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Opinion

The Theory of Animal Nutrition According to French Zootechnics (1893)

Juan Manuel Cervantes Sanchez*

Department of Animal Nutrition and Biochemistry, Faculty of Veterinary Medicine and Zootechnics, National Autonomous University of Mexico, Mexico

***Corresponding Author:** Juan Manuel Cervantes Sanchez, Department of Animal Nutrition and Biochemistry, Faculty of Veterinary Medicine and Zootechnics, National Autonomous University of Mexico, Mexico.

Received: January 17, 2023; **Published:** January 24, 2023

This theory was developed by a group of French scientists during the 19th century. It is formed by a series of knowledge that mixes contents from different areas of French enlightened human knowledge and its subsequent evolution: anatomy, physiology, natural history, inorganic and organic chemistry, toxicology, bromatology, biology, calorimetry, zootechnics, etc.

Its initiator was Jean Baptiste Boussingault, a French miner, disciple of Humboldt, who in 1836 began to make experiments in his farm located in Pechelbronn, Alsace, creating the first experimental agricultural station and the modern model of research in animal nutrition. In 1893, Dr. Louis Grandeu wrote in his book Le Nutrition Animale, the most finished version of this theory, the most complete version of this theory. The following is a summary updated to our time, in order to understand the concept.

The elements of the periodic table are widely distributed in the ecosystem, most of them in inorganic form, through processes induced by soil microorganisms become more available to plant roots.

Already inside the plants the inorganic compounds are transformed by plant metabolism into organic compounds (carbohydrates, lipids, proteins, vitamins) and in addition to supplying the corresponding mineral elements.

Vegetables are the basic food (grains, legumes and fodder, etc.) for herbivorous animals because they contain in different proportions the nutrients that animals need, which is why vegetable raw material must be mixed with other plants or with ingredients of animal origin in order to cover the nutritional requirements of the animals.

The animals have food available to them either by grazing or by human provision at the feeding trough. Thus, animals ingest the food, chew, digest and absorb it with the help of the central nervous system, hormones, digestive enzymes and the digestive microbiota, in such a way that the macromolecules must be degraded to their minimum active expression, to be absorbed and continue their way to the liver and later metabolized in the cells. From the majority portion of nutrients, meat, milk, eggs, wool, etc. are produced. While the remaining part is incorporated into the soil, where other soil microorganisms will degrade the organic matter of the feces to the inorganic form and thus be available again for the roots of the plants, and the cycle repeats itself...

Volume 8 Issue 2 February 2023