Vol. XVIII Number 8

The Agricultural Student

HORSE NUMBER

10c per copy

APRIL, 1912

75c per year

Wholesale Factory Prices On Vehicles to Everybody

And 30 Days' Free Trial Allowed

I HAVEN'T any agents, or jobbers, or dealers, or middlemen of any kind to take care of on the prices of my buggies, because I deal direct with you and give you the dealer's price. I have sold 150,000 of my vehicles this way and thousands of sets of harness.

I make everything I sell in my own factory. My business is a personal business. I give my time and attention to everything. I make all my vehicles to order—I know they are right before they leave the factory. I give them a 2 year's guarantee that protects you absolutely. In 12 years selling this way, I have never heard of a worn out Split Hickory Vehicle.

Split Hickory

Means Split With the Grain —Not Sawed Across It

This means strength in all parts of the running gear. My business is bigger than ever. Other makers, selling through the dealers, are going out of business on account of automobiles. I figure that everybody needs a buggy whether they have an automobile or not, and that every automobile owner wants a buggy anyway—for times when he can't run his machine.

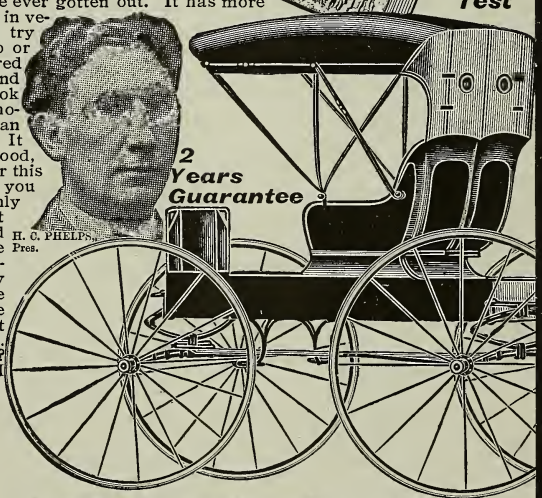
Local dealers carry only a few styles to select from. I make 125 styles of automobile seat buggies, surreys, phaetons, road carts, etc., and full line of harness.

30 Days FREE Road Test

My Big Show-Room Buggy Book for 1912 Is Now Ready

It's the best one I have ever gotten out. It has more styles to select from, both in vehicles and harness. Why try to select a buggy from two or three shop-worn, dust-covered samples, when I will send right to your home a book that shows in big, actual photographs more vehicles than you can find in 25 stores. It is only a question of good, sound judgment to send for this free book no matter where you buy. It will cost you only one penny but it will cost me many pennies to send it to you, but I will take the chance if you are willing, because it is my only salesman and I am sure that I can not only give you a better buggy, but save you a lot of money. Will you write for the book? You are invited to do so, I will pay the postage.

H. C. PHELPS, Pres.


2 Years Guarantee

H. C. PHELPS, Pres.
The Ohio Carriage Manufacturing Co
STATION 1
Columbus, Ohio

PHELPS ***Oversees to the Manufacture of Every Buggy Turned Out Of His Factory***

Factory & Office Located at Hocking Valley Tracks and High Street, Station 1, South Columbus, Ohio.

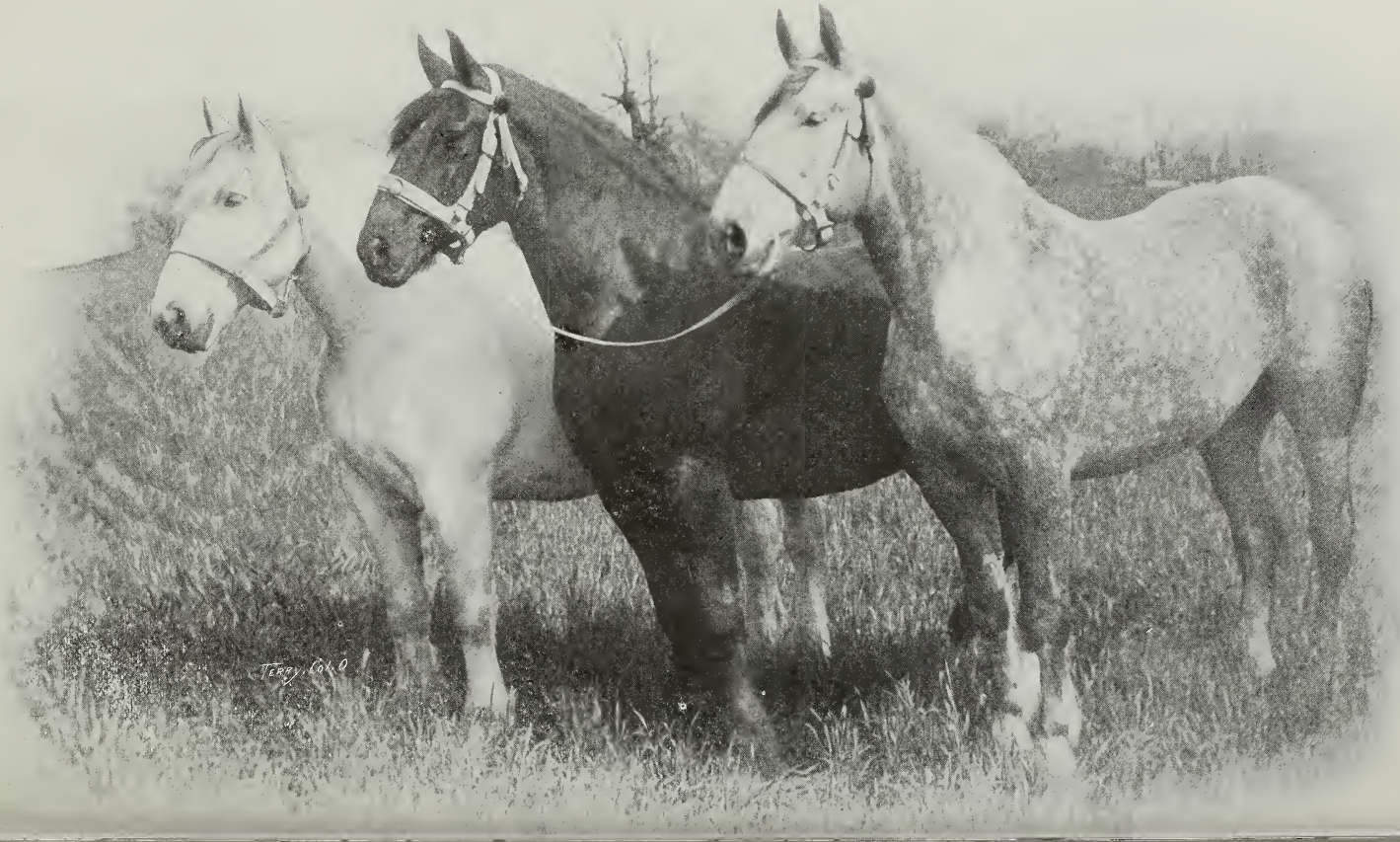
"We have used Sal-Vet since 1909 and would not know how to grow sheep without it. We consider it the only practical worm remedy on the market, for it destroys the worm before the latter has a chance to injure the sheep, if kept constantly before the animals. We have also had good success with the treatment in cases in which infection was well advanced. We consider that in Sal-Vet lies the Salvation of the sheep business in America, and we recommend its constant use to our customers, as well as to others.

"CHAS. LEET & SON, Mantua, Ohio."

"We have used Sal-Vet with excellent satisfaction, and while we have not obtained information as to the absolute effect in our sheep, they consumed the preparation with results which appear to us to corroborate your statement, that it is desirable for discouraging the development of worms and keeping sheep in good condition. I believe that Sal-Vet will repay the user in the results which come from its action in his flock.

(Signed) "C. S. PLUMB, B. Sc.,
"Prof. Animal Husbandry."

Contents


TERRY, COLO

THE
AGRICULTURAL STUDENT

more

Vol. XVIII. OHIO STATE UNIVERSITY, COLUMBUS, APRIL, 1912 Number 8

What of the Future?

F. R. MARSHALL
Professor of Animal Husbandry

THE relation of the horse to human progress is a most interesting study. It seems strange that civilization should have had its rise in the idea of expansion that stirred the people of that far-away and now little known Asiatic land. One fact must be considered, however, that the Assyrians were the first to bring the powers of the horse into service. He was a native of their country, and his domestication and use was a great factor in the position they attained in the world at that time. Through the conquests and migrations of successive peoples the horse was introduced into the Mediterranean countries and later to Northern Europe. In all these times he was prized for his fleetness and his beauty, and so far as his breeding was studied or controlled, those qualities were held uppermost.

Changed methods of warfare made size and strength permanent qualities in the animals that carried the heavy armed warriors into combat. There were no proposals of arbitration in those brave fighting days, but perhaps peace advocates may have hoped that the dreadful slaughter of the "villainous saltpetre" would make war too horrible to be tolerated. From that time on, nations certainly spent less of their time in fighting, and the industries of peace were pursued more seriously.

