

other. The heels should be wide, and of good depth. In draft horses, too frequently, shallowness at the heels is characteristic.

The front foot should be almost circular in shape, but the hind foot is narrow, and longer from front to rear. The hind foot is also deeper at the heel, and less open at the hoof-head, being adapted for propulsion, while the front foot must withstand much concussion. The sole should be slightly concave, the frog large, healthy and elastic, free from a deep cleft, and the bars should be strong. Feet that are small, brittle, flat in

sole, shallow of heel, spongy and weak, are always to be avoided.

The placement of the feet in relation to the axis of the leg is never a negligible factor. That plane which divides the normally-set leg into interior and exterior halves, also similarly divides the foot. The deviations from this give "toe-wide" when more than one-half the foot falls outside of the dividing plane, and "toe-narrow" when more than one-half the foot falls on the inside of this dividing plane. A horse that stands toe-narrow throws his feet outwards when travelling, while one that is toe-wide brings them inwards, thus having a tendency to interfere if he is otherwise normal. Irregularities in the placement of the legs may accentuate the evils of these irregularly-placed feet. Thus, a horse may be closer than usual at the fetlocks, and still be toe-wide; such a horse is predestined to interfere badly.

The executive officers of the States that have laws governing the licensing of stallions have formed an organization named the National Association of Stallion Registration Boards, with the object of unifying the laws of the various States, urging more careful supervision of horse registry associations, and encouraging the more general use of pure-bred, sound stallions by the farmers of the country.

LIVE STOCK.

The quickly-matured sheep makes the choicest mutton.

* * *

Improve your flock systematically. Careful selection and proper handling will produce a higher standard for wool and mutton.

* * *

A nice round body, pink skin, with a clean face, clear, bright wool, and sportive disposition, are good indications that the lambs are doing well.

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Breed only to first-class rams, and remember that, while a sheep may be of the purest blood, its form and fleece may be so deficient as to render it unfit for breeding purposes.

Judging Pavilion Needed.

The Canadian National Exhibition stands in a class by itself amongst all the fairs held on the American continent. It has not the reputation of the Chicago International, yet in its scope is more varied than that show, covering, as it does, all breeds and classes of stock. It is larger, of longer duration and more widely representative than are the State Fairs of the adjacent Republic. Thus, the Toronto Exhibition stands by itself.

There is another respect in which the Toronto Exhibition is practically in a class by itself amongst the large fairs, and that is in its failure to make adequate provision for the judging of live stock. The Illinois State Fair executive have built an amphitheatre 225 x 325 feet, with a tankard oval in the center, and a seating capacity of 7,000, all under one roof, for \$65,000. This makes the judging possible, and more comfortable, in all kinds of weather, and gives the people a chance to see both cattle and horses at the same time, and be comfortable while doing so. For sheep and swine there is a smaller pavilion. The attendance at this fair in 1909 was about 330,000. Admissions in the day time were 50 cents for adults, and at night 25 cents.

Wisconsin has provided a similar pavilion for the judging of cattle and horses, and for the seating of the interested people.

Minnesota has an amphitheatre 350 x 250 feet, costing \$110,000, built of brick, with cement finish, and a tile roof. This pavilion has a seating capacity of 7,500. The arena is 270 x 120 feet, and allows for the judging of cattle and horses at the same time. With two large cities to draw from, the attendance at Minnesota Fair this year was about 330,000, and the admission is, as above, 50 cents and 25 cents.

The Iowa State Fair in 1902 built a pavilion 225 x 275 feet, with an arena 120 x 175 feet, and a seating capacity of 2,200, for \$45,000. Horses and cattle are judged in this pavilion, the morning being devoted to horses, and the afternoon to cattle. They have also steel-and-concrete hog pens, with accommodation for nearly 1,000 hogs, and a pavilion in which to judge them, furnished with ample seating. The attendance at this fair in 1910 was 235,000, with a 50 and 25 cent gate.

