

# Genesis passes user-friendly test

**Software package: Genesis R&D  
Version 6.61, Database December  
2000**

**Function: Product formulation,  
nutrition calculation and labelling**  
Site: [www.esha.com](http://www.esha.com) (demo and pdf  
reports)

**Rating: ★ ★ ★ ★ (out of five stars)**

Based on an extensive US and Canadian database of over 21,000 food items and ingredients, Genesis R&D promises it can analyse your formulation for 129 nutrients and 23 other factors. The question is: do you need that capability, and is it worth the hefty US\$2,999 price tag?

The program starts up with a blank page, where you are prompted to start a new formulation, which is called a “Food List”. Becoming familiar with the pull down menu and the US terminology/spelling takes a while, for instance you need to use “color” rather than colour. Initially, frequent referral to the Help file may be needed for “how to” issues. Using the same milk ice block formulation which was used to put the FoodWorks program to the test (see FT, April 2001) quickly identifies the lack of information on NZ foods as a main problem. Wanting a 2% fat milk, I had to settle for milk with added vitamins. The only way around this is to enter all the data on milks from the NZ Food Composition Tables, or to pretend to make it from non-fortified (US) ingredients, possibly using the “Dairy Formulator” feature. A similar feature is the “Meat Formulator”, used to calculate the amounts of nominated lean and fat meat components needed to achieve a certain fat level. There is also a “Dairy Density



Figure 1: Genesis R&D software showing parts of the nutrition profile and the contribution of each raw material to the calorie level.

Calculator” but with an imperial (pound/gallon) rather than a metric (kg/litre) output this is not of much practical use.

A handy feature when entering new ingredients in a formulation is the “Preview” function, showing you all the information stored on that raw material. Data such as the cost can be quickly updated using a function key. Adding own ingredients into the database is easy. A “Search” function is available to find ingredients “High/Low” in a particular nutrient, and it can look selectively in particular food groups or in the whole database. It is possible to nominate 3 simultaneous search parameters. Of the over 1,100 “other ingredients” available some are familiar to the NZ market, saving you the job of having to enter that information.

Entries of amounts in other units are converted to a % formulation. Formulas can be saved under a different name to allow for quick

entering of flavour variants. Adjustments in the formulations can be made for moisture and fat loss/gain (in weight or %) or you can nominate a target. For instance, when you know the composition of feijoa, you can work out the nutrient profile for the freeze-dried product if you know the final moisture level. For gains in fat and moisture you need to enter the gains into the formulation, and losses are dealt with by the program. At the same time processing loss can be entered. (see top of screen, Figure 1). A formulation can be used in another recipe, and is entered with all its sub-ingredients.

Analysis of the formulation is done by pull-down menus or by clicking on icons. You can set up a “user defined” setting to just look at the required nutrient information. The total nutrient listing covers 27 basic components (including individual sugars and saturated fat), 21 vitamins, 16 minerals, 31 fatty acids (including omegas and trans), 18 amino acids and 23 other components from alcohol to taurine. You can nominate a further 25 nutrients/components. This could for instance be used to alert the user to the absence (0) or presence (1) of allergens. The database allows for the addition of the different RDI profiles from the new ANZFA joint code, to enable the calculation of the %RDI for the nominated serving size. An ‘Analysis Override’ function is available where results differ from calculations. The different nutrition analysis results options appear as separate screens, but these can be tiled or cascaded. This feature could be improved to get an easier overview. Missing nutrient values are indicated. The “Single Nutrient Analysis” shows the percentage contribution of each raw material to a particular nutrient level or cost (see Figure 1).

Trying out the “Supplement Facts” option crashed the program but contacting ESHA by e-mail gave a quick overnight reply and advice to remove one option under “settings” which

was wrongly installed. The programme converts the formulation into an ingredient label which can be edited and then appears alongside the standard US “Nutrition Facts” label. A good feature for exporters to the US but of limited use in NZ. Information can be exported as files or by “clipboard” but this last option resulted in rather jumbled information in Word. The program has extensive background information in the Help file. An unusual feature is the “Protein Quality Index”, where the amino acid profiles of proteins are compared to that of the ideal (based on FAO/WHO criteria). Disappointingly, of the 5 caseinates on file, only one had the full amino acid profile needed. This highlights that the results of the program are only as good as the data entered in the database.

Feedback from current users in NZ indicates good acceptance, especially since the change-over from the old DOS format to Windows. One customer I spoke to who purchased the program about 10 years ago, indicated that they used it to help with sodium reduction for “Pick the Tick”, and liked having the information on individual sugar levels.

Conclusion: Overall I am impressed with the features of the program. It is reasonably user-friendly but it takes a while to become familiar with it all. The major drawbacks are the lack of a NZ foods database, and the high price.

Company: ESHA Research

Cost: Single user license US \$2,999 (approx. NZ\$ 7,250) includes 1 year priority support with a 90 day money back guarantee. Additional licenses US\$550

System requirements: See website. Incompatible with some networks.

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