We are told that the interest taken by royalty in the improvement of the racing horse in the seventeenth century sprang from the need of cavalary mounts, but England's reliance was even then in her strength on the sea and the real interest in the running track was a sporting one. Neither the agriculture nor the scattered commerce of that date afforded a serious impetus to improvement of horses for labor. The fox-hunting nobility created a demand for pleasure horses, but nothing like a general demand for horses for business existed until the coming of the stage coach. We know that in France it was the omnibus horse that was modified and added to, in the perfection of the Percheron. With freer communication, trade centers became larger and the millers and brewers started the cry for horses of more weight and power. The coming of the railway made large cities possible. The growth of cities multiplied the needs of horses for servic, and economical transportation of merchandise called forth the draft horse. Luxury and enjoyment of city opportunities for display brought in the heavy harness horse. The saddle animal had never ceased to be the huntsman's pride and the enjoyment of high born men and gentle ladies. And it remained for the Kentucky gentry to mould the hot-headed English ideal of a riding horse into a fit conveyance for a gentleman on social occasions.

The American's intolerance of every-

thing but superlatives required his driving horse should be the fastest, and the trotter is our national horse. The testimony of the other nations proclaim him to be worthy of the superlatives ever bestowed upon him.

Hotspur's popinjay found that "villainous saltpetre" fittingly expressed his contemtpt for the stuff "digg'd out of the bowels of the harmless earth, which many a good tall fellow had destroyed so cowardly." How shall the modern horse lover put together words that will give adequate expression to his estimate of the odoriferous liquid pumped from the bowels of the earth to propel the hideous wagons which have so many good true horses already placed in the discard?

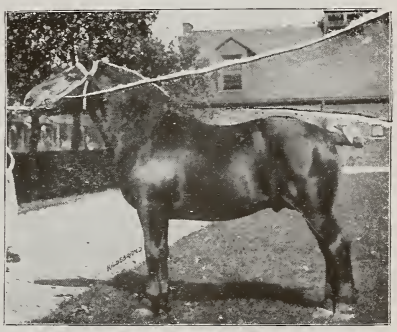
My parody may be mixed, but so are my feelings. Owning no "buzz wagons" I may despise them, but I must admire the mind of man when it takes a combination of inert materials and produces an instrument of service that does for many people, and for many uses replaces a creature so noble and so pliant as the horse.

If we were historians or if our interest were that of a student of the evolution in commerce and in forms of recreation, we would not try to anticipate the future of the horse. As farmers we have an immediate and practical interest in the problem. It may seem that I regard the situation as alarming to the breeders of horses. The tone of the markets shows the unreasonableness of any panicky feeling. The automobile has already done its worst and its best for the classes of light horses. The undetermined feature is the influence of the auto truck.

The coming of the railroads and the electric car were both announced as the supplanters of the horse. It is no argument to assert that because he came back to stilll greater popularity after those inventions found their place, the same will be true after the phase of motor vehicles has been determined. It would be foolish to ignore the reasonableness of the claim that a large part of the tonnage now moved by horses can be handled by auto trucks. The outcome of the matter depends altogether on the relative costs of horse and truck service, that is, for business in which the truck is practical. The most comprehensive comparison I have seen is one prepared by a Chicago manufacturer who estimates a difference of 26 cents per day more for operating a truck than for two and a half teams. This is on the basis of a $3500 truck lasting seven years, with $300 per year for repairs. A high-priced truck is not an economical substitute for a one or two-team outfit even when the streets and length of hauls is satisfactory to it. There must always be a number of smaller firms whose work can be done by an equipment in horse vehicles of which the value is less than that of a truck. Some such firms now using the mechanical power are charging a good deal of operating expense to advertising, which cannot be fairly done for any great length of time. For short hauls and for handling some commodities horse labor seems certain to retain an advantage. It seems wholly probable that a large number of the most serviceable draft horses will continue to be used in city work. The lower values of horses would change the situation materially, or if the horses were sufficiently improved to allow their users to figure on six or seven instead of five years' service, the appearance of the comparison would change.

Agriculture is going to be modified greatly in the coming years by the application of business principles. Econ-

omy of production is already calling for plans for saving in labor and farm power costs and in most cases the farm will use fewer horses and larger ones. Operators of large farms may be able to use mechanical power in field work, but with the decreasing size of farms there will be fewer instances in which the more adaptable horse is not to be preferred, and then so long as there is a horse market, the home multiplication of the horses gives them an inherent advantage. At present the man who has a moderate investment in breeding draft horses and is using them in his farm work, **needs only to plan to raise better ones.** The discrimination of the market against the soft-legged, less durable kind is already very pronounced, and safety lies in combining strength, wearing qualities, and beauty.



Courtesy McLaughlin Bros.

The number of horses used for pleasure is much greater than is generally realized. Practically all of the light horses are for some form of pleasure and with them there is no limitation to price when the moneyed man finds what he wants. The heavy harness and light harness horses are now demanded chiefly for show purposes, except as the latter may be used for racing. There is a growing number of stables of show horses kept for the sport of winning, much as are track horses. There will be a place for a large number of 2:10 trotters to entertain the throngs of genuine horse lovers who will patronize the tracks when the conditions of racing and the betting have been placed upon a more American basis.

The saddle horse is now the most popular type of pleasure horse. Saner forms of recreation are becoming more fashionable. This is evidenced by the imposing classes of park hacks and hunters shown of late in the East. While the rearing of saddle stock may not be attractive to corn state farmers who are prepared to feed heavily for draft size, there can be no complaint over the outlet and the prices obtainable. The saddle horse comes nearer to reaching his full value in the hands of his breeder than does any other light horse. The less valuable ones fit into some branch of the army service. The war department's concern over the remount problem has resulted in the proposal now awaiting the support of Congress to place suitable sires in parts of the country where the breeding of light horses can be most profitably carried on.

The day of the nondescript horse is far past. He still comes to market, but not from the farms of the men who are prepared for the future. In the future only the really high-class ones can be depended upon to more than repay their cost.

The Making of a Horse Judge

J. L. EDMONDS, '08
Associate in Horse Husbandry, University of Illinois

IN most cases, our good judges of live stock are men who through inheritance or early surroundings develop a strong interest for some particular class of live stock. This factor, coupled with patient persevering, would seem to be the most valuable asset that could be wished for. There are not many men so gifted as to be really expert judges of many different kinds of live stock. Possibly from the utility standpoint the best judge is the man with good general information regarding all classes of live stock and expert information regarding some one particular kind.

Fastest strides in the making of a horse judge are generally made where the beginner has the advantage of close association with seasoned factors. The interest thus aroused and the information thus obtained, even tho obtained piecemeal, is of incalculable value. Here as elsewhere the personal equation is the really big one. The writer has had the opportunity of associating with a few lads who have early developed the stockman's eye through the interest of friends, both inside the family and out.

A number of different roads have been followed by men who later became good judges of horses. Some have started "on their own" in a small way and have gradually attained efficiency largely through the environment which they themselves have made. Some of our best practical horse breders have been men who originally bought, fitted and sold a few geldings annually. In many instances time as well as money would have been saved by the wider experience which might be gained by working for a breeder or dealer who has a real "top notcher" in his line. It is a well known truth that there is but a meager chance for live stock improvement in the community where the number of animals is small. In exactly the same way judgment is only developed to any considerable degree of proficiency where contact is had with large numbers.

Courtesy McLaughlin Bros.

Some of our most prosperous horse-

men have made their money out of the horse business, not so much because of their fine judgment with respect to the animal itself as because of being shrewd judges of values and of human nature. Generally speaking, then, the associations on a good breding farm might be more valuable in learning of breed and type. There, oftentimes, several generations can be seen and the results of the mating of different blood lines observed. The dealer's barn would afford more opportunity for a study of values and methods of vendue because one would likely see more business done for the amount of time he spent at it.

Fairs and horse shows of all kinds are helpful when attended with an earnest purpose of learning something. Local colt shows, in addition to their great value from the standpoint of improving the horse stock in a community, are extremely useful in spreading information as to what the market demands and hence what it will pay most for.

AN APPRECIATION OF OHIO STATE'S HORSE JUDGES

Bronze Statute of Etudiant—The Name of the Student Ranking Highest Each Year in Horse Judging is Engraved on the Pedestal.

The Care and Feed of the Farm Horse

B. E. CARMICHAEL
Chief of Department of Animal Husbandry, University of Illinois

WHAT constitutes proper care and management of farm horses? Short as is the query, the answer, if complete, would occupy far more space than can be given to this discussion. Perhaps the best way to get at the points that are especially important would be to call attention to some of the points in which horses are most frequently subjected to carelessness and mismanagement.

The farm horse, to be efficient, should be suited for the use to which it is put; should be kept comfortable, both in and out of harness; and should be well nourished, that is, supplied with feeds that are suited for meeting its requirements, whether for growth, foetal development, milk production, work, or any of the possible combinations of these requirements. Properly caring for farm horses should begin with careful selection of farm horses, avoiding the use of light horses for heavy work, or of extremely heavy horses for work which could more easily be done by horses of lighter weight. The horse which is not suited for its task is so heavily handicapped that no care that can be given it can altogether compensate for the natural inefficiency. Lack of comfortable stabling, the essentials of which are little more than fairly roomy quarters in a dry, light, well ventilated shelter which protects the animal from heat in summer and from cold in winter, may interfere with the horse's greatest usefulness. A comfortably bedded stall is a great boon to the tired horse, and such a bed should be supplied as will encourage the horse to lie down during much of the night. Wet bedding, uneven stall floors, and extremely narrow stalls are circumstances that too often interfere with the comfort of the horse.

To keep a horse comfortable in harness is no small task. Proper adjustment of harness is of great importance and requires the careful watchfulness of the driver. Shoulders should be rubbed clean very frequently, particularly when the horse is first put to work in the spring; careful attention to comfort in harness during the first two weeks of a season's work will do much for the farm horse, and may frequently avoid the need for liniments, salves, poultices or the knife during the latter part of the season. No definite directions could be given to an inexperienced man, even by the most careful driver, that would always insure the comfort of the horse in harness. The careful driver is constantly on the lookout for matters that need his attention, and is proud of the good condition in which his horse or horses are kept. In hot weather it is well worth while to supply water to the hard-worked horse at frequent intervals. It is usually possible to supply water in the field without very much extra effort, and the increased comfort of the horse pays well for the trouble.

