In order to complete the information offered in the present document concerning the relation between the way cattle fodder is supplied and animal nutrition, an example is given below of the way in which the nutrition value of each element of feed-forage is analysed from the point of view of what are considered to be “balanced rations”. Raw data is processed and the resulting information presented differently in order to observe how animals make use of each particular nutrient. Factors such as plant composition or the cow’s digestion system mean that cows rarely make use of all the nutrient content contained in a given plant. The following are examples of the values calculated for each type of forage or supplement in such feeding programmes:

- Net energy (NE) classified for maintenance (NEm), for growth and gain (NEg) and for lactation (NEl). Net energy is sometimes measured in terms of units of fodder (UF) equivalent to the energy contained in 1kg of barley grain.
- Dry matter (DM): this includes all the nutrients needed by a cow, except water.
- Crude protein (CP)
- Metabolizable protein (MP): the part of the protein in fodder that an animal can actually absorb and use
- Digestible protein (DP)
- Non-degradable intake protein (UIP), known as by-pass protein
- Degradable intake protein (DIP)
- Digestibility
- Organic matter: compounds that contain carbon (C), hydrogen (H), oxygen (O) and nitrogen (N) are classified as organic
- Inorganic matter: also known as minerals, including all other chemical elements (calcium, phosphorus.....).
- Acid detergent fibre (ADF: from cell walls, mainly cellulose and lignin)
- Neutral detergent fibre (NDF: FAD plus hemicellulose). The more fibre a plant contains, the more indigestible it becomes.
- Palatability

An example is presented below of the feeding value of forage (parameters measured during the green state of plant development, just as flowering commences, except for digestibility and crude protein which are average values from April to September):

% DM	Chemical composition %DM			
Nutritional value				
Ashes(Mineralas)	CP		Fibre	Digestibility %

Perennial rye-grass	18	10	11.7
26	67.3	0.78	70
Italian rye-grass	18	9	10.3
25	66.9	0.75	60
Cocksfoot	17		
12	12.7	25	63.3
0.77	110		
Tall fescue	19	13	11.7
Maize	28	13	
9.8	27	81.3	0.80
55			
Alfalfa	20	10	17.1
White clover	18	11	16.7
0.75	152		

As such, analysis of this information offers the same conclusion as that reached from analysis of all the information offered throughout Section 2 of the present document: the importance of a feeding regime based on forage comprised of a variety of plants, given that some species fulfil

some nutrient requirements in the best manner possible, whilst other species fulfil other requirements to the best..

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