

Mapping culinary and gustatory taste through time

Maestro Martino's *Libro de Arte Coquinaria* and Italian culinary recipe collections of the 14th and 15th centuries

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Background

Composed in the 1460s, Maestro Martino's *Libro de Arte Coquinaria* is the first collection of culinary recipes that displays the name of its organizer. The *Libro de Arte Coquinaria* is the connecting link between the previous anonymous culinary recipe collections of the 13th/14th centuries and the Italian culinary treatises that will be printed in the second half of the 16th century and represent the highest points of the Italian culinary tradition of the Renaissance.

The text of the *Libro de Arte Coquinaria* will be widely disseminated in printed editions after the introduction of print. In his *De Honesta Voluptate et Valetudine*, Bartolomeo Sacchi (Platina) will translate into Latin the entire text of the *Libro de Arte Coquinaria* in the chapters devoted to food preparations. The text of the *Libro de Arte Coquinaria* will be used, without acknowledging the source, in two other cookbooks printed in the 16th century: a) the *Opera Noua chiamata Epulario*, printed in Venice in 1516, with 50 editions between 1516 and 1700, and b) the *Opera Dignissima*, printed in Milan around 1530.

Research question

According to several scholars, Maestro Martino's *Libro de Arte Coquinaria* is pivotal in the transition from the Middle Ages to the Renaissance in terms of culinary and gustatory taste. Its appropriations in print in the 16th century and their editorial success reinforce the innovative value in gastronomic and gustatory terms of the *Libro de Arte Coquinaria*.

But how can we ascertain the innovative value of a cookbook in a diachronic perspective? To solve this puzzle, I propose to look at the combination of ingredients in Maestro Martino's *Libro de Arte Coquinaria* and to analyze whether and how those combinations of ingredients confirm or disprove its innovative character in the evolution of culinary and gustatory taste.

Methodology

Recipes and ingredients represent a network of possible combinations. Applying the idea of network analysis to culinary ingredients allows us to study the combinations of ingredients in a specific recipe and within a specific cookbook. If different cookbooks are analyzed using the same parameters, it is possible to have a clear image of the changes and evolution in the combinations of ingredients in one cookbook as opposed to previous cookbooks.

In order to do that, we need to consider recipes and ingredients as the nodes of a network. Ingredients are connected to one or multiple recipes, and recipes can work both as clusters of ingredients and as an ingredient in a recipe. To test this idea, we limited our analysis to the chapter of the *Libro de Arte Coquinaria* devoted to sauces and relishes. For each recipe we have identified all the ingredients in the order they appear in the recipe. The same manual data extraction has been performed in two culinary recipe collections chosen as representative of the two previous vernacular Italian textual traditions, the *Anonimo Fiorentino* (from the *Liber de Coquina* textual tradition) and the *Anonimo Toscano 1* (from the *12 Gluttons* textual tradition).

References:

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Results in Cytoscape

Using Cytoscape, we created a graph for the sauces and relishes for each manuscript. The graphs show how ingredients relate to the recipes. Ingredients are represented by red dots and recipes by green dots. The thickness of the connection between an ingredient and the recipe depends on the sequential order of the ingredients: the thinner the connection, the earlier the ingredient is used in the recipe. The *Libro de Arte Coquinaria* presents recipes that are more elaborated and use more ingredients.

