sire of a performer may have been published in the summaries of his races, and it may be assumed that I have seen it there and already know it. Possibly I may have seen it there, but I don't know that it is correct, and it will not do to incorporate it into the official records, with the consequences that an error would entail. A newspaper report may be correct, but it must be verified before it can be accepted. Now, I think every man will understand that *I want the sire and dam of every performer* and the *address of the breeder* of every performer, and I do not hesitate to press upon every breeder and horseman the importance of furnishing this information. Attention to this will not only be esteemed a personal favor, but it will be a very valuable service to the public.

Please address:

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FISH CULTURE FOR FARMERS.

PITTSBURG, PA., Oct. 29th, 1885.

To the Editor of the CANADIAN BREEDER.

I have a few thoughts to present to my fellow-farmers all over the country. I know the times are hard and we are all anxious to turn an honest penny. When wool is only 28 cents and wheat 80 or 90, we must look sharp to make both ends meet, and a free exchange of thought often does much to assist us. I feel that I owe all I have to ideas gleaned from different papers. I bought a farm near the city in 1881. Then it was thought that everything was at its lowest and times must brighten up. But expecting good times did not make my payments. I could not raise grain, sheep or hogs with profit, so I was driven to look for something new; I struck on raising fish. I will say to start on, that the U. S. Government is doing all in its power to advance fish culture, and will give to any one desiring to start in the fish business, "German carp fish" to breed from. This is a valuable field, almost entirely unoccupied. It requires no capital and yields a large revenue. One eighth of an acre devoted to German carp will make a clear profit of $800, at the very lowest estimate. I think I hear a host of fellow-farmers say, just as I did, "I should like the $800; where can I get information regarding the fish business?" Write to the U. S. Fish Co., Columbus, Ohio, enclosing a plainly addressed envelope, and you will receive free the information you desire. Will they tell me how to get the fish offered by the Government to beginners? Yes, they will send you blanks to be filled out, by which you can get the fish without cost. Is there any doubt of my making money in the fish business? No; do you think the government would go to the expense of raising fish and shipping them to different parts of the U. S., and then giving them free, unless positive it was a profitable trade for citizens to engage in. How large a pond must I have to start with, and what will it cost? A pond 15 or 20 feet across will do to start with, and it will cost you nothing but a little digging. There is no stream on my lot; what will I do for water? Carp fish do not require running water. They do better in still water, even in swamps. They delight in mud. What sections of the U.S. are best for raising fish? Any part will do. Carp are such excellent fish that they command a good price and ready market everywhere. Will it not take a long time to get a start with the 20 fish supplied by the Government? No, indeed. Each female carp lays from 40 to 50 thousand eggs every year. They increase amazingly fast, and will increase your dollars just as fast if attended to. What season is best to make a fish pond? Right away. The U. S. Government will send you fish between Nov. 1st and March 1st. Do you have to feed the fish in winter? No; they eat nothing during the cold months, but lie in a dormant state, while sheep and cattle are eating their heads off. If the Government offered to send a fine pair of pigs to any one who asked for them, every farmer in the land would send in his name. Then why not get some fish, when they cost you nothing, care for themselves and bring you more money than any kind of farm stock? I wish all the papers in the land would urge this matter on their readers, as I know they would be conferring a lasting benefit.

WM. BAIRD.

THE PHILOSOPHY OF SWEATING—WHEN IT IS WELL FOR A HORSE TO SWEAT, AND WHEN IT IS AN UNFAVORABLE SYMPTOM.

Western Sportsman.

"My horse sweats easily," is a common complaint among horse-owners; and as such view it in the light of a peculiar disease, the practitioner must be prepared to prescribe for such cases. The sweating seems to be the feature most regarded, and if that can only be made to disappear, horsemen are generally satisfied, although they are not always solicitous to learn the real cause of it. Let us, therefore, in as brief a manner as possible, enquire into the causes of increased transpiration of the fluids of the body.

A large quantity of watery vapor is continually passing off from the body of horses, and it may be very considerable, although not sensible. If the atmosphere be warm and dry it readily absorbs the cutaneous exhalation, so as to pass off unobserved, but on a damp day, when the atmosphere is highly charged with vapor, almost to saturation, or completely so, then the exhalation from the surface is there condensed, so as occasionally to give the horse an appearance of being in a profuse sweat. Under these circumstances the amount of condensed perspiration depends on the warmth, dryness and motion of the surrounding air. The motion of the atmosphere has considerable to do with carrying off the insensible fluid. Many of our readers must have observed that a horse will dry off quicker, and of course sweat less, in a draught of air than in a damp stable, where there is no current.