So far as feeding farm horses is concerned, probably the worst fault of average practice is the lack of a sufficient food supply of the right kind. Horses that are fed solely for work purposes need a relatively large amount of feeds that will supply much energy but do not need a large supply of protein and ash. Work horses can use a relatively larger amount of corn in the ration than can horses that are fed for growth or than can brood mares, either with foal or

while suckling the foal. When immature mares are used for breeding purposes and for farm work at the same time, a very generous ration is necessary, and a relatively large amount of feed rich in protein and ash, is needed. Corn is the most abundant of the efficient feeds for the work horse, even for use with mixed clover and timothy hay, but for growing horses and for brood mares, either working or idle, corn alone with this roughage would scarcely prove adequate. The use of oats, bran, lineseed oilmeal, cottonseed meal and other concentrates, richer in protein and ash than is corn, is frequently advisable for growing horses and brood mares. If clover, alfalfa or other similar roughage is available, it seems entirely probable that the almost or quite exclusive use of corn would give good results even for growing horses or for brood mares. The needs of each horse should be taken into consideration and its ration should fit the needs. On account of the condition, appetite and work of the horse, as well as the character and price of feeds, variation would often need to be made from any rule that could be laid down relative to amount of feed to give; yet, in general, a pound of grain and a pound of hay daily for each hundred pounds the horse weighs in good condition, would be not far wrong for a horse at moderate work. The idle horse could use a relatively larger proportion of roughage, and the very hard worked horse might need a relatively larger amount of grain. The underfed horse is a source of great waste, comparable to the engine that is fired just enough to little more than warm the water in the boiler; work production is greatly diminished and costs more per unit than it would if the horse were fed a ration that would permit him to do a full day's work and keep in good condition.

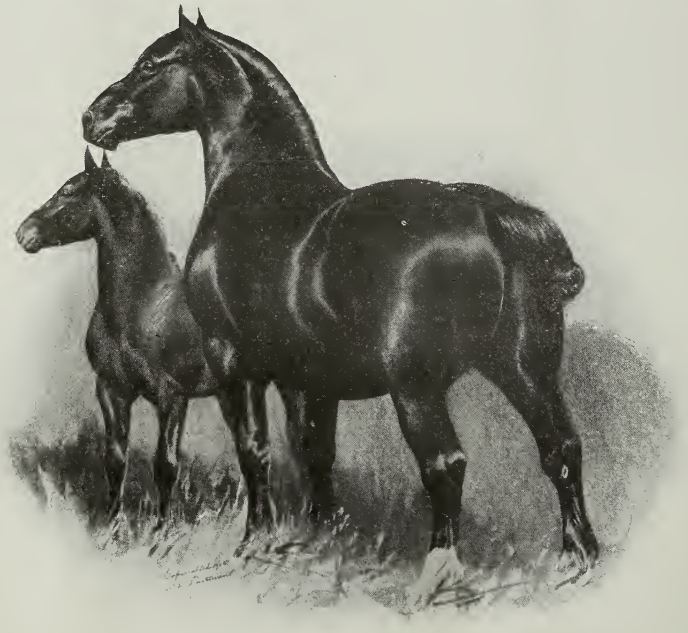
While home-grown feeds should be given first attention in selecting rations for farm horses, as for all other kinds of farm live stock, yet it should be remembered that commercial feeds, particularly those that carry a high percentage of protein and ash, are frequently almost a necessity if best results are to be secured. A more general, and more careful use of clover and alfalfa hay would do much to improve the ration for many horses and, on account of the fact that the use of these roughages would make possible a larger use

of corn in the ration than would bring best results with timothy, red top or other similar hay, would frequently cheapen the ration without decreasing its efficiency. The use of corn stover or oat straw is occasionally desirable with horses. Idle horses can use these feeds better than can the hard-worked horse. Corn stover is more palatable in fall and early winter than in spring and summer, and should be fed early.

During summer months many farmers give work horses access to pasture at night. If adequate rations are supplied in the stable, the practice of pasturing work horses at night seems to be an excellent one. Grass alone, or grass in the place of all dry roughage, is not recommended for the hard-worked horse, and the use of grass in this way probably accounts in large part for the unsatisfactory results that some secure from pasturing work horses. The comfort that the horse derives from being at freedom during the night and the small amount of grass eaten when the horse is well fed in the stable are of material benefit. It is of doubtful economy to make any use of very early "washy" pasture for work horses.

The regular or frequent use of drugs, conditioners, tonics and other medicinal materials is not usually necessary, and as frequently practiced, very foolish. A well horse needs none of these if given an adequate supply of feeds that will supply the necessary nutrients, and without such feeds the so-called medicines would be of no use. If drugs are needed, they should be used for a definite purpose and usually under the direction of a qualified veterinarian.

The farm horse that is worth keeping deserves a comfortable stable, well kept and carefully fitted harness, and an adequate supply of feeds suited for its needs. Careful attention to these points and sufficient grooming should make the horse an efficient servant and a source of both pleasure and profit.



"THE MASTER COMETH."
Courtesy The Hartman Stock Farm.

The Position of the Hackney

DONALD R. ACKLIN
Breeder and Exhibitor, Perrysburg, Ohio

THE history of the Hackney Horse in America affords some curious phases. Few breeds of our domestic animals have been subject to so much prejudice, because, speaking comparatively, we have originated but very few breeds of live stock and, when a worthy rival of one of these has appeared upon the scene it has been like moving a mountain to convince the upholders of our native breeds that the rival is really worthy. When the Hackney was first foolishly he has been blamed for the absence of qualities which it was absurd to claim for him. That as a breed he has the most extravagant of high action must be admitted, but to claim a corresponding degree of speed for him is out of reason, but speed is one of our national failings.

When horse shows were first popular in this country, and the Hackney was the popular horse show animal, many wealthy men, who had never been

Courtesy D. R. Acklin.

A FAMOUS HACKNEY SIRE.

introduced into the show ring, the trotting-horse partisans heaped no amount of unfair criticism upon his head, and even now that he has almost completely swept the boards in the harness classes at all of the horse shows, which are to the heavy harness horse what the Grand Circuit is to the trotter, the Hackney is not given his just due.

Attributes have been ascribed to him, no doubt foolishly, which he did not possess, indeed from the very nature of things, he could not possess. Equally known as horse breeders, commenced to breed a few of them. Hackney breeding became a favorite amusement with the rich. Others took it up as there was a demand for the high stepper, with good prices attached. Then fashion began to make its insatiable demands to the confusion of inexperienced breeders, but as is usually the way, fashion carried the sway, and a horse with action, and nothing else, was the result. The breeder put all his eggs in one basket. He jumped straight for action

without due regard for other things, and if he is not entirely to be blamed for this on account of its being the most salable of all qualities, he has been led up a blind alley in some cases by the fact that judges have set an example which it is very difficult to get away from. Thin slips of horses with the ability to move have won places, and others with a lack of other desirable qualities, but who could "go," have drawn the ribbons, without regard to their lack of physical merit. So long as this is true the breed, as a breed, must suffer inevitably.

Then again, in the matter of color (extremely important in a harness horse) there has not been a great deal of studied attention. As a rule the colors are good, but it is almost funny to think that a horse can win as a gentleman's horse in one class, and then by simply changing the vehicle win again as a ladies' horse. In this day when perfection is hard to imitate, no matter what the game, it is the close attention to seemingly small details that makes it that much easier to obtain.

It cannot be doubted that the type of Hackney has been changing within the past few years, whether by studied intent or not, it is not our purpose to discuss. That is inevitable, for a successful sire, or series of sires, will assuredly have an effect upon the breed which it is impossible to forecast. We can see that influence in heavy horse breeding as well, and one cannot suppose that the penalty imposed by success will always be light. If a horse is a consistent winner in the show ring, it is not unusual to have mare owners send their mares to be bred to him regardless of most of the things which should enter into a successful mating. But because the sire is a winner is no certain proof that the offspring will be a good one as well. There are other things to be considered. We are not trying to detract from the glory of a prize-winning sire, but it does seem not the best policy to breed to a horse solely because he is a winner, without taking the individual fitness of the two animals into consideration.

Just now there are three questions which are puzzling the English breeders, which may be of interest to us. The first is rather important, as regards whether the stud book shall be closed to alien blood or whether it shall remain as at present with three qualifying crosses as the basis of entry. Then, also, there is the question as to the advisability of the omission of stallions in harness classes at the shows, and mature horses over six years old, likewise in harness, at the Hockney Show. The concensus of opinion regarding the first question seems to be that alien blood should be admitted to registry, for inasmuch as the type is still apt to change, it will be as a sort of safety valve for the breed. The other two questions as to the showing of harness horses is of not so much interest to us because they are of a more local character, though it may be said that most of the breeders are for having the liberty of showing any age of horse in harness.

There is no doubt but what the motor has had an influence in harness horse breeding, but notwithstanding this fact horse shows are more popular than ever and there is still a demand for the horse that is good enough to win.