The Toronto Fair had in round numbers 800,000 attendants in 1910, paying a 25-cent admission; thus, her receipts should exceed those of any of the above State fairs. Yet Toronto provides an open-air ring for the judging of both horses and cattle, surrounded by a picket fence, whereon farmers who have come to see and learn

something about horses and cattle may hang themselves, if they come early enough to get next the fence. It is true that seats are provided for probably seven or eight hundred, but the seating provided is scarce a beginning of what is needed, and they are roofed with canvas that may exclude the sun, but is scarcely rain-proof. Moreover, the glaring sun is uncomfortable for both stock and onlookers, while, when it rains, the show must stop.

The structure of the Art Building, and the proposed extensions thereto for next year, we appreciate, but there are a vast number of live-stock artists who bring their works to the Fair year after year, with no adequate opportunity to display the results of their skill; and there are thousands of persons interested in their work who come to the fair to watch the judging of them, but have small opportunity to do so.

Some time ago, \$110,000 was voted by the directors for the erection of a live-stock judging pavilion at the Toronto Fair, but, for various reasons, it has not been expedient to execute the plans. The management again committed themselves to this plan during the recent exhibition, while the stockmen again urgently expressed their wishes in the matter.

The interests of these live-stock producers—artists, if you choose—and the farmer-students who come to see and learn, but fail for the lack of a decent opportunity, we commend to the executive of the Toronto Exhibition. On behalf of the exhibitors, the attending farmers, the Toronto Fair, and Ontario live-stock and agricultural interests, let us hope these plans may soon be acted upon.

Contagious Abortion in Cows.

A committee of seven prominent men, including four eminent veterinarians, appointed by the president of the Board of Agriculture of Great Britain to inquire, by means of experimental investigation and otherwise, into the pathology and etiology of epizootic or contagious abortion in cattle and other stock, and to consider whether any, and, if any, what preventive and remedial measures may, with advantage, be adopted with respect to that disease, has published its first report. For the purpose of intimately studying the disease, it was necessary to start it and pass it from animal to animal in the laboratory. Unfortunately—from the farmer's point of view, at least—there was no dearth of material, and the Committee were able, without going far afield, to purchase animals in which the act of abortion was imminent, from herds in which they considered epizootic abortion had prevailed for some time.

A detailed description of the animals purchased, and found by post-mortem examination to be diseased, is given in the report, which is too lengthy to be reproduced here. Through the sympathetic co-operation of the Board's Honorary Agricultural Correspondents, the Committee were put in touch with a large number of farmers in whose herds the disease prevailed, many of whom undertook, at the Committee's request, to forward material in the form of aborted fetuses, fetal membranes from aborting cows, and cotton-wool swabs containing the discharges from aborting animals. Post-mortem descriptions of cows obtained from infected herds in the field, and those experimentally infected at the laboratory, are given in detail, in which it is seen that the appearances in both classes of animals were identical. The method of examination adopted was to open the abdomen of the animal immediately after slaughter, ligature the neck of the uterus, cut the organ out, and take it to the laboratory for minute examination. In no case were lesions that could be connected with abortion found in any other organ than the uterus. A description typical of a cow's uterus when affected, and of the microbe of cattle abortion, is given in the report.

From the report we quote: "Affected in-calf cows may be introduced into a clean herd, and be the means of establishing fresh centers when they abort; this is one of the most insidious ways in which abortion may be spread, for it is impossible for the ordinary individual to say whether a pregnant animal is affected or not. Cows which have aborted must be considered sources of infection as long as the discharge continues to come from the genital organs, and it may continue intermittently for a few weeks if the animal be not treated. Such animals, if not isolated, may continue to infect the stables or the pasture when turned out to grass."

Coming to the natural methods of infection, there are two ways in which the virulent material may gain access to the pregnant uterus, viz., by the vagina, and by the mouth. A table in the report shows that, by introducing virulent material per vaginam, five positive and three negative results were obtained. Another table shows that, by ingestion (by the mouth), three positive results were obtained against one negative.