As no evaporation from the skin can, therefore, take place while the atmosphere is loaded with vapor, and as the perspiration glands still continue to pour it out on the surface, it must inevitably produce an appearance of profuse sweating. In such cases the reader will perceive the absurdity of dosing a horse, for the conditions under which the fluid is poured forth are peculiar to all animals whose skins are not covered with scales or plates. Physiologists teach us that the purpose of this watery exhalation, and of its increase under a high temperature—for it does increase under the scorching rays of a noonday sun, whether the horse be drawing a load or not—is evidently to keep the heat of the body as near as possible to a uniform standard. By the evaporation of the fluid from the surface of the skin a considerable quantity of heat is withdrawn from it, becoming latent in the change from fluid to vapor, and this evaporating process lessens the temperature of the whole body. Were it not for this all-wise provision neither man nor horse could ever endure the rays of a tropical sun; neither could they sustain any high degree of heat for any great length of time without injury to the vital tissue. Carpenter informs us that the perspiration contains a small quantity of solid animal matter, most of which accumulates on the surface. This is—at least should be—removed by the brush and currycomb. Besides, there are other secretions of the skin which are mingled with it, and there is good reason to think that this excretion is of much importance in carrying off certain substances which would be injurious if allowed to remain in the blood. This receives confirmation from the fact—known to all grooms—that humory horses, as they are termed, have an abundance of scurf on their hides, and require constant grooming to keep them anything like decent. We here see the circumstances under which evaporation and condensation take place, and have learned something as regards the object of cutaneous exhalation in its normal or healthy aspect.

We are now prepared to investigate the causes of abnormal exhalation. And this takes place at various times, subject to the preceding provisions, under several forms of disease; yet of itself it cannot be considered as such. It is sometimes indicative of pain, irritation, etc. A horse, for example, has an acute attack of gastritis—inflammation of the stomach and bowels; he seems to sweat so profusely that the water runs from his body in large drops; the pain, together with the muscular efforts of the animal, augments this secretion, and thus augmented it helps to cool the patient and lessen inflammatory symptoms. In such case, and in many others of an acute character occurring in a plethoric subject, sweating is decidedly beneficial; it is prostrating, no doubt; but as the object of every practitioner in the treatment of some acute diseases is to prostrate by some means or other, sweating is a valuable process in view of cure. Here again we need not prescribe for sweating. We, however, often find horses of a weak washy constitution laboring under some chronic form of disease, that cannot perform mere ordinary work without getting into a perfect lather. Such are proper subjects in veterinary skill, not in view of prescribing anti-sweating medicine—although it prove so by restoring the animal to health—but for the purpose of treating the real malady. If successful, the sweating will disappear.

A horse must be expected to sweat on a sultry day, especially if he shall have imbibed large quantities of water. The sweating, however, is beneficial and often wards off an attack of founder or rheumatism. Profuse perspiration in the last stages of dissolution is a feature only regarded as a symptom, and therefore it is useless to prescribe with a view to putting a stop to it. For these and other reasons which might be presented, sweating cannot be considered as a disease. Sweating often relieves the system from disease by liberating through the surface morbid matter; so that if we were to suppress the cutaneous exhalation by providing for its exit through some other depuratory surface, disease of some sort in very surfaces—the skin, lungs, digestive surface and kidneys; each is continually eliminating materials, many of which if retained, would prove injurious to both man and animals. But exposed as domestic animals are to such varieties of atmospheric changes, it seems natural that some provision should be made for change or diminution of function. And thus we find, that if a horse in a profuse sweat is suddenly exposed to a current of cool air, the mouths of the exhalants close, putting a sudden stop to transpiration. The result would be disease, and probably death (which now and then does happen), were it not that the fluids recede to some other surface. When the kidneys are its receptacle it passes off by the urinary organs; when it recedes to the digestive surface a diarrhœa is the result. Should the lungs be called upon to perform the extra labor, copious expectoration is the result. In each of these cases disease is very apt to follow, and, therefore, under no circumstances whatever should the cutaneous exhalation be checked. If the animal is laboring under any form of disease prescribe for that and let him sweat.

All who have anything to do with the good cows should remember that a kick from a heavy boot, or a belaboring with a heavy club, will produce bloody milk. Treat the cow gently and give her plenty of pure feed if you wish to get pure and healthy milk.—*National Stockman.*