What, then, is the present position and future prospect, of the Hackney when its formidable rival, the motor, is growing in favor with many people? The writer thinks that, as time goes on the rivalry will, to a certain degree, perhaps to a considerable degree, cease seriously to affect the production of the

really high-class Hackney horse. If one looks carefully round amongst the owners of the cheaper motor cars, one finds that the greater majority of them would never have, under any circumstances, been the owners of a high-stepping horse. Then, again, there is the fact that with many people the horse-drawn vehicles are gradually resuming their former place in their domestic economy, and while machines are used for long journeys, the smart, high-going pairs are used in the parks.

So it seems that the case of the Hackney cannot said to be very serious at present, if the animal himself is of the right kind. It will be many a day before the motor cars and other mechanical means of location will drive the horse out of the markets of the world, and amongst other breeds the Hackney will continue to hold his own in his own particular sphere.

"Hast thou given the horse strength? Hast thou clothed his neck with thunder?

"Canst thou make him afraid as a grasshopper? The glory of his nostrils is terrible.

"He paweth in the valley, and rejoiceth in his strength; he goeth on to meet the armed men.

"He mocketh at fear, and is not affrighted; neither turneth he back from the sword.

"The quiver rattleth against him, the glittering spear and the shield.

"He swalloweth the ground with fierceness and rage; neither believeth he that it is the sound of the trumpet.

"He saith among the trumpets, Ha, ha! and he smelleth the battle afar off, the thunders of the captains and the shouting."—Book of Job, Chapt. xxxix.

A Vacation Tale--The U. S. Morgan Horse Farm

GEORGE M. WORMAN, '08

AN hour on the lake and Cleveland's lights had dimmed to a faint shimmer on the dark shore line. In their place Nature's own lights shone from out a clear sky. The cool lake breeze faced us and stirred up waves that rolled heavily and steadily beneath the bow. The deadened vibrations of the propeller and the solemn quietness of it all, early induced us to find our berth. That sleep, which I think was the most refreshing since infancy, was only broken by the bumping of our vessel's side against Buffalo's dock early the following morning. A trolley ride of an hour brought us to Niagara and there, much to our surprise, we found the falls to be almost within stone's throw of the main part of the city. The place was filled with tourists from all parts of the world to see America's object of greatest pride. Here, too, occupying benches of secluded position or strolling over sentiment harboring paths were those lost in connubial bliss and but recently tied by matrimonial vow. The falls, somewhat disappointing at first, grew and grew with each succeeding viewpoint until before we left we were completely subdued by the magnificence and splendor of it all.

A trolley ride down the gorge, torn by that maddened stream, brought us to the vessel which crosses Lake Huron to Toronto. After a stay of but a day in this city we began to question our whereabouts and to wonder if we had not really crossed the ocean and were lost in some English city. Having been advised on several occasions by formidable policemen that gazing from street corners was contrary to Canadian statute and English custom, we decided that for us the lake was more home-like and lost no time in getting to the boat landing. Recrossing Lake Huron, we entered the St. Lawrence river and, after transferring to a smaller vessel, began the down-river trip. Early the next morning we were among the Thousand Islands. How they must have changed! Once the scene of Cooper's early frontier combats, unmolested in primitive and natural beauty, now a new world Venice. The forts and garrisons of that author's imagination have been supplanted by real state mansions, the summer retreat of city kings.

Down the river, down the river we went, occasionally stopping at a quaint Ontario town where dirty urchins crowded the wharf and fought over the pennies we tossed into their midst. Past vineyards and orchards, past fields with crops and management differing from our home system more with each succeeding mile. Fed to fullness, read to sleepiness, listening to the music of performer after performer, until music became a discord, the life would soon have become monotonous had we not advanced to that part of the river where our passage became extremely hazardous. The river had narrowed and the current quickened and before we were aware we were fast in the grip of the great Laschine Rapids. The engine had stopped, but not our down stream rush. We shot past big grey rocks that almost grazed the vessel's side, through reeling whirlpools and over wildly tossing waves. The pilot steered well and soon we felt smooth water beneath us and each passenger drew a long breath of relief. In looking back we were surprised to see a hill of tossing water down which we had slid.

Just as evening was settling we

crossed the gang plank into Montreal. With difficulty we dodged the mob of baggage men and cab-drivers, and made our way afoot, for we wished to have opportunity to let the old French town make its full impression. That part of the city near the river is very old and those who have visited France say it is very similar to old French cities. Indeed, we found it very strange. Approaching a policeman with our inquiries, we were met with a volume of unintelligible French. Passers-by were chattering in the strange tongue. Boys cried their French papers. The dress was as strange as were the gestures and mannerisms. Men smoked the short, straight stem pipe used by their voyageur ancestors. Buildings were low and long, shops small and queer, fronted with signs lettered in French. Again my companion and I paused to assure ourselves that we were quite awake and sane, that our last voyage had not been across the Channel and that even then we were not in Versailles or in a Bordeaux. Before leaving, however, we visited the more modern Montreal and found it to be a beautiful city, full of many spots of historical interest.

Crossing the St. Lawrence and the strip of territory belonging to the province of Quebec, we were glad to find ourselves once again in Uncle Sam's land. The Green Mountains came into view and skirted our route on one side, with beautiful Lake Champlain on the other. The valley narrowed and finally we drew into the station of Middleburg, a few miles from which is located the U. S. Morgan Horse Farm, which was to be the seat of our summer's work, and

GENERAL GATES,
Head of Stud, U. S. Morgan Farm.

here my story rightfully begins.

The drive from the station to the farm is along a very pretty country road. Nearing the farms one always sees floating above the pines and maples, the nation's flag. Then the large white buildings came into view, located at some distance from the road on a sloping elevation. The first impression is one of a snug, restful home-likeness. A winding roadway leads through well kept grounds to the buildings. A heavy natural forest is the background to the North, and to the South rises a beauteous, orchard covered slope. In the rear of the large main barn are the horse barns and paddocks. The whole is set in the valley of the Otter, with the Green Mountains to the East, the Snake Ridge to the West, beyond which, wrapped in haziness, tower the more stately Adirondacks.

The U. S. Morgan Horse Farm consists of some 400 acres and was given to the government by Joseph Battell, a wealthy farmer and an ardent devotee of the Morgan horse. The purpose of the work carried on at this farm is to save the Morgan breed of horses from a threatened extinction. By the selection, from those yet to be found, of a few superior animals of the genuine Morgan type and characteristics, and by such a careful mating of these to rebuild the breed and reinstate that horse to that useful position which he originally occupied, it is hoped to do a great good to the equine world.

The fall of the Morgan horse dates to the time when the horses of Ethan Allen and Daniel Lambert startled the country with their remarkable records. Breeders at once believed the Morgan horse could be bred for speed; a speed craze ran rampant throughout the country. Consequently a reckless crossing with Hambletonian and Geo. Wilkes blood was everywhere practiced. A desire for more size led to even more violent crossing. The whole resulted in the almost complete annihilating of the breed. Formerly known for compactness and beauty of conformation, for action and quality, the breed became rangy and angular. The registry book became filled with horses that traced to Justin Morgan, but were Morgans only in name. Had it not been for a few loyal breeders who remained true to their breed standards the possibilities are that the breed should have been completely lost.

The first stock bought was in 1907, shortly after the passage of an appropriation bill for co-operative breeding and feeding experiments. Seven mares and two fillies were bought and later in the same year the horse General Gates, whose cut accompanies, was purchased. This horse, although considerably advanced in years, still remains the chief stock horse, and justly so. While his jet black color may not be most desirable, he has the type desired and type counts most in the selection of the stock. He stands 15 hands high and weighs 1000 lbs. He is compact and symmetrical, is a free and easy actor and especially is he deserving of mention from the fact of his strong individuality and his great prepotency. However, sole reliance is not placed in this horse, since mares are mated to other Morgan studs of desired type and character.

Mr. Rommel, who is Chief Animal Husbandman of the Bureau of Animal Industry, has oversight of the work being carried on at the farm and deserves considerable credit for the results obtained in the few years the farm has been in operation. It is the work of a lifetime and those in charge must have time. Those who might offer criticism

at this early stage of the work would be showing lack of wisdom and a lack of appreciation for the great task the Government has undertaken. Mr. Rommel has from time to time added to the farm stock as he and the Department have seen fit. Curious enough in the days of the breed's prosperity, choice Morgans were taken to Kentucky, and there, in a few instances, the breed has been better preserved than in its own state. Mr. Rommel has secured some of this Kentucky stock and has taken it back to the farm and its original home. Morgans from several states other than Vermont and Kentucky, principally from Ohio, Illinois and Missouri, have been added to the farm's stock until at the time of my leaving the place in September, the horses numbered about 85, including that year's colts. Animals are well cared for and well fed. Promising colts are induced to more thrifty growth by the addition of milk and eggs to their rations. Bran and oil-meal figure largely in all rations, with a small amount of corn and some oats. Peanut-meal has been successfully used and found to replace oats at less cost. The maintenance cost is strikingly low; animals are well fed, but unnecessary food is not supplied. The stock are all the better for it.

Among several impressions gained at the farm last summer, one was that the Morgan horse and the part he has taken in the foundation of our native horse stock has not been, and is not appreciated by the average horseman. Ten per cent of the horses registered in the first two books of the American Saddle Registry trace directly to Justin Morgan, and in turn the American saddle horse with its Morgan blood foundation has figured most prominently in the building of our American carriage horse blood lines. So that in summing up the whole we find the Morgan horse to have been a prominent factor in the founding of the light horse breeds of America. With the auto truck replacing somewhat the heavy draft horse, and with greater demand for an active general purpose horse, the possibilities for the use of Morgan blood will enlarge.

