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REGULATION OF PROTEIN CONTENT CLAIMS

BEEF WATCH REPORT FOR MARCH 2024

ENSURING PROTEIN CONTENT CLAIMS ON FOODS ARE SUPPORTED BY THE BEST AVAILABLE SCIENCE

Claims such as excellent or good “source of protein” are regulated by the Government of Canada and based on specific Protein Rating (PR) criteria.

Protein content claims are important for Canadians who are seeking to identify foods that are high in protein for their health and wellness.

For many years, the protein efficiency ratio or PER was the lone approved method to calculate the PR and determine eligibility for a protein content claim in Canada.

On November 4, 2023, the Government of Canada announced the intent to add one additional approved method for PR calculation: protein digestibility corrected amino acid score or PDCAAS.

This announcement was published as part of a series of proposed regulatory changes falling under what the federal government is calling a “Regulatory Modernization” strategy, outlined in a consultation document published in Canada Gazette.*

Should this proposal be approved, industry would be allowed to choose either the 90s era PDCAAS, or the earlier still PER method, to determine protein quality, despite newer and more accurate protein quality assessment methods being available.

IMPORTANT OBSERVATIONS

1. The FAO recommends using newer DIAAS method

PER and PDCAAS are outdated. In 2013, the Food and Agriculture Organization (FAO) of the United Nations published an expert report that recommended replacing both of these methods with a newer more accurate protein quality assessment method, known as digestible indispensable amino acid score or DIAAS. It is worth noting that Canada remains the only developed country to use the PER method for foods other than infant formula.

2. DIAAS is the most accurate measure of protein quality

The advantage of DIAAS is its ability to account for how well humans digest and absorb the individual amino acids within a protein - which it does better than either PER or PDCAAS. This is important since a protein’s value lies in our ability to actually digest and absorb it when consumed. High-quality proteins are better absorbed which is why protein quality, not just quantity matters.

3. PDCAAS overestimates the quality of plant proteins

Digestion and absorption are not as well accounted for with PDCAAS thus this method tends to overestimate the quality of plant proteins and undervalue the quality of animal-source proteins to human health.

4. PDCAAS is not equivalent to PER

Whereas the federal government’s consultation has positioned PDCAAS and PER as ‘equivalent,’ there are various examples where claims differ based on the method. For example, some legumes qualify as Good Source of protein using PDCAAS, while using PER, would not qualify for any claim; eggs can qualify only as a Good Source of protein with PDCAAS but as an Excellent Source with PER.

5. Protein quality matters more than ever

Research indicates that some Canadians may not be consuming the quantity and/or quality of protein they need for optimal health, an especially important consideration for vulnerable populations such as infants, women during pregnancy and for seniors.

Given the push towards plant-based diets (e.g. Canada’s Food Guide), ensuring that the protein quality of foods is characterized accurately is critical to ensuring the protein needs of all Canadians is met.

IN SUMMARY

There is a clear case for why DIAAS is a superior choice for determining protein quality, as urged by the FAO.

PDCAAS is a less accurate method whose use does not reflect current scientific consensus.

Policies to differentiate the quality of various protein sources are more important than ever for Canadians given the government’s emphasis on replacing animal with plant-based proteins.

Footnotes

* Canada Gazette, Part I, Volume 157, Number 44: Regulations Amending Certain Regulations Concerning Food Additives and Compositional Standards, Microbiological Criteria and Methods of Analysis for Food.