

# IMPACT ON THE ANIMAL PROTEIN INDUSTRIES OF THE NEW FAO REPORT ON PROTEIN QUALITY MEASUREMENT FOR HUMANS

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The FAO has released a report that should be of keen interest to everyone involved in the business of producing human proteins. This is important because it will change the status of animal proteins versus vegetable proteins.

"Research approaches and methods for evaluating the protein quality of human foods - Report of a FAO Expert Working Group." You may access to the report through this link <http://www.fao.org/3/a-i4325e.pdf>

## **Animal Proteins vs Plant Proteins**

This report provides recommendations and methods necessary to move the evaluation of protein quality on a worldwide basis to the new method of DIAAS (digestible indispensable amino acid score). This new method will have considerable impact on the animal protein industry because the old method overestimated the protein quality of vegetable proteins. As a result it appeared the people were meeting their dietary requirement for protein and amino acids from vegetable proteins, when in actual fact they were not.

With the new method of DIAAS, animal proteins, including meat, meat products, and dairy, will rank much higher than plant proteins because animal proteins are both more digestible and have better amino acid scores than plant proteins. Under the new methods people will have to consume 10, 20 and even 30% more vegetable protein to meet their amino acid requirements. This change will place animal proteins at much greater advantage when global decision makers are seeking ways of improving food security and human nutritional status.

## **Recommendations for Increased Protein and Amino acid Requirements for Humans**

The second component of this story is the fact that the most recent documents on human protein and amino acid requirement have significantly increased the recommended protein intakes compared to the previous documents. This is already having an effect on the recommendations for animal protein consumption in developed countries. This will have an additive effect on the increased demand for animal protein on a worldwide basis.

## **New Research is Necessary to Complete the Move to DIAAS**

The Report concluded with a number of recommendations including:

- "the complete value of DIAAS could not be realized until there are sufficient accumulated digestibility data for human foods as determined by competent national and/or international authorities"
- "there is the need to develop a fully accessible, robust database on amino acid digestibility of foods and diets from different regions of the world.
- there is the need to identify funds for research. The experts believed that public and private sector funding would be required to carry out this work and efforts should be made to encourage such funding.

## **The Way Forward**

Protein quality is an important public health issue that has been under-recognized and under-valued for decades. We have an opportunity to correct this problem and benefit both public health and the industries we support, but it will require a considerable investment of dollars into the necessary research and into public education.

*Dr. Ron Ball was a member of the Expert Working Group that produced the report on evaluating the protein quality of human foods. He developed the indicator amino acid oxidation method that was recognized in the Report as one of only 2 published bioassay methods that produce data on amino acid bioavailability in humans. This was the only method that was clearly endorsed by the Expert Working Group. He has published more than 200 research papers in the areas of protein and amino acid requirements, amino acid digestibility and protein quality in humans and animals.*