One is scarcely afoot in a Vermont town until he is aware that the horse stock differs considerably from that of the Middle West. Somewhat smaller, full of snap and fire, horses draw farmer's wagons into town with a dash and a spirit that is admirable considering the mountain road they had just covered. The stamp of Morgan blood is on them all. The farm horses are a cross of Morgan and heavier stock. They move easily and without the heavy plodding customary to the draft breeds. I noticed two of the Government teams passing along the country road—one, a 1000 lb. team of Morgan mares, the other a 1600 lb. team of Percherons. The mares moved a 3000 lb. load with seemingly more ease than the Percherons with an empty wagon. Of all the horses that were put into harness last summer, each proved to be a free and pleasant driver. The larger the hill facing them, the more determined they are to carry the wagon at a dashing speed to the very top. They come in from a hard drive with good wind and without jaded flanks. After a sip of water they settle eagerly to a hearty feed. They are tough and hearty, and easily kept; kind and willing always. Surely the United States Government is engaged in a most worthy work in bringing back to us that most serviceable branch of our native horse stock.

Barring a few unpleasantries, the summer at the farm was a most enjoy-

able and instructive one. The farm superintendent, Mr. Fred Hammond, a worthy man of pleasant nature, preserves peace and industry there. During the summer I was sent to Washington with some horses and had opportunity to visit the U. S. Experimental Farm at Beltsville, where the Government is carrying on some very strange and interesting breeding experiments. The zebra has been mated with the ass, the cross being called the zebrass. The animals are being worked and are found to be practical and useful beasts of burden. The Barbados sheep, remarkable because of the females' readiness to mate at any period of the year, has been crossed with the Merino, and this in turn to the Southdown, the result being a sheep of fairly good mutton type, fair wool, and retaining the breeding characteristic of such value. The result of this experiment may prove to be a valuable asset to the country's sheep industry.

The last week in the Green Mountain State was spent on a camping trip on Lake Dunmore. The pine covered mountains slope to the very water's edge. Bass and lake trout abound and in the neighboring mountains are some fine trout streams. On the east shore of this lake, half way up the mountain side, is the cave in which Ethan Allen hid his Green Mountain Boys. Camp was only too soon broken up by the arrival of the date set for our homeward trip. On the return to Ohio we visited Boston, went from there to New York by sea, (narrowly escaping seasickness) and, after stopping a few days at each place and at Washington, finally took the train for Ohio, as ever "the best of all," the unrivaled seat of prosperity and happiness supreme.

They keep us for our family trees,
They trumpet our names beyond the seas,
They hang our portraits on their walls,
They paint and garnish and gild our stalls.
—Carleton.

Training and Developing the Three-Gaited Saddle Horse

J. A. TAYLOR, '12

IF you have ever seen a man who was trying to open a gate at which a score of impatient riders were waiting, who could neither get at it nor out of the way, because his hunter didn't know what the pressure of his master's legs meant, and fought shy of the gate while keeping others from coming near it, you could not help but notice a lack of training on the part of the horse and have a feeling of disgust. On the other hand, it would be a pleasure to have a horse who is fresh enough to bound out of the road at any instant, yet who is well enough schooled to rein down to a five mile canter with his haunches under him, while, though he is burning with eagerness to plunge into a gallop, he curbs his ambitions to your mood and rocks you in the saddle with that great combination of strength and ease. Such a horse we would all love to have.

It is our intention to show how such a horse may be trained and developed.

The three-gaited saddle horse is a short tailed horse and is really an Englishman's product, yet to-day he is quite popular in this country for riding in parks, where he is termed a "Park Horse," or to some extent used in "the chase," and for country club games, when he gets the name "Hunter."

Now some of the things that our training should bring out are:

(1) To develop the three gaits—walk, trot, and canter.

(2) To thoroughly manner our horse, so that he will go lightly on the reins.

(3) To have him hold himself together, i. e., to go collectively.

Our horse has been harness broken, yet it is not likely that he has ever had any one on his back. Different ways can be used to get the horse accustomed to the weight of a saddle or a person's body on his back, but probably best results can be obtained if this work is begun indoors. When we are grooming our horse, we can at times bear our weight on his sides, shoulders, and after a little time across the back, even getting on his back in the barn. If this is gone at by degrees, as all our training and developing should be done, it will be but a short time until we can mount our horse out in the open.

It is natural for our horse to walk and trot and in some cases canter, yet he will not trot when we want the trot, nor canter when we desire that gait. However, by careful perseverance, we can have our saddle horse act as if he were a part of us. We will now consider some of the devices to attain this end.

There are but two bridle bits for riding purposes. The first and most useful is the snaffle, a smooth round mouthpiece, jointed in the middle with rings, and when it is employed alone, it has check pieces also on the ends. The snaffle is the bit for the beginner, because he can do little harm with it. The other is the "Curb," but it will not be needed for the walk and trot. The reins of our bridle are to afford us no support, but simply for conveying to the horse what we would have him do. The great difficulty in training horses is to have them know what we are trying to get them to do. Such information is best conveyed through a

sensitive mouth, so it is for this reason that we use only the plain bit in our first training.

Several ways might be given to mount a horse, but this comes naturally through a little work with a saddle horse. If one does not have the agility to easily mount a horse, it is not his place to attempt to train it. Upon taking your seat on the horse's back, quickly close the legs against the sides of the horse and draw the reins so that he will collect himself. To advance at a walk, the rider will increase the pressure of his legs, or give a gentle tap of the whip behind the girth, until he produces the necessary impulse which should be met by the hand in such a manner that the horse will proceed in an evenly cadenced walk.

In bringing the horse to a halt from the walk, the rider should close his legs against the animal's sides, lean back slightly and raise the bridle hand. This will bring the horse to a stop in a finished manner, with the hind legs under him ready to furnish impulse for further movements. The tension of the legs should be relaxed and the legs of the rider withdrawn.

In the trot, the horse should be ridden in exactly the same manner as in the walk, except in the turns the horse should be more closely united between hands and heels, particularly as the rate of speed is increased. To get the trot, we would start from the collected position from the walk. The old fashioned signal for the trot is to rise in the saddle and grasp a bunch of the mane in the right hand. It answers as well as any.

Every time you fail to get the trot, take him back to the walk and try again. Be gentle, patient and very positive and time will bring your reward. We should not be restless and expect to get the gaits too rapidly. If at the end of six months we could turn out a horse trained to the three gaits and well suppled, we would be accomplishing our work quickly.

Before the canter is attempted, the double bridle should be used and some suppling done. By suppling, we have reference to the horse becoming pliant and obedient, to have greater use of the muscles of the forehand and the croup, and respond more readily to your wishes, really to forget himself and act as the trainer directs.

In this work the curb-bit has its place. It must ever be kept in mind that this is a severe bit and should not be used universally.

Through certain exercises, the horse is taught to raise and lower his head, turn the head from one side to the other, and to move the rear feet sidewise, to collect his hind quarters, by moving his feet under the body, etc. By such exercises the horse has more control of himself. A great deal of this work is done from the ground, but some movements can be taught when mounted, particularly raising and lowering the head and getting the feet under the body. However, we should not attempt too much of this work while riding lest we confuse our horse.

Our horse will seek relief from the curb at first by poking out his nose, but in time he will give way and arch the neck, which will add much to his appearance.

Good driving horses often pull on the bit, but a good riding horse never pulls. By proper manipulations of the curb and snaffle, in time the trainer should learn to hold the reins so loosely that he scarcely knows they are in his hand. The reins will then be used merely to transfer our signals to our horse. We will be able to turn to the right or left

with one hand and become really proficient in handling our saddler.

By the time our horse becomes fairly well accustomed to the curb, we will try the canter. To get the horse to enter this gait, we will have him collect himself in the trot, then by forcing him to increase his pace often the canter can be obtained—the gallop at first, but by restraining the horse by means of the curb we get the canter.

There are still other things that our horse must know, such as side stepping, which is gotten in the suppling. He, too, should know how to back. A simple way to get him to back is to cause him to collect himself, working from the ground, but just as he raises his rear feet in so doing, pull gently back on the curb before the step is completed and we may get a step backward. If not the first time, repetition will succeed.

Again, if a horse will not back for a slight pull, force will not avail. By patience, ingenuity and time the work will be accomplished. Taking our horse to a little raise or hill, with a slight pull, he will be more apt to back under such conditions.

Should our horse resist any of our efforts, we should immediately cause him to do something else, so that the impression of resistance will not be fixed in his brain.

"Practice makes perfect," so the more experience in training we can have, the more dispositions in horses we will know how to deal with and the more we should be able to accomplish in turning out a product that for superb beauty and undeniable pleasure the world knows no equal.

Look, how round his straining throat,
Grace and shifting beauty float;
Sinewy strength is in his reins,
And the red blood gallops through his veins:
Richer, redder, never ran
Through the boasting heart of man.
He can trace his lineage higher
Than the Bourbon dare aspire.

—Proctor.

The "Landwirtschaftliche Institut" of the University of Halle, Germany

DEAN H. C. PRICE

THE organization of a German University is essentially different from an American, but in general the "Landwirtschaftliche Institut" corresponds to our agricultural college. It is not organized under a separate faculty, but is a part of the philosophical faculty of the University. The term Institut is used here to indicate a subject and is between the department and college of an American university, and agriculture is still regarded here so far as organization is concerned as a single subject.

LANDWIRTHSCHAFTLICHE INSTITUT,
University of Halle.

