horses.-Last winter it was noted that an unusual number of horses were troubled with vermin-in plain English, lice. They might be fed twice as much as ordinary horses, and yet they remained poor and wretched looking. Mr. D. W. Hayes, a well-known trainer of Western New York, gives the following recipe for getting rid of the peats: Half a pint of kerosene to two gallons of water. Wash the horse with this twice, with an interval of two or three days between applications, "and any lice you find after that I will give troubled first by mildew, but had final- a premium for," says Mr. Hayes. - Kx. | the animal is older.

The following reprint from Science relative to the sugar-producing capabilities of Indian corn (maize), taken from an English paper, may be of in-

Maize Sugar.

terest at the present time, when the sugar beet is attracting attention. According to the article, maize has superior properties to the beet for sugar purposes: "A double harvest of sugar and grain is likely in future from Indian corn. The extraordinary statement has been made by F. L. Stewart, of Murrysville, Pennsylvania, that by picking the cobs at the usual stage for 'sweet corn,' or before the grains glaze and harden, there is indeed an immense development of sugar in the tall cornstalks. Full details of many years of experiments are given by him in some recent numbers of Science. He shows that, after such removal, the sugarcane increases from under a possible 9 per cent. to 15 percent., or sometimes even 16 per cent. of the weight of the stalk after the leaves are stripped off. This is more even than is found in the sugarcane as grown in Louisiana, and slightly above results obtained at Madras. It should be noted that sugarcane, like maize, is a grass, but, naturally, fails to produce seed save under exceptional circumstances. Perhaps the most extraordinary circumstance is that the discovery was not made before. A correspondent reports in a later number that a farmer's wife in Ontario, some 40 years ago did actually make her sugar from cornstalks. The stalks were boiled and then the liquid squeezed out, yielding, on evaporation, a white and sweet sugar. Left to itself, the cornstaik in Pennsylvania, early in September, suddenly loses nearly all its sugar as the grain glazes and hardens, and then quickly assumes the dead, dry condition. Let the ears, however, be removed in early August, and the sugar increases until the end of September, and the plant lives on, even into the next month, unless cut by frost. All kinds of Indian corn do the same, but not the somewhat similar sorghum, from which for many years attempts have been made to obtain sugar at commercial prices. Corn sugar is made far more easily than from this or beet. Even if it proves rather less productive than sugarcane, corncane has two immense advantages over the former. Its range and case of cultivation are incomparably better, whilst the grain is not lost, and the leaves, stripped off, are already used extensively as silage. The grain is far more digestible at this stage, and is easily dried for keeping as cattle fodder or for grinding for bread. Again, should the grower wish it, he can still, at mid-August, leave his crop to ripen in the ordinary manner. Corn being in many parts of America almost a drug in the market, this doubling of its use will be most welcome. Doubtless improved forms will soon be developed, since a few plants responded more kindly to the efforts of the agriculturist. Already certain varieties have been shown to be preferable, especially the Virginia foddercorn and Golden Beauty. Care has also to be exercised that the kind grown at a given latitude shall have sufficiently developed for cutting before Homestead tells how he hauled the early frosts. The crop is sown in in fodder. He says: We took the usual way. The first named kind the rear stake out of the haystack, will give 15 tons of stripped cane per built up a high rack in the front end | acre, containing, therefore, 21/4 tons of sugar. Of this, probably, conover a ton could be extracted-a welcome addition, surely, to the ordinary of fodder. A piece of wire attached profits on the crop. The process of extraction has to be entirely distinct from sugarcane, as the crushed cane is so sponge-like that half the juice is quickly re-absorbed. But it is said to be extracted both simply and effectively.

Live Stock in Kansas.

The numbers of the different classes of live stock in March and their values based on their average prices for the year is as follows:

Horses, 852,789 head; average value, \$28; total value, \$23,878,092.

Mules and asses, 95,150 head; average value, \$34; total value, \$3,235,746. Milch cows, 517,254 head; average value, \$24; total value, \$12,414,096.

Other cattle, 1,258,919 head; average value, \$19; total value, \$23,919,461. Sheep, 136,520 head; average value, \$2.40; total value, \$327,648.

Swine, 1,666,221 head; average value, \$5.50; total value, \$9,164,215.50. Total value of live stock, \$72,939,-258.50.

Ther are no diseases of live stock reported except the so-called "choiera" among hegs, and this is common in counties where they are most numerous; the losses from this little-understood scourge have been enormous.

Kansas is overflowing with both forage and grain and could winter to great advantage vast numbers more of cattle and swine than are now obtainable at prices likely to permit a profit. F. D. Coburn

Dehorning Experiments.-The Agri-

cultural Experiment Station at Still-

water has twice dehorned a considerable number of cattle. In no case has any serious injury resulted. The operation is very painful for a time, but the animals apparently soon recover. In most instances there was some although this might have been caused by a change in food, in part. Several calves were dehorned this fall, and seemed to suffer less than older steers, some of them not showing any shrinkage in weight. The growth of horns

may be prevented by the application of caustic potash. This is preferably done before the calf is a month old. It is better to clip off some of the hair. wet the skin and rub with the caustic directly over the building horn or knob. Good judgement and some experience are necessary to determine just how much of an application is needed. Too much causes needless suffering; too little will not prevent the growth of the horns. When carefully attended to this plan is to be preferred to cutting or sawing the horns when