The Impact of NLEA on Food Composition Databases

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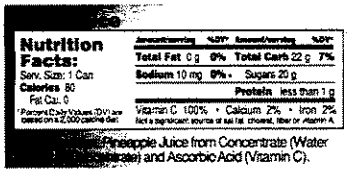
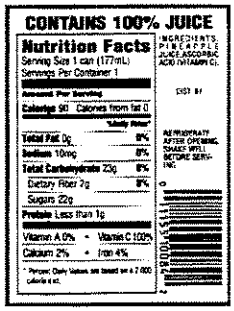
Why Food Labeling Databases

- **Ability to label reformulated or new products quickly.**
  - **After development - cost effective**
  - **Help in product formulation development**
  - **Shorten leadtime in label development**

Why Food Labeling Databases

- **Ability to label reformulated or new products quickly.**
- **Unified label for commodity type products.**
  - ➡ **Reduces consumer confusion**





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Why Food Labeling Databases

- **Ability to label reformulated or new products quickly.**
- **Unified label for commodity type products.**
  - ➡ **Reduces consumer confusion**

  - ➡ **Enhances competitiveness in the private label market**

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Current NFPA Databases

- Apple Juice
- Applesauce (sweeten)
- Applesauce (unsweetened)
- Asparagus (brine pack)
- Asparagus (water pack)
- Beets (Regular pack)
- Carrots (water pack)
- Carrots (brine pack)
- Corn (brine pack)
- Corn (water pack)
- Green snap beans (brine pack)
- Green snap beans (water pack)
- Yellow snap beans (Brine pack)
- Yellow snap beans(water pack)
- Lima Beans (brine pack)
- Potatoes (Brine pack)
- Peas (brine pack)
- Peas (water pack)
- Peaches (light Syrup)
- Peaches (Heavy Syrup)
- Pinto beans (brine pack)
- Tomatoes (puree, 1.060)
- Tomatoes (puree, 1.045)
- Tomatoes (stewed)
- Tomatoes (whole and diced)
- Tomatoes (paste)
- Tomatoes (crushed)

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Why Food Labeling Databases

- **Ability to label reformulated or new products quickly.**
- **Unified label for commodity type products.**
- **More realistic nutrient values.**
  - ➧ Representative sampling
  - ➧ Large sampling reduces uncertainty

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Why Food Labeling Databases

- **Ability to label reformulated or new products quickly.**
- **Unified label for commodity type products.**
- **More realistic nutrient values.**
- **Possible "safe harbor" for labeled products.**

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Overview of Agencies Guidelines on Databases

- **USDA**
  - **"Safe Harbor" with products labeled with databases**
  - **Most sources of databases are "OK" until proven otherwise.**
    - **Handbook #8**
    - **Commercial Databases**
  - **Label using mean nutrient values**

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Overview of Agencies Guidelines on Databases

- **USDA**
- **FDA**
  - **"Safe Harbor" for labels using approved databases.**
  - **Compliance Focus (80-120 rule)**
    - **Statistical adjustment on small databases**
    - **Label with means when nutrient values meet criteria**
  - **Commodity databases best chance of success**
    - **Prior approval recommended.**
    - **Handbook # 8 by itself not adequate**

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Aspects to Consider in Labeling Database Development.

- **Availability of published studies.**

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Aspects to Consider in Labeling Database Development.

- **Availability of published studies.**
- **Quality of information.**
  - **Product History**
  - **Sampling protocol**
  - **Analytical testing issues**
    - > methodology
    - > accuracy and precision

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Aspects to Consider in Labeling Database Development.

- **Availability of published studies.**
- **Quality of information.**
- **Scope and representativeness of nutrient data.**
  - **Growing Region**
  - **Growing Season**
  - **Cultivar**
  - **Shelf life of product**
  - **Container**
  - **Industry trends in manufacturing**

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Aspects to Consider in Labeling Database Development.