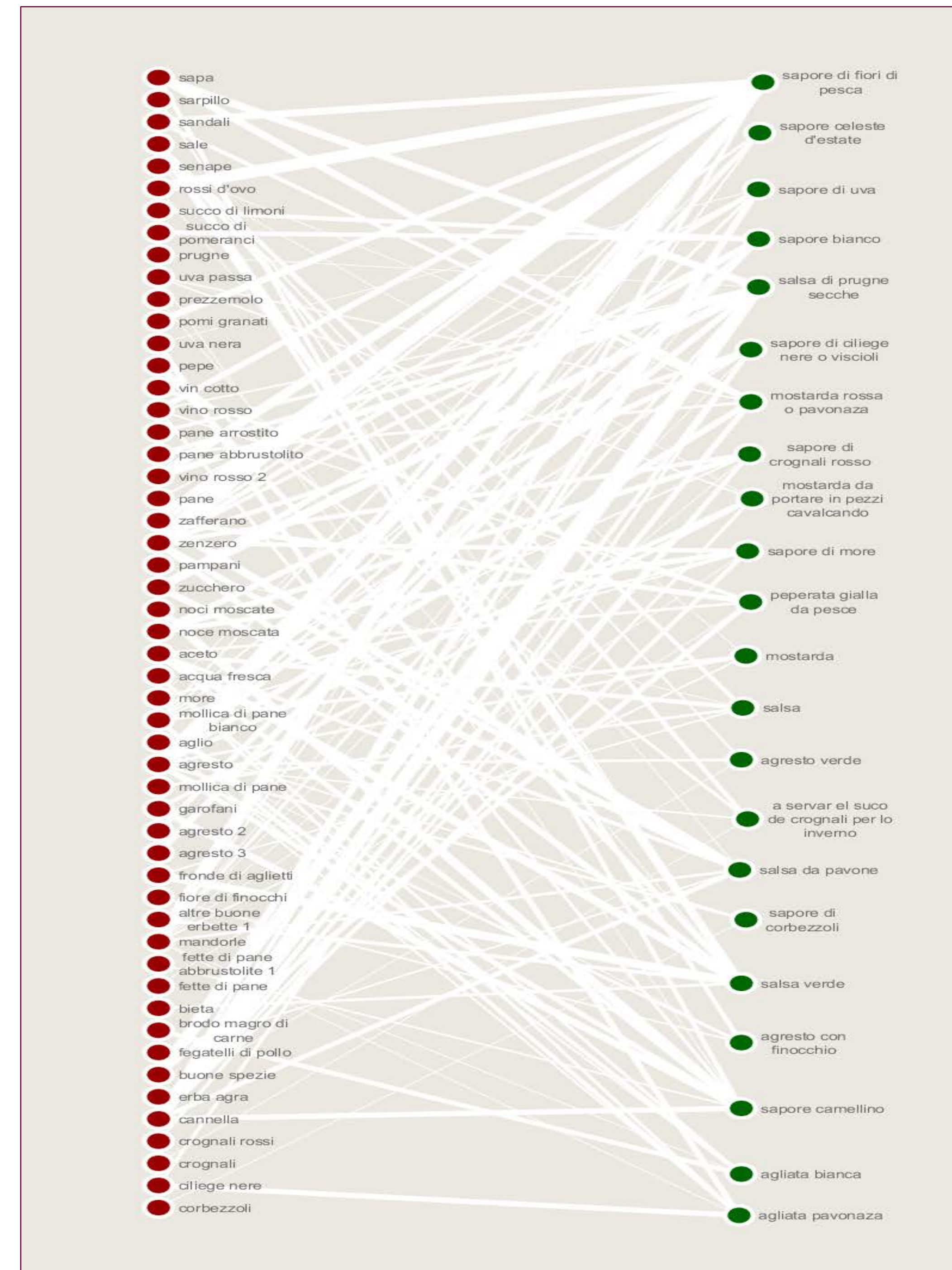


Fig. 1a: Maestro Martino's *Libro de Arte Coquinaria*

