

CHAPTER XX.

FEEDING THE HORSE

In several preceding chapters the subject of feeds or feeding had to be taken up, but only because of its influence upon the subject then under discussion. This chapter is not intended to be more than an aid to the breeder in the feeding of his horses.

291. The Extraction of Nutriment. The amount of nutriment to be secured by the horse from any kind or quantity of feed, depends upon its mastication, the action of the salivary glands and the gastric fluids. The food is first reduced by the molar teeth, assisted by lips, tongue and cheeks, in passing it to the place of grinding and holding it in position. In the horse the lower jaw is about an inch narrower than the upper, so that grinding is possible on but one side at a time. As mastication proceeds the feed is mixed with saliva poured upon it from glands opening into the mouth.

292. The Amount of Saliva Secreted. Experiments made by Colin made it possible for him to state that it required nearly twenty minutes for a horse to masticate one pound of dry fodder consumed. Oats required a little more than their own weight, green fodder about half. It can be seen that the more thorough the mastication, the more perfect the digestion following. In other words the more time consumed in the mastication of his food, the better will the digestion of the horse be carried through. In this connection for feeding grain, an automatic feeder has many advantages over feeding in an open trough. Digestion is further aided by the gastric fluids poured upon the food after it enters the stomach.

293. Size of Stomach. The stomach of the horse is so small that it cannot contain much feed at one time, because of which the food is constantly being pushed on and out of the stomach before it has been long acted on by the gastric juice. The large intestine of the horse has a capacity of about six times the stomach, permitting the retention of a large quantity of food. The capacity of the stomach of a mature horse is but eighteen to twenty quarts. The entire alimentary canal is but a system of glands, secreting fluids to aid the process of digestion.

294. The Elements of Food. Foods may be divided into three elements or classes of nutrition; protein, consisting of the nitrogenous substances of the food; fats, which are absorbed unchanged in the form of an emulsion; and carbohydrates, which