The Institute at Halle is especially notable for two reasons: (1) It was the first Institute of its kind established in a University, which was in 1862, the year that President Lincoln signed the Morrill Act providing for the establishment of American Agricultural Colleges. (2) It has the largest number of students of any of the Landwirtschaftliche Institutes of the German universities. As students of agriculture are now numbered at the Ohio State University and at the other agricultural colleges of North Central States, the enrollment is not large, last year 366 and this semester 381. Of this number 233 are from the German Empire, 88 from Austria-Hungary, 39 from Russia and the remaining from the other countries of Europe, from Africa and 3 from America, I being the only one from the United States.

The work of the Institut is so very different from that of our colleges that a description by means of comparison is almost out of the question. In the first place the students average much older than our own, and I do not feel at all out of place as far as age is concerned, for plenty of men attend the lectures that are much older than I am.

Equipment.

According to the American standard of the equipment necessary for an agri-

cultural college what they have here is not at all elaborate. They are located by themselves some distance from the administration buildings of the University, as are most of the other Institutes. The buildings and gardens occupy three or four acres. The buildings are very plain and some of them quite old and entirely inadequate to the present needs. This coming summer a new dairy building is to be built and considerable remodeling done on the old buildings. Limited as they are in space, it has all been utilized very intensively and is kept in excellent order. Tropical agriculture is of importance to Germany in relation to her colonies in Africa, and consequently they have green houses devoted to the plants of economic importance in the Colonies. The gardens are planted principally with specimen plants of the shrubs and trees. In beds about four by six feet, varieties and specimens of the different vegetables and grains are grown.

A VIEW OF THE BARNS.

In the live stock department the animals are confined entirely to the stables or paved yards which are very limited in size and give little room for exercising. Notwithstanding this limitation in space they have a large amount of livestock, representing a great many types and breeds. These are not only representative of the most important domestic breeds, but some of the wild animals also. For example, they have three American buffaloes, a wild boar, and several zebra crosses. In some respects it reminds one of a zoological garden, but these have all been brought together for a special purpose and a great deal of work has been done in cross breeding. The work has been carried on for years and an immense collection has been assembled of the mounted skeletons and skins of the animals that have died as well as the living animals that they now have. I do not suppose that such a collection in range and quality is duplicated any place else in the world.

Within a half hour's walk of the Institute is its experiment farm, which contains nearly 300 acres. Here very extensive variety tests, fertilizer tests and culture tests are carried on for all of the principal farm crops, much the same as at our experiment station at

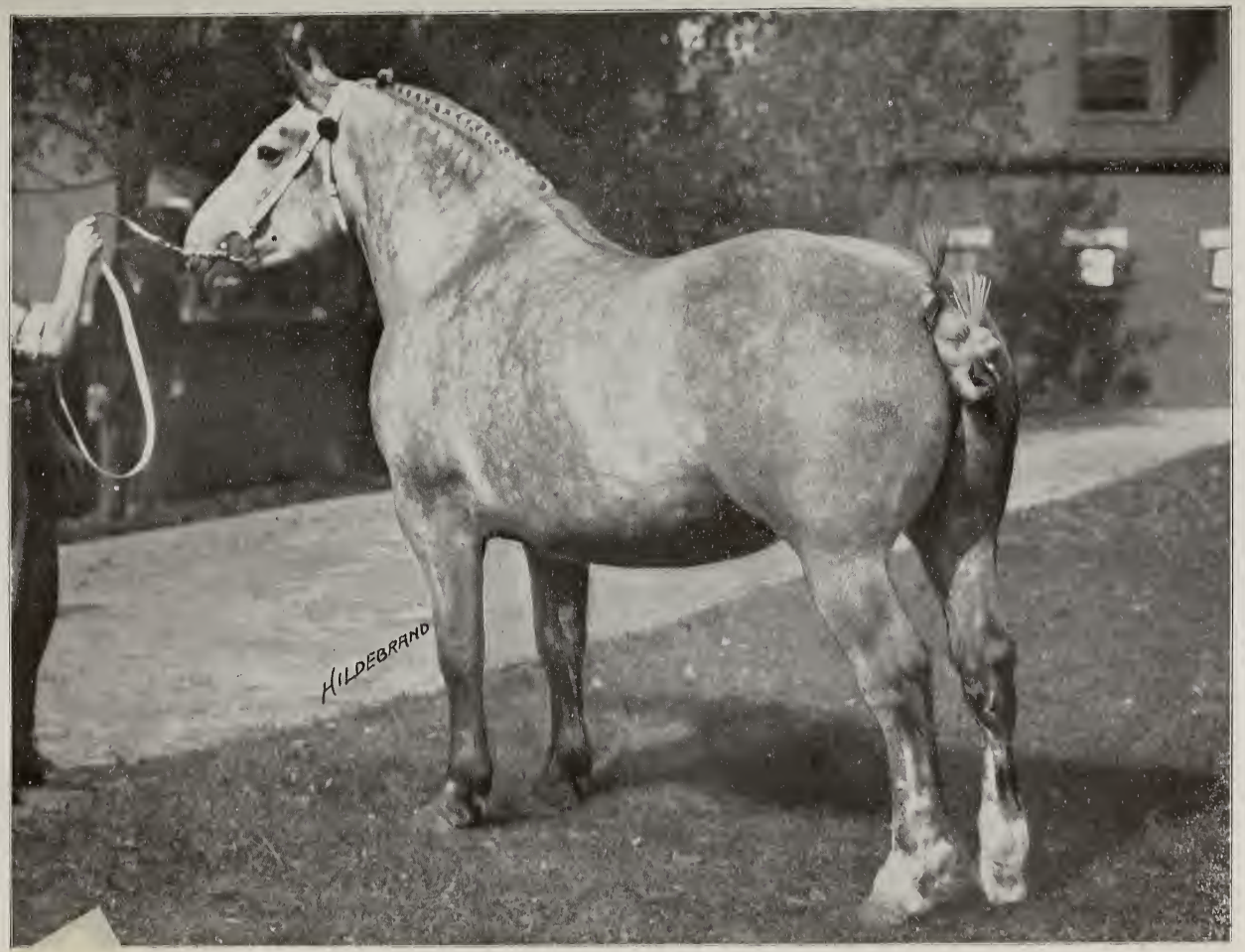
Wooster. In plant breeding the work is also very extensive, and quite a large building has been built for the storing, testing and record work of the individual plants that are used in the breeding work.

One of the best features of the Institute's equipment is its library, which consists of over twenty thousand volumes, approximately one-fifth as many as we have in our University library. It is entirely separate from the University library and has its own offices under the direct control of the Institute. While the books are confined principally to agriculture, yet the general sciences and economics are quite well represented. Naturally the works are mostly German, yet English, French and Italian are also included. The bulletins from the American agricultural experiment stations and the publications of the Department of Agriculture at Washington, are in the library, but not many American books on agriculture.

In this is the greatest contrast between our own college and the work here. According to the classification here the subject of agriculture is divided into three main divisions: (1) Acker- und Pflanzenbaulehre (Agronomy), (2) Tierzucht und Molkereiwesen (Animal Husbandry and Dairying), (3) Betriebslehre (Farm Management). All the other subjects are made secondary to these ,or are given an independent course by special lectures, as in the case of horticulture, which is given by the Director of the Province Fruit Experiment Station, an institution entirely separate from the University but located near Halle. The work is principally given by lectures and the two things that are entirely lacking are class rolls and examinations, except the examinations that a student must take when he wants a teacher's certificate, a diploma, or a doctor's degree. At the beginning of the semester students are given four weeks in which to decide what lectures they want to attend. During this time they are at liberty to attend any they want to. By the end of the four weeks they must have reported and paid for the lectures that they have elected, otherwise their registration will be cancelled. They are now at liberty to attend or not to attend just as they please. It is their own loss if they do not, and no one concerns himself about them. But as I have thus far observed the attendance is quite regular, except at lectures at eight o'clock in the morning, and here it has been so dark during December and January that the lights had to be lighted in the lecture room at that hour. The absenteeism at this hour is frequently large and I occasionally helped to swell it myself.

A German professor never begins a lecture till a quarter past the hour and frequently twenty minutes. He then comes in, in a great hurry, plunges right in, goes steadily until the bell rings at the close of the hour and then leaves as suddenly as he came. He is usually the last one in and the first one out of the class room. He seldom or never asks the class a question or gives them an opportunity to do so.

I did not start out to give any opinion of this method of teaching, but only to describe the Institute and its work, but I cannot refrain from saying that it impresses me that there is a tremendous loss of time for the student and an over-lapping in the subjects as they are given. Since there is no sequence of studies, each one must be complete in itself and independent of the others instead of being founded upon what the students learned in their previous courses.



KEEP YOUR EYE ON THIS KIND. Courtesy McLaughlin Bros.

THE AGRICULTURAL STUDENT

OF

OHIO STATE UNIVERSITY.

A Monthly Magazine Devoted to Agricultural Education.

Published by the Students in the College of Agriculture. Established, 1894.
Subscription Price, 75 Cents the Year.
Entered at the Postoffice at Columbus, Ohio, as second-class matter.

COLUMBUS, OHIO, APRIL, 1912.

Editorial

THE HORSE.

The paragon of brute animals is he. For general beauty, exquisite harmony of proportions, poetry of motion, commend us to the horse. Thru the dangers of the journey, the pleasures of the chase he has associated with man; with willing ardor he encountered the dangers of the martial field; and best of all, it was with a sturdy prowess that he partook in the humble labors of cultivating the soil for mutual subsistence.

