

XII.—COMPOSITION OF THE LEADING FOODS USED IN SWINE FEEDING.

The subjoined table of composition of foods was compiled from data taken from Prof. Henry's 'Feeds and Feeding.' The table does not show the total amount of each of the constituents present; it shows the total amount of water and of ash and the amount digestible by cattle, of each of the other constituents. Comparatively few digestion experiments have been conducted with swine; it is, therefore, impossible, from any data at present available, to compile a satisfactory table showing the amount digestible by swine of each of the nutrients contained in a number of feeding stuffs. Enough work has been done with swine to show that the digestion by swine of grains and other concentrated foods containing only a small amount of crude fibre, is very similar to the digestion of the same foods by cattle or sheep. The difference is so slight that it does not impair the usefulness of a table compiled from digestion co-efficients as determined with cattle.

TABLE OF COMPOSITION OF FEEDING STUFFS.

Showing the number of pounds of digestible Nutrients contained in 100 lbs. of the Feedstuffs named.

Feed-stuff.	Water.	Ash.	Protein.	Carbo- hydrates.	Fat.	Nutritive ratio.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	
Corn	10.9	1.5	7.9	66.7	4.3	1 : 10
Gluten meal	8.2	.9	25.8	43.3	11.	1 : 3
Barley	10.9	2.4	8.7	63.6	1.6	1 : 8
Oats	11	3	9.2	47.3	4.2	1 : 6
Rye	11.6	1.9	9.9	67.6	1.1	1 : 7
Peas	10.5	2.6	16.8	51.8	.7	1 : 3
Buckwheat	12.6	2	7.7	46.2	1.3	1 : 7
Wheat	10.5	1.8	10.2	69.2	1.7	1 : 7
Wheat bran	11.9	5.8	12.2	39.2	2.7	1 : 4
Wheat middlings	10	3.8	12.8	53	3.4	1 : 5
Linseed meal (new process)	10	5.2	28.2	40.1	2.8	1 : 3
Clover (green)	70.8	2.1	2.9	14.8	.7	1 : 6
Alfalfa	71.8	2.7	3.9	12.7	.5	1 : 4
Rape	84.5	2	1.5	8.1	.2	1 : 6
Sugar beets	86.5	.9	1.1	10.2	.1	1 : 9
Mangels	90.9	1.1	1.1	5.4	.1	1 : 5
Turnips	90.5	.8	1	8.1	.2	1 : 9
Artichokes	79.5	1	2	16.8	.2	1 : 9
Potatoes	78.9	1	.9	16.3	.1	1 : 18
Skim milk	90.6	.7	2.9	5.2	.3	1 : 2
Buttermilk	90.1	.7	3.9	4	1.1	1 : 2
Whey	93.8	.4	.8	4.7	.3	1 : 7

EXPLANATION OF TERMS USED.

ASH.

Ash includes all the mineral constituents of the food, which consist mainly of carbonates and phosphates of potash, lime, magnesia and soda. In animal nutrition these mineral constituents of the food are essential to the nourishment and growth of the bony framework. Bone formation cannot take place in the absence of phosphoric acid and lime, hence the great importance of ash in the food of young, growing animals. The well known value of such foods as milk, oats and bran in the feeding of young stock may be quite largely attributed to their richness in ash.