- **Availability of published studies.**
- **Quality of information.**
- **Scope and representativeness of nutrient data.**
- **Investigate statistically important variables.**

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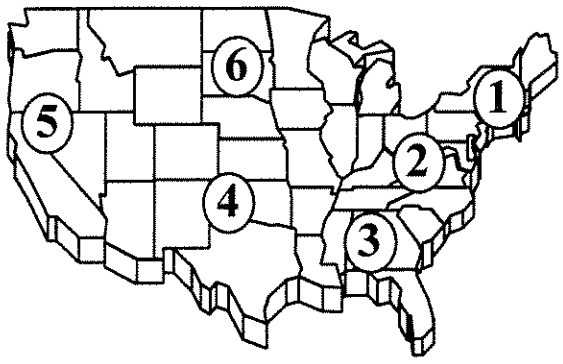
Geographical Regions



KEY	Region
1	Northeast
2	Mid-Atlantic
3	Southeast
4	Southwest
5	Pacific
6	Midwest
0	Unknown

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Geographical Evaluation

	Least-Squares Mean (per 100 g)				
	1	2	4	5	6
Calories, cal	17.5	18.1	18.1	17.9	17.1
Protein, g	0.82	0.87	0.75	0.90	0.80
Fat, g	0.11	0.11	0.20	0.13	0.09
TDF, g	1.43	1.29	1.73	1.49	1.35
Carbohydrate, g	3.36	3.39	3.14	3.28	3.36
Sugars, g	1.08	0.79	1.06	1.30	0.98
Iron, mg	0.75	0.83	0.57	1.25	0.97
Calcium, mg	27.4	30.2	30.9	24.8	25.7
Vitamin C, mg	3.11	1.01	1.56	3.99	3.09
Vitamin A, IU	190	253	249	204	209

Site of Sampling Evaluation

	Least-Squares Mean (per 100 g)	
	Production	Retail
Calories, cal	17.6	16.2
Protein, g	0.83	0.71
Fat, g	0.12	0.15
TDF, g	1.44	1.28
Carbohydrate, g	3.35	2.87
Sugars, g	1.02	1.25
Iron, mg	0.89	0.75
Calcium, mg	27.0	22.8
Vitamin C, mg	2.80	1.67
Vitamin A, IU	210	146

Aspects to Consider in Labeling Database Development.

- **Availability of published studies.**
- **Quality of information.**
- **Scope and representativeness of nutrient data.**
- **Statistically important variables.**
- **Database expansion and maintenance**
  - **Initial investment spread out over several years**
  - **Ongoing commitment to keeping up to date**

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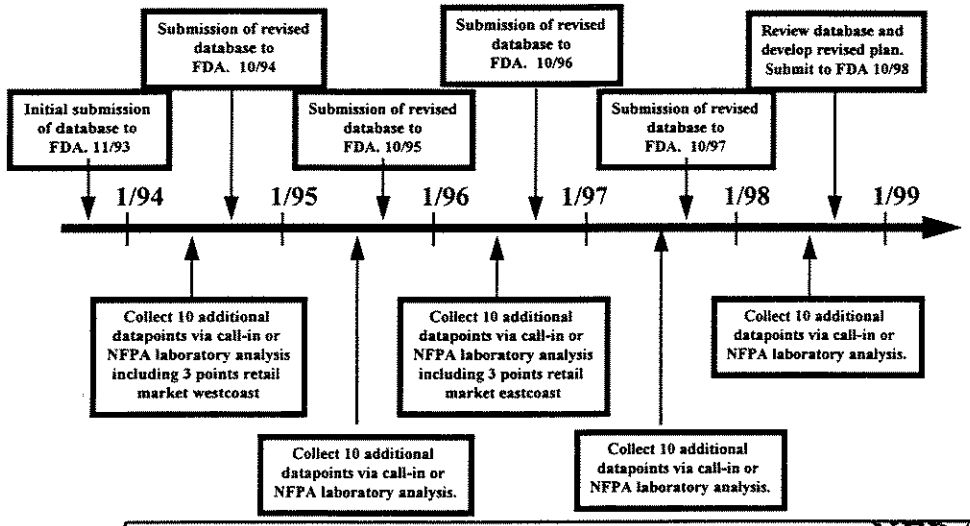
Continuing Effort



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Summary

- **NLEA has driven the development of labeling databases.**
- **More and better nutrient data will be available for databases because of NLEA.**

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National Food Processors Association

"The principle scientific and technical trade association representing the processed food industry."