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Finding Plant-Based Foods in PubMed: A Problem for our Foodie Future

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Most Plant-Based Foods Are Not In The Food Explosion

The main problem in searching for plant-based foods (PBFs) in PubMed is that most of them are not in the Food explosion, but only in Plants. This is especially tricky because there ARE terms in the Food explosion that seem to include PBF’s, but which in fact contain only a relatively small number of citations.

In the Food explosion, three large categories of PBFs are treated quite differently.

A Tip On Searching For Plant-Based Foods
Most plant-based food (PBF) terms are only in the Plants explosion, so searching in PubMed for Food will miss many relevant PBF articles. Fortunately, however, many articles on PBFs are indexed with other nutrition-diet MeSH terms. So the best way to find articles on PBFs is to combine the Plants explosion AND a Food Diet-Nutrition hedge such as this one:

food OR foods OR beverages OR diet OR dietary OR vitamin OR vitamins OR nutrition OR nutritional OR nutrition disorders OR food industry OR nutritional physiological phenomena OR dietary fats OR dietary proteins OR feeding behavior


So Many Plant-Based Foods!
Part of the problem of searching for PBF is the sheer number and variety of them. The MeSH tree lists 183 taxonomic families of plants. To give a sense of the tremendous variety of plant-based foods, in the green side panels we’re listing the families in MeSH with the most articles relating to food use...

Search Problems: Examples
Although MeSH terms that are in the Food explosion are occasionally added to PBF articles as a category term, they fail to retrieve most articles on PBFs.

A MeSH term under Food, but not an explosion

A MeSH explosion under Food, with a relatively small number of sub-terms.

A MeSH explosion under Food, contains one sub-term (Black Pepper)

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… Taxonomic relationships are important because families have a biochemical, and therefore nutritional, uniqueness. Biochemical variety is the spice of a good diet!

Some Plant-Based Foods:

- Soybean
  Fabaceae: Soybeans
- Broccoli
  Brassicaceae: Brassica
- Apple
  Rosaceae: Malus
- Peppermint
  Lamiaceae: Mentha piperita
- Turmeric
  Zingiberaceae: Curcuma
- Banana
  Musaceae: Musa
- Sweet potato
  Convolvulaceae: Ipomoea batatas
- Litchi
  Sapindaceae: Litchi
- Dragon Fruit
  Cactaceae (No MeSH term)
- Pawpaw
  Annonaceae: Asimina
- Jalapeño
  Solanaceae: Capsicum annuum
- Black Pepper
  Piperaceae: Piper nigrum

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