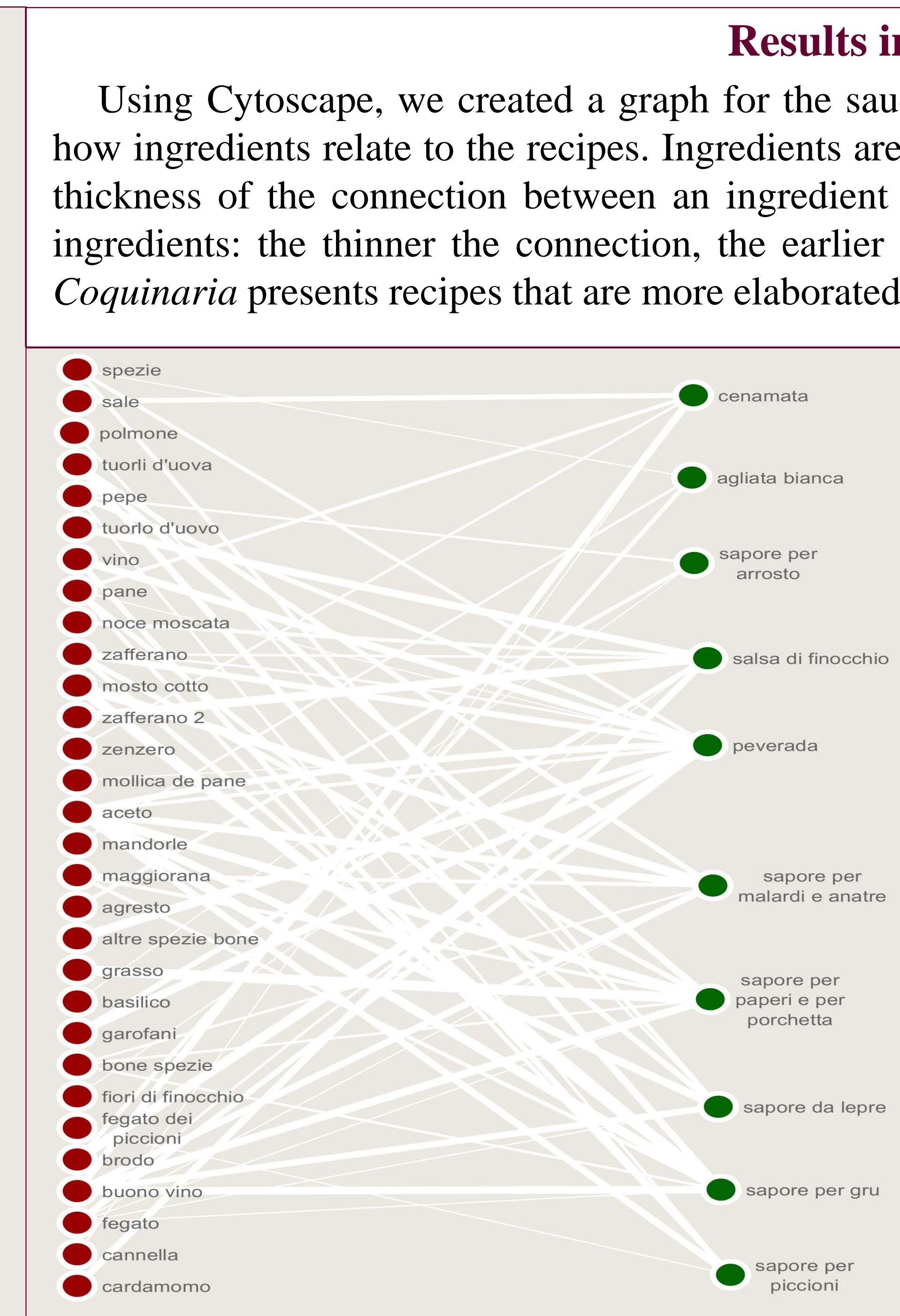


Fig. 2a: Anonimo Toscano 1

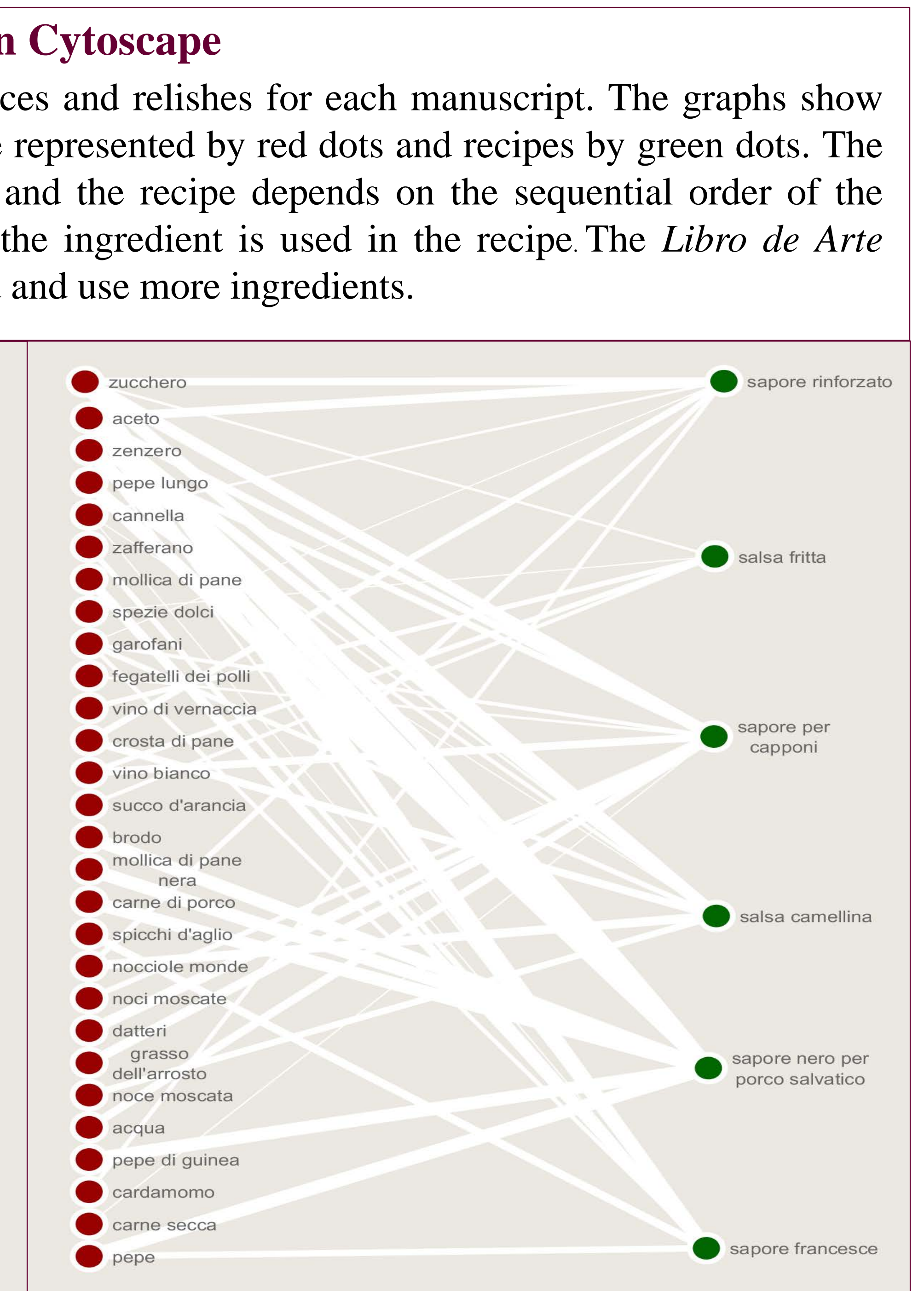


