



Catalogue of Meal Effects for Individual Ingredients

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General Rationale

Meal effects are random outcomes that are presumably related to the recipe ingredients. We wanted to investigate the relationship between each individual ingredient and effects that might be observed after consumption. By cataloguing the “bonus proportions” for each single ingredient, we can make more informed decisions regarding which recipes (i.e. combination of ingredients) are most likely to achieve the desired effects of consuming a meal. In this study, we obtain the data for and present this catalogue.



This screen, encountered in Deming Woods, allows the player to select an ingredient to forage. The list of ingredients are enumerated in the table of results.

Method

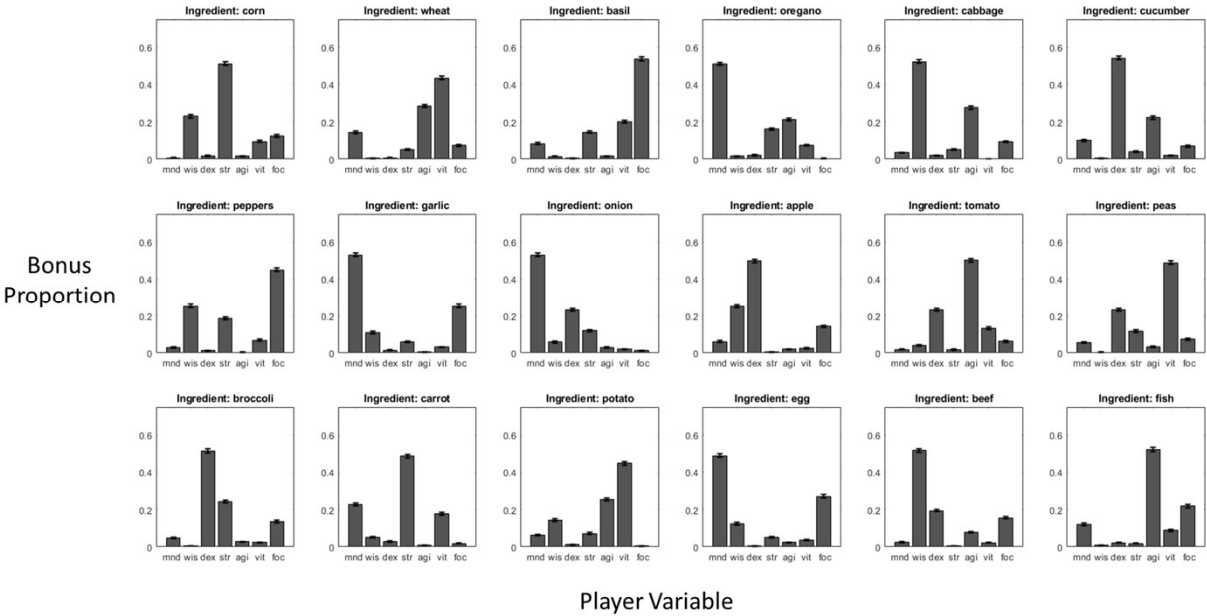
First we maxed our cooking level at 101 to make sure the effects could not be attributed to changes in experience (Thornton, 2018). Next, we foraged for each ingredient 100 times from the Deming Forest location. This provided enough ingredients to cook each single-ingredient recipe 100 times (see figure above).

After consuming a given meal, we calculated the bonus proportion with the following two steps:

- Sum the total bonus to all 7 player statistics.
- Divide the bonus for each statistic by the sum total.

These two steps were repeated for every recipe until all ingredients were depleted. Using these sample proportions, we can estimate the bonus proportion using the t-distribution.

Results



Each panel illustrates results for a different ingredient, which is stated above the panel. The expected bonus proportion for each of the 7 player statistics is illustrated by the height of the bar with standard errors according to the t-distribution.

The bonus proportion for variable X is defined as the percentage of total bonus points allotted to variable X. For example, corn has a STR bonus proportion .5015 and .5205. This means that when a player consumes corn, at least 50% of the total bonus will be allotted to the STR variable.

Bonus proportions greater than 3/7 are considered a primary effect of the ingredient. Bonus proportions greater than 1/7, but less than primary effects, are considered secondary effects of the ingredient.

	corn	wheat	basil	oregano	cabbage	cucumber	peppers	garlic	onion	apple	tomato	peas	broccoli	carrot	potato	egg	beef	fish
MND	0.01	0.14	0.08	0.51	0.03	0.10	0.03	0.53	0.53	0.06	0.02	0.05	0.05	0.23	0.06	0.49	0.03	0.12
WIS	0.23	0.00	0.02	0.02	0.52	0.01	0.25	0.11	0.06	0.25	0.04	0.00	0.01	0.05	0.14	0.12	0.52	0.01
STR	0.02	0.01	0.00	0.02	0.02	0.54	0.01	0.02	0.23	0.50	0.23	0.23	0.51	0.03	0.01	0.00	0.20	0.02
DEX	0.51	0.05	0.14	0.16	0.05	0.04	0.18	0.06	0.12	0.01	0.02	0.12	0.24	0.49	0.07	0.05	0.01	0.02
AGI	0.02	0.29	0.02	0.21	0.28	0.22	0.00	0.00	0.03	0.02	0.50	0.03	0.03	0.01	0.25	0.02	0.08	0.52
VIT	0.09	0.43	0.20	0.07	0.00	0.02	0.07	0.03	0.02	0.02	0.13	0.49	0.02	0.18	0.45	0.04	0.02	0.09
FOC	0.13	0.07	0.54	0.00	0.09	0.07	0.45	0.25	0.01	0.14	0.06	0.07	0.14	0.02	0.00	0.27	0.16	0.22

This table shows point estimates for each bonus proportion and ingredient, rounded to two decimal places.

Bonus proportions for primary effects are shown in red, and for secondary effects they are shown in orange. This color-coding of the catalogue makes it easy to categorize each ingredient by primary and/or secondary effects.

Conclusions

- Every meal has exactly one primary effect, which we defined as a bonus proportion greater than 3/7.
- Every meal has at least one secondary effect, which we defined as a bonus proportion between 1/7 and 3/7.
- The conclusions for this study might be misleading for recipes involving multiple ingredients, since we only analyzed recipes with one ingredient.
- The conclusions of this study depend on the assumption that the effects of an ingredients are the same regardless of the location or settlement where the ingredient was harvested.

References

(1) Thornton, Robert (2018) How do meal effects depend on cooking experience? Royal Library Submissions vol. 2