

# The Recipe Module evaluation

By Anny Dentener

Software package:

Hamilton Grant, Recipe Module  
Version 1.3.024 (and 1.3.043  
beta)

Function: Management of food  
product formulations

Site: [www.hamilton-grant.com](http://www.hamilton-grant.com)

Agent: [www.unimonde.com.au](http://www.unimonde.com.au)

Rating: ★★★ (out of five stars)



Figure 1: Recipe tree for Chocolate coated Anzac biscuits with nutrition, intolerance and cost information.

Got all those formulations in a muddle and need it sorted? The Recipe Module from Hamilton-Grant may be able to help you, but at around NZ\$21,000 for a single license (1 concurrent user, suggested for 3-4 users) (subsequent licenses about half that) plus an annual service fee of 17.5% that help does not come cheap. So what can this package do for you as a food manufacturer? And can it save you more money than it costs?

The Recipe Module works with stepwise interlinking recipes, in what it calls a "Recipe Tree" (Figure 1). Hamilton Grant mentioned that one of their customers, a Swiss chocolate maker, has about 2000 links from ingredients and packaging going into one mixed box of chocolates. At that level paperwork is indeed likely to get stuck.

As a test formulation I used the recipe for a chocolate-coated Anzac biscuit. This allowed me to evaluate how the software deals with mixing of ingredients, moisture loss on baking, yields, nutrition calculation

and % calculations for characterising ingredient on the label. Setting up a Recipe/Formulation is claimed to be easy as you "drag and drop" ingredients into it, add phrases in between, and nominate losses or target moisture levels. Itching to see what it could do, I was disappointed I could not go there straight away. So I obediently followed the instructions in the manuals and defined lots of settings. Because of the multitude of functions within the software it takes a fair while to become familiar with it all. The manual unfortunately is not written for the novice and only starts making complete sense after you understand the software. The Help file is also very sparse and rarely able to address questions.

The software first asks you to set up a database hierarchy, so that access to the different recipes, production and R&D, can be controlled. Common ingredients go to a general access point, or a short cut to another file can be set up. Each R&D staff member can have their own sub-directory. For manufacturers servicing markets with

different languages, the system can be set up to suit just that. I played around with setting up English (differentiating between factory and labelling terms), Dutch, German and French. In a Recipe it is possible to insert "Standard Phrases" between ingredients (e.g. "mix using ABC mixer for 6 minutes"). Once set up these phrases can be re-used, saving re-typing into each recipe, and making manufacturing instructions consistent. Changing recipes in the system by other users can be controlled by what is called a "Status" function, which limits who can change what, and where reasons for changes need to be entered. Waste/losses can be defined to make sure that for a set amount of product the right base mix amounts are prepared at the production stage. The system can even be set up to incorporate % nutrient losses and loss of whole components, for instance for the whey lost in cheese making.

Problems started when I wanted to nominate the nutrient associated with fat loss (i.e. fat) during the setting up process. The software locked up and would not let me back into that part. The advice by e-mail from technical staff in the UK to delete a "locking.tbl" file helped (again and again....). This was only the first of a long series of crashes, programme opening up and disappearing without a trace, and other erratic behaviour. Installation of a more recent beta version did not improve things much. But I persevered with the testing, determined that no software was going to get the better of me.

Next in the setting up stage is the definition of nutrition information required. A good feature is the option to override the default setting for energy calculation with the new ANZFA joint code formula, something not possible with the other nutrition calculation software reviewed to date. However, the software only allows for the complete nutrient list to be printed off under "Page

options", not for a handy "shortlist" such as that required for labelling. Nutrient Databases loaded on the system were McCance & Widdowson (UK), and the USDA Nutrient Database, both limited to standard foods and by no means as extensive as the Genesis R&D one. The USDA database was initially not activated and neither the manual nor Help file did give any information on how to do so. The USDA database has also not been corrected for the omission of "Carbohydrate, sugars", in contrast to the USDA data within Genesis R&D (see May 2001), so it is necessary to be alert at all times. HG indicated that it will also be possible to have the New Zealand and Australian Food Tables loaded onto the system. An optional US Label option is available. Calculation of %RDI is not possible. In the Nutrient list solids are defined as "100 – water", which does not work for a different size serving, and comes up with a nonsense answer. For a formulation, incomplete data for nutrition and cost are indicated with "% complete", handy as an alert. This information is visible on the screen but not on the print out. Columns can be set up with the recipe to monitor contribution of each ingredient to cost or specified nutrients e.g. energy, fat and sodium.

Before starting a new Recipe/formulation you need to set up each ingredient (incl. water) in recipe folders. There is no food search option as with other (nutrition) software, and searching can take a while if you are unsure where in the database that ingredient/food is listed. The nutrition information for an ingredient can be easily "dragged and dropped" from the nutrition databanks. This information can be overridden if you know better, want to use other information and/or want to adjust for processing losses. After adding costs, giving the ingredient a name for each language you want to work in, specifying the "intolerance" info, and nominating

losses or target moisture level you are ready to use it in a recipe. The handy "Intolerance" function allows you to enter "free from"/ "includes" (automatically reverses yes/no) or "suitable for" for all ANZFA declaration columns (Standard 1.2.3) plus e.g. Halal, Kosher, GMO and Organic. Multilingual declarations for labelling purposes are possible, both in single and plural forms. Ingredient declarations can be defined for different users/languages and the information given can be differentiated for when an ingredient is below or above a defined cut-off point, such as the 5% level for ANZFA. Costs can be entered in many formats, including exchange rate conversions. The programme calculates the overall % of all ingredients ending up in a complex recipe, which is ideal for the "% characterising ingredient" declaration. Parts of the formula can be locked for "Baker's Percentages" use.

Within a formulation it is possible to do a least-cost optimisation (with limits set) against nutrition targets. In particular useful for baby food and petfood manufacturers. It is also possible to use this for "reverse engineering" i.e. to come up with a likely formulation from a nutrition label and ingredients listing. Unfortunately it only mentions that it cannot come up with an answer if the targets cannot be met, leaving you at a loss where the problem lies. TechWizard (see June 2001) indicates the min/max exceeded points, which makes it easier to get to the likely answer. Options within the programme allow for searching e.g. for "which ingredients are certified Halal?" or "which recipes use ingredient X?". Data can be exported to Word and Excel.

The Recipe module is part of the Hamilton Grant range of software for technical departments in the Food Industry. Different modules, linking together, cover supplier management, recipe management (reviewed here), customer and supplier specifications (including a special Tesco format for electronic data transfer) and complaints management. The modules can also be purchased stand-alone, however combined purchasing is cheaper. They can be installed on a network and integrated with systems such as SAP.

Feedback from three current users of the system is positive. They recommend it, think it represents good value for money, and find it easy to work with. Technical support rates from "reasonable" to "brilliant". Little niggles mentioned are that the multilingual option does not extend to the nutrition information, small bugs in the programme, slowing down as it gets fuller, some problems with system interlinking and crashing when printing.

Conclusion: Hamilton Grant Recipe Module is powerful software with a multitude of functions suitable for larger food manufacturers to manage their formulations from R&D to production. It should save money in the long run, if only by reducing paperwork and transcribing/typing errors. However, it is essential that the software is stable on all operating systems (I use Win95 SR2) to avoid frustrations associated with a frequently crashing software package (this reduced my rating from 4 to 3 stars).

Anny Dentener is an independent Food Technology Consultant and a founding member of the FoodInc Consulting Group ([www.foodinc.co.nz/](http://www.foodinc.co.nz/)).  
Contact: [anny.dentener@xtra.co.nz](mailto:anny.dentener@xtra.co.nz)