# **Food Database Source**

To understand the best practices of financial calculators, about 15 applications were analyzed, among which were: Lifesum, SparkPeople Calorie Tracker, Lose It!, FatSecret, Cron-O-Meter, MyNetDiary, Carb Manager, ControlMyWeight, Fitbit, Nutritionix, Noom, Lumen, Healthi, HealthifyMe etc.

The largest market participants use their own database, which was based on data received by company employees directly from manufacturers, U.S. DEPARTMENT OF AGRICULTURE and user data. On average, their bases have from a million positions. Sometimes they open the developed databases for other users as an API. We will consider such options.

As for the smaller market participants, their database consists of the following sources:

* Shareware open databases ranging in size from 300 - 400 thousand Ingredients;
* U.S. DEPARTMENT OF AGRICULTURE;
* User data.

We will also analyze some of the free or shareware open-source databases.

Let's also compare them with the free open state database "FDC U.S. DEPARTMENT OF AGRICULTURE".

## MyFitnessPal API

MyFitnessPal don’t have open database. MyFitnessPal API allow create, retrieve, update, and deleted various items such as exercises, users, and diary entries. This is convenient for managing user activity, but not to ger food information.

## Comparison table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Spoonacular api | Nutritionix | MyNetDiary | Edamam | USDA FDC |
| Price | 0$ for 150 points per day | 0$ for 2 users | First year 3 300$ per month;  Then 670$ per month | 0$ for API calls limits 10 000 per month | free |
| 29$ for 1 500 points per day, then 0,005$/point | 299$ for up to 200 users |
| 79$ for 4 500 points per day, then 0,004$/point | 499$ for up to 1000 users |
| 149$ for 10 000 points per day, then 0,002$/point | From 1 250$ per month for Individual |
| From 300$ per month for Individual | 999$ per month no limit |
| Accuracy | 90% | 92% | ~90% | ~90% | 100% |
| Recipes | 360,000+ | No | 370 000 + | 2 300 000 + | 1 555 000 + |
| Ingredients | 86 000 + | 738 183 + | 1 126 000+ | 900 000 + |
| Nutrition Info | 10 nutrients + | 10 nutrients + | 15 nutrients + | 25 nutrients + | 12 nutrients + |
| Restaurant Info | No | Yes | Yes | No | No |
| Photo | Yes | Yes | Yes | Yes |  |
| Diets | Popular, healthy, vegetarian, vegan, gluten free, dairy free, paleo | Grocery Categories (bread, cheese, fruit etc.) | 8+ Diet (keto, vegan, low-carb etc) | 70+ Diet | No |
| Search by | Avg keywords,  Semantic | Avg keywords,  Semantic | multiple words in any order, partial words, food synonyms, abbreviations and phonetic similarity | Avg keywords,  Semantic | Avg keywords |
| Barcode Scanning | No | 220 000 + | 566 000 + | 615 000 + | yes |

## Conclusions

If the application will only work geographically in the US, we recommend using the USDA FDP schema + user interface for input information. This is the most common option with the potential to create your own API in the future.

As for the use of shareware resources, Edamam looks the most attractive. It has the lowest price, a good database and additional features (diets, good nutrition info, big barcode base).