Fig. 3a: Anonimo Fiorentino

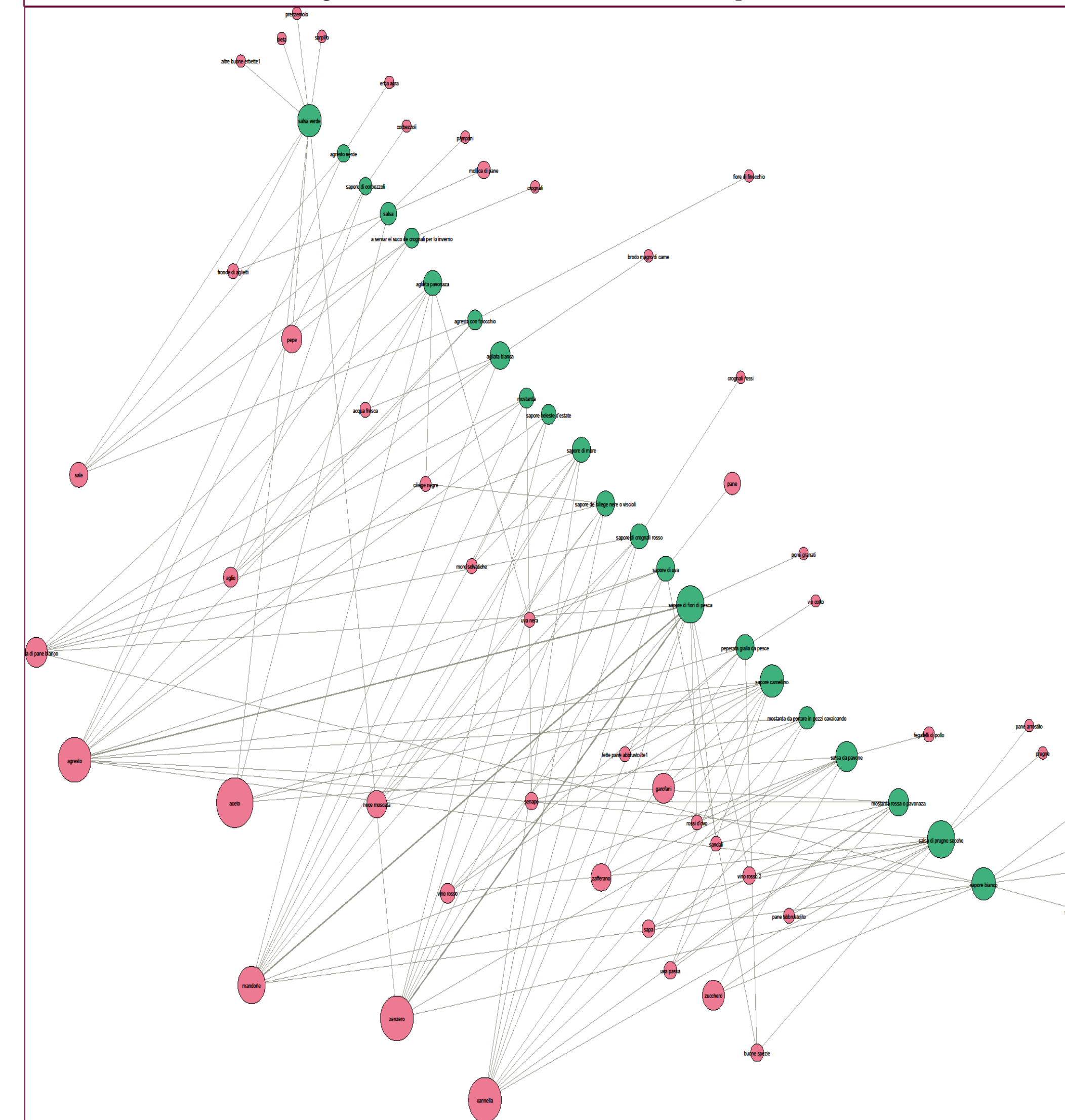


Fig. 1b: Maestro Martino's *Libro de Arte Coquinaria*

