

We should not, or cannot, expect an animal to grow and develop as it ought unless we supply it with the proper amounts of the different substances its body needs. There is no one good feed, excepting milk, that supplies all of the necessary nutrients in the correct ratio. It is necessary, therefore, to use a mixture of two or more feeds to get the best results.

In selecting and combining feeds it is not only necessary to take into consideration their composition, but also their digestibility and palatability. It is worse than useless to give an animal a food that cannot be digested, and one that is not palatable will not be eaten in sufficient quantity.

HOW TO CALCULATE RATIONS.

From the table which gives the percentage of digestible nutrients in the various feeds we can easily work out a balanced ration. For example, suppose we are feeding flint corn 12, sweet potatoes 12, cottonseed meal 1.75, and cowpeas 5 pounds per day, to find the amount of protein in 12 pounds of corn, we divide the amount in 100 pounds (the percentage) by 100, and multiply by 12, and so on. We will thus get the following results:

CORN.

	In 100 pounds	In 12 pounds
Crude protein-----	8.0	0.96
Carbohydrates -----	66.2	7.94
Fat -----	4.3	0.51

SWEET POTATOES.

	In 100 pounds	In 12 pounds
Crude protein-----	0.8	0.09
Carbohydrates -----	22.9	2.75
Fat -----	0.2	0.03

COTTONSEED MEAL.

	In 100 pounds	In 1.75 pounds
Crude protein-----	37.6	0.66
Carbohydrates -----	21.4	0.37
Fat -----	9.6	0.17

COW-PEAS.

	In 100 pounds	In 5 pounds
Crude protein-----	16.8	0.84
Carbohydrates -----	54.9	2.74
Fat -----	1.1	0.06

If we then arrange these results in another table we have:

	Pounds	Protein Pounds	Carbohydrates Pounds	Fat Pounds
Corn-----	12	0.96	7.94	0.51
Sweet potatoes-----	12	0.09	2.75	0.03
Cottonseed meal-----	1.75	0.66	0.37	0.17
Cow-peas -----	5	0.84	2.74	0.06
Total-----	30.75	2.55	13.80	0.77