Vast and energetic bodily powers, an admirable pliability of disposition and fortitude of heart, aye, and even a portion of intellect—all these Nature gave unto him, gave unto him that he might serve and associate the better. Is it to be wondered at that he aroused the finest sentiments and worthiest feelings of primitive times?

Where else, than in the horse, can we see the personification par excellence of beauty and utility? Watch him in action, a good one—an American saddler, epitome of grace; an American trotter, marvel of speed; a high-stepping coacher, prodigy of beauty; a mighty drafter, vision of power; study his movements and then wonder no longer when we say that the horse has an irreplaceable spot in the heart of man, as well as in his pocketbook. Figures still prove him indispensable in commerce. If he ever ceases to be so, it will be ours to mould him to his new adaptation, whatever that is.

AGS., 2—VETS., 1.

Sounds good, doesn't it? Don't blame you for being hilarious. But be out at the next game, (every Friday at 4 p. m.) and root!

HORSE NUMBER.

Perhaps it was Ishmael, the outcast, who first appreciated the adaptability of the horse to the needs and the admiration of man. Perhaps it was in his heart, as he wandered there in the far eastern desert, that there first welled up the sentiment, which Lord Byron so effectively visualizes:

"A thousand horse, the wild, the free,
Like waves that follow o'er the sea.
A thousand horse, and none to ride;
O! where are they the reins to guide?"

At any rate, it was his son's great-grandson, Salaman, whose five mares made up the renowned "Al-Khamseh," whom we associate with the founding of the magnificent Arabian race of horses.

Since then man has known the horse as an instrument of his rise, noblest of servants and truest of brute friend. The westward march of civilization was on the back of the charger. Bred for battle, he became the foundation of peace. When the human family turned from Mars to follow after Demeter, when tillage and commerce replaced war and brigandage, what of the horse? The need for him was but the greater. The study of his adaptation to the new order of peace is one of the most fascinating chapters of history. Behold the fashioning of the modern horse. Five original equine races went into the melting pot, and there came out the present day breeds, each finely adapted to the conditions imposed by the master. And now we have him, drawing our burdens, carrying us lightly on his back, or pulling our carriage—at once catering to our needs and pleasure as can none other.

We might recite statistics aplenty to prove his great worth to man. Suffice it to say he is at present, as through past centuries, indispensable to our present system of living. Not soon will he be displaced. Moreover, the love of horseflesh is deeply ingrained into the heart of every countryman and every lover of the "out-of-doors," which includes us all.

Sons of Ohio have never yielded to anyone in admiration for the horse. Ohio horse history forms an introductory and basic chapter to American agriculture. Its study makes one a prouder Buckeye and a still more enthusiastic horseman.

Thus it is that we have devoted this issue to Ohio equine interests. Would that it might have been a thousand times more worthy of the caption it bears!

ACKNOWLEDGMENTS.

In placing before our readers this current number devoted to an appreciation of the equine interests of Ohio, we gladly acknowledge our indebtedness to the many who have so kindly co-operated with us.

The subject matter represents careful preparation through hours of labor on the part of the various authors whose names head the various articles. Each one of these have an individual expression of our gratitude.

The issue could not have been a success without the aid so kindly extended in the loan of cuts and photographs. For the illustrations we are indebted to The Hartman Stock Farm, Columbus, Ohio; McLaughlin Bros., the importers of Columbus, Ohio; D. C. Acklin, of Nilka Farm; Prof. B. E. Carmichael, of the Ohio Experiment Station; Dean H. C. Price and the Ohio State University Extension Department.

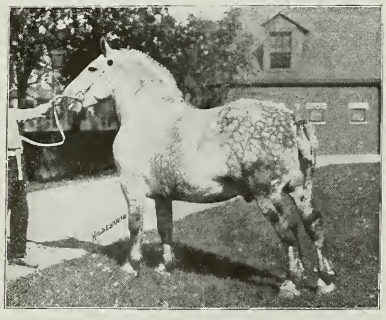
For all the favors so kindly extended we are duly appreciative.

ALL OUT FOR BANQUET!

Friday, April 26th, is the date of THE AGRICULTURAL BANQUET. This is the one big event of the Agricultural College, when everybody must be out, faculty, students, freshmen, seniors, sophomores and juniors—all must be on hand, ready to vent their enthusiasm to the limit. Every one is on the same plane for that one evening, the plane of good feeling for the enhancement of agricultural spirit at Ohio State. Excuses for that night are null and void. We owe it to ourselves and to our fellows to be there. Lets "gobble" up those tickets just as soon as they are placed on sale. Let's crowd the Virginia to its utmost capacity. An unsurpassed cuisine and a list of toasts such as we shall some day be glad to travel hundreds of miles to hear await us. Then 'tis all out for the banquet and for the honor and glory of Ohio State! Be there!

SECOND TO NONE.

A broad constructive policy is what the Ohio college needs, and what is coming. She needs a neater adjustment to her marvelous growth. Her quarters are crowded. She needs more big men. The Ohio public is seeing it so and it is to be hoped is instructing its legislature accordingly. That body will surely rise to the situation and provide for our needs. As alumni or as students we shall never rest until everyone shall know for a truth that the Ohio College is second to none in all this land. It is hers by right, by location, by environs, and by popular demand. The broad constructive policy will bear this fruit. It is our duty to help, wherever it may lead us.



Yet looks he like a king;
Behold his eye,
As bright as is the eagle's,
Lightens forth
Controlling majesty.
—Shakespeare.

Courtesy McLaughlin Bros.

All hail to the lordlings of high degree,
His neck is high and erect,
His head is replete with intelligence,
His belly short, his back full,
And his proud chest swells with hard muscle. —Virgil.

NEWS NOTES

AGRICULTURAL BANQUET. THE BEST YET.

The third annual banquet of the Agricultural College will take place Friday evening, April 26th, at the Virginia Hotel. Professor Vivian will act as toastmaster and an excellent toast list has been prepared. Dr. Hunt, Dean of Pennsylvania State Agricultural College, will deliver a short address. Following this a number of prominent men, including Dr. Thompson, ex-Senator Harris, Secretary A. P. Sandles, F. E. Pomerene, Colonel Wilson and George M. Worman, '12, will respond to toasts.

No effort is being spared to make this event a success in every detail. The growing popularity of this function indicates that between four and five hundred students will on that night be gathered about the festal board to promote that spirit of loyalty, fellowship, and unity so characteristic of the Agricultural College.

Don't forget the date, Friday, April 26th.

TO FIX OLEO STANDARD.

Professor Oscar Erf, head of the Dairy Department of the College of Agriculture, has been appointed by the Agricultural Committee of Congress as a member of a sub-committee of five to help establish a color standard for oleomargarine. The oleo manufacturers contend that there is no such color as pure white and that they are unable to comply with the law. Hence this committee has been appointed to establish a standard color. Professor Erf is doing the experimental work for the committee.

The Oliver Chilled Plow Co. recently presented the University with a two bottom, four horse, gang plow. It has been tried out during the spring plowing and gives excellent satisfaction.

The Agronomy Department recently purchased a Huber bean and pea huller of the latest and most improved type. It has been busily employed in threshing out a considerable quantity of soy beans which the University will sell for seed purposes.

Dean Homer C. Price, who has been spending the past year in Germany, is blossoming forth as a very prolific author of farm magazine articles. During the past month articles from his pen have appeared in the Breeder's Gazette, Wallace's Farmer, The National Stockman and Farmer, Ohio Farmer, and Twentieth Century Farmer.

R. T. Baker, Curator of the Technological Museum, of Sydney, New South Wales, sends to Professor C. S. Plumb, of the Animal Husbandry Department, a box of valuable wools from Australia. They will be a welcome addition to Ohio State's already notable wool collection. Besides the wools a number of very valuable photographs accompanied the gift.

Joseph F. Cox and Leo E. Melchers are at present engaged in orchard investigation work in Washington County under the direction of Mr. Selby, of the Ohio Experiment Station. They will return in June to receive their degrees.

RICHARDSON WEDS.

On March 20th, Mr. Chas. Richardson, '10, was united in holy wedlock to Miss Ruth Merrill, of Wickliffe, Ohio. The happy pair are now settled in the Richardson homestead at Willoughby. Richardson's many friends at Ohio State extend their deepest felicitations.

Professor A. G. Phillips, of the Poultry Department of Purdue University, Lafeyette, Ind., was the guest of Mr. F. S. Jacoby, of the Poultry Department, last Thursday. Professor Phillips inspected the few houses that the department has and looked over the site of the proposed Laying and Brooder Houses. He commended very highly the work carried on.

Excavation is now under way for the basement of the new $10,000 Storage and Implement building to be located directly to the rear of the horse building. The original plans called for a $15,000 building, but a discrepancy in the available appropriation necessitated the erection of a cheaper building.

Mr. G. B. Woodrow, of Jackson Co., a member of the Ohio legislature, is our new farm manager. He attended the short winter course here this year and acted as toastmaster at the Winter Course banquet. He began work April 1st.

V. L. Wildermuth, '09, is now stationed at Tampee, Arizona. He is working on cereal and forage crops insects, devoting his time more particularly to alfalfa pests.

The class in Landscape Gardening will make some plantings of shrubbery around University Hall.

At the last regular meeting of the Saddle and Sirloin Club, Supt. David M. Fyffe gave a short talk on "The Pasture Lands of Scotland." Following this was a discussion on the future of the society and the need of an amended constitution. At an adjourned meeting the Executive Committee presented a few amendments, which were adopted. Following this was the election of officers for the semester. The following members were elected: President, L. L. Heller; Vice President, V. A. Place; Secretary and Treasurer, Geo. B. Crane.

Professor Davis spent a few days at Oak Harbor, superintending the planting of the new school grounds at that place. He was also at Rosewood, in Champagne County, where the school grounds are three or four acres in extent, and planned the planting of them.

Professors Paddock and Gourley spent several days at Geneva, giving demonstrations in pruning, spraying, and caring for the frozen peach trees of that vicinity.

Professor A. G. McCall spent the Easter vacation at Carlsbad, in the Pecas Valley, New Mexico, looking over some irrigation lands.

T. H. Parks, '09, is working for the Bureau of Entomology at Salt Lake City. He is investigating the alfalfa weevil.

Fifteen men from the Horticultural Department were pruning orchards about Columbus during Easter vacation.

Philip Luginbill, '10, is at Lafayette, Indiana, working on cereal crop insects.

CHAMPION OF THE WORLD
Banostine Belle de Kol, of Ohio.

WHAT GOOD BREEDING WILL DO.

W. H. Standish, of Fulton County, O., began 26 years ago with a few head of cows to build up a dairy herd. By judicious selection and breeding he has succeeded in producing what is considered, by representatives of the College of Agriculture, as one of the best Holstein herds in the country produced by a single individual. He has eleven cows for which he has been offered $25,000. Recently, Mr. Standish refused $600 for a two-month-old heifer calf, the mother of which has a record of 111 lbs. of milk in one day and an official seven-day record of 34.6 lbs. butter fat. Last year one of these cows produced 119 lbs. of milk in one day. Only within the last year has any official record of these cows been kept, but since that time their fame has spread and buyers have come into the community and bought up $7,000 worth of descendants of the herd. This is an example of what may be done on the farm if one so wills to do it. Such men as Mr. Standish are needed in every community. Get busy, farmers, young and old, theoretical and practical; if there is not an opening, make it!

CORN AND ALFALFA SPECIALS.

The "Corn and Alfalfa Special" which was run over the Erie railroad, April 3, 4 and 5, bu the Extension Department, was very successful. Notwithstanding the bad weather, some 2000 persons, nearly all of whom were mature farmers, attended the lectures and demonstrations on the testing of seed corn, seed-bed preparation, and culture of corn and alfalfa. Similar trains will be run over the C., H. & D., the Nickel Plate, and the T. & O. C., the last of April and the first week in May.

The March number of the Agricultural College Extension Bulletin contains an article on the "Care of Milk," by Prof. A. B. Graham, and one entitled "The House Fly and the Blow Fly," by Prof. James Hine.

The second senior spread of the year will be held at Ohio Union on the evening, May 3rd. The entire building will be thrown open and all amusements, etc., placed at the disposal of the members of the class. A special program of music, stunts, and a speech will be features of the evening.

OHIO STATE POULTRY INSTITUTE

The interest manifested at the recent Ohio State Poultry Institute is a good indication that the poultry industry is rapidly being placed on a basis equal to that of our other live stock interests. The program, which was prepared by Professor C. S. Plumb and Mr. F. S. Jacoby, of the Animal Husbandry Department, was instructive and interesting from both the practical and the scientific standpoints.

The morning session opened at 9:30 a. m., with Prof. C. S. Plumb, President of Ohio State Poultry Association, as chairman, after whose brief address Mr. Oscar E. Miles, of the Miles Poultry Farm at Worthington, O., spoke on "The Breeding of Poultry." Mr. Geo. G. May, of the Aldrich Poultry Farm, at Clintonville, O., followed with "Incubation and Brooding." Following these two practical talks, Ernest R. Hoftyzer, a student at the University, disclosed some very interesting facts in reference to an investigation of the Columbus egg market.

The afternoon session was presided over by President W. O. Thompson. Practical demonstrations by experts were the feature of this session. Mr. Ross M. Sherwood, of the Ohio Experimental Station, spoke on the Fattening and Feeding of Poultry." This was followed by a demonstration of the "Three Methods of Killing Poultry," by Mr. F. S. Jacoby, instructor in Poultry Husbandry at the University. The session was brought to a close by scientific demonstrations of cooking eggs and preparing fowls for the table by the Misses Frances Beck and Anna M. Parry, instructors in Domestic Science in the Columbus High Schools.

The evening session opened at 7:30, with Hon. A. P. Sandles, Secretary of Ohio State Board of Agriculture, as chairman. The first speaker was A. T. Campbell, Secretary of the American Poultry Association. Following his talk, Professor A. G. Phillips, of Purdue University, gave an illustrated lecture on "The Housing and Brooding of Farm Poultry." This lecture was the feature of the institute and met with hearty appreciation from everyone. Dr. O. V. Brumley, of the Veterinary College, fully discussed the subject of "Roup" and the investigations carried on concerning it at the Veterinary Clinic. The institute was brought to a close by having Mr. A. P. Sandles, Mr. Ross M. Sherwood and Professor C. S. Plumb discuss what the various organizations which they represented were doing for Ohio poultry interests. Professor Plumb briefly outlined the work carried on by the Department and the plans for its future development.

On Friday, April 5, the Judging Pavilion was the scene of the Fifth Sheep Shearing Contest of Ohio State University. The entries were numerous in most of the contests and professional shearers of considerable reputation went into this game to show the speed and quality of their work. The contest for shearers under fifteen years of age proved to be an attractive event and the quality of work done by these youngsters was worthy of much commendation. The most interesting event of the day was an exhibition by Mr. Moran, of the Chicago Flexible Shaft Co., who removed the fleece from a Southdown wether in two minutes and twenty-six seconds. Some very interesting points of conformation were revealed with the removal of the fleece. However, the students who are most interested in this phase of the work were deprived of this benefit, as the contest was held during the spring vacation, when

most of the students were home. Animal Husbandrymen students are prone to feel that the coincidence of such an event occurring during the spring vacation, should not happen again.

OUR NEW BOTANY AND ZOOLOGY BULIDING.

The new Botany and Zoology building will occupy the site of the old Veterinary Hospital. The architectural features will harmonize with Oxley Hall and Ohio Union, the nearest permanent buildings. The whole area of the hollow and the grounds surrounding the buildings will be used for botanical gardens and eventually be developed into an ideal landscape garden. A series of ponds will lie in the hollow north of the building. These will balance up the effects of Mirror Lake on the opposite side of the driveway.

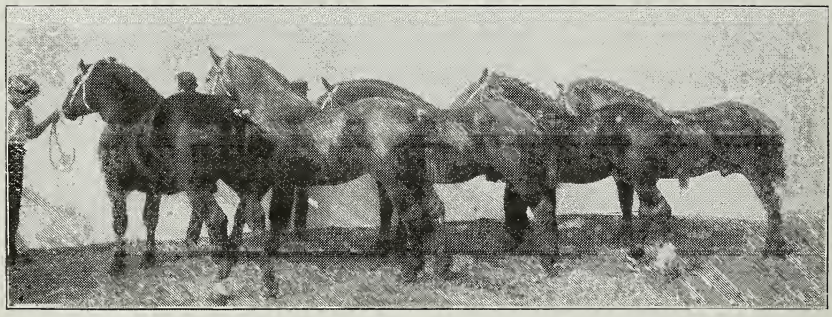
The main part of the first floor of the building will have the offices and a large lecture room for both departments. The main part of the basement will contain an aquarium. Fresh and salt water tanks will contain marine animals, fishes, frogs and other study material. The second floor will be a museum for study collections and demonstration material used in class room work. A joint library will contain books, papers and current periodicals of botany, zoology and general biological nature.

The north wing will be occupied by the Zoology Department. The first floor will have laboratories for advanced work. The first and second year laboratories and a room for experimental zoology will be located in the basement. The second floor will have laboratories for ornithology and research work. An insectary on the outside will be used for studies of life histories and habits of insects.

The Botany Department will occupy the south wing. The laboratories and class rooms will be similarly divided up. The underclassmen will occupy the basement, the students of advanced standing having the upper floors. A green house back of this wing will have plants for class room work and decorative purposes, one feature being a section devoted especially to water plants.

The new building will accommodate more than 1000 students in each department. There are now over 700 students of zoology and 350 of botany. The increase in zoology students was about 450 this year. The Botany Department is increasing at the rate of about 80 a year. However, the building is so planned that future additions to take care of the growth will not mar its beauty.

How often we hear the statement that horsemen do not appreciate the value of good "blood" in the sires. But is it so? One can hardly hold to this opinion if he will but consider the large fees that are paid for a service to some of the really good horses that have proven themselves as good breeders. The recent announcement by the Patchen Wilkes Stock Farm, of Lexington, Ky., of a $500 fee for a limited number of services to Peter the Great will illustrate this point. Criticize horsemen for disregarding merit when they will pay this sum for a microscopic cell even from this great sire. No, they have come to realize that individuality, backed up by a good line of breeding, means prepotency, and consequently the transmission to the offspring of those points of conformation and temperament which enable the sire to go the mile at a record-breaking speed. Although the spermotazoa are microscopic, they are sometimes worth many times their weight in gold.



Prominent Live Stock Breeders

These men solicit your trade. They have a reputation for honesty and square dealing and we recommend them to be reliable and safe. Mention "The Student" when you write.

Our Collegiate Advertisers

Fellow Students, let us show our appreciation not only by giving these firms our trade, but by boosting them to our friends. A thousand students here in school ought to be a class that any firm would be glad to get their goods before. Look over this list of advertisers and do your business with them, at the same time mentioning your connection with "**The Student.**"