We do not think it would be warrantable, on a comparatively small number of experi-

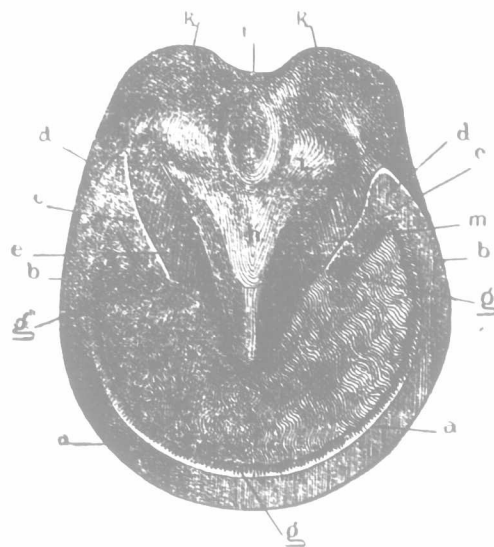


Fig. 1.—Ground surface of a right fore hoof of the regular form: a-a, wall; a-a, the toe; a-b, the side walls; b-d, the quarters; c-e, the bars; d-d, the buttresses; e, lateral cleft of the frog; f, body of the sole; g-g, leafy layer (white line) of the toe and bars; h, body of the frog; i-i, branches of the frog; k-k, horny bulbs of the heels; l, middle cleft of the frog.

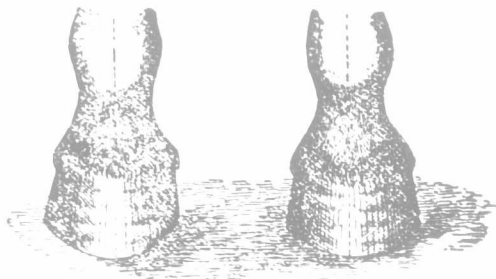


Fig. 2.—Pair of fore feet of regular form in regular standing position.

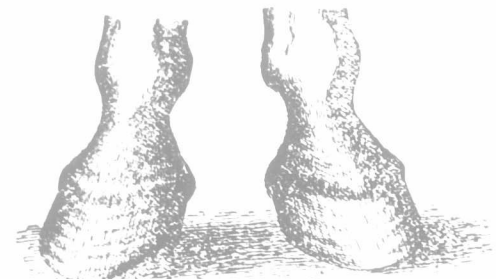


Fig. 3.—Pair of fore feet of base-wide form in toe-wide standing position.

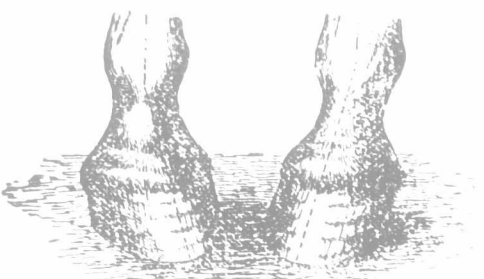


Fig. 4.—Pair of fore feet of base-narrow form in toe-narrow standing position.

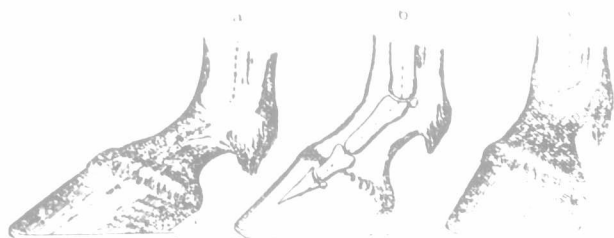


Fig. 5.—a, side view of an acute-angled fore foot (shod); b, side view of a regular fore foot, showing the most desirable degree of obliquity (45°); c, side view of a stumpy or "upright" fore foot, obliquity above 50°. In a,b,c, note particularly the relation between the length of the shoe and the overhanging of the heels. Note also the toe roll of the shoes.