gain per 1000 pounds live weight of 4.4 pounds. The cost per pound of gain was eight cents. For every 100 pounds of gain produced it required 546 pounds of feed. Lot II, fed shelled corn and cull velvet beans, equal parts by weight, made an average daily gain per 1000 pounds live weight of only 3.3 pounds. With this combination of feeds it cost ten cents to make a pound of gain, and it required 797 pounds of feed to make 100 pounds of gain. Lot III, fed equal parts by weight of shelled corn, cull velvet beans and shorts, made an average daily gain per 1000 pounds live weight of 4.7 pounds. The cost per pound of gain with these feeds was nine cents. With this combination it required 641 pounds of feed to make 100 pounds of gain. Lot IV was fed the same as Lot II, with the addition of green sorghum. This ration produced a daily gain of 4.5 pounds per thousand pounds live weight. The cost per pound of gain was eight cents. It required 1118 pounds of feed to make 100 pounds of gain. When we remember that 520 pounds of this is green sorghum, the total amount will not seem so excessive.

COMPOSITION OF THE ANIMAL BODY AND ANIMAL PRODUCTS.

Investigators have found that the bodies of animals, as well as animal products, are mainly made up of the following group of substances: Water, ash, protein, and fat. These substances occur in the animal body in somewhat varying proportions, depending upon the age, condition, treatment and other factors. Water is an essential constituent of the animal body, and composes from 40 to 60 per cent. of the live weight. Ash occurs mostly in the bones, and forms from 2 to 5 per cent. of the live weight. The fat occurs in greatly varying proportions, but rarely constitutes less than 6 per cent, or more than 30 per cent. Protein includes most of those substances which contain nitrogen in their composition. It is an important group, and is largely present in lean meat. The white of eggs also consists mainly of protein and water. In its pure state protein contains about 16 per cent. of nitrogen. The flesh, internal organs, brains and nerves, contain a large proportion of it.

COMPOSITION OF FEEDS.

Plants also contain water, ash, fat and protein. In addition to these the plants which compose the food of herbivorous animals contain a group of substances called carbohydrates (starches, sugars, etc.) which may be converted into fat or energy.

WATER.—All food-stuffs, no matter how dry they may seem, contain a considerable amount of water. In grains and dry feeds the water ranges from 3 to 15 per cent. of the material; in green forage and silage it is about 80 per cent.; while in some tubers and fleshy roots the water reaches as high as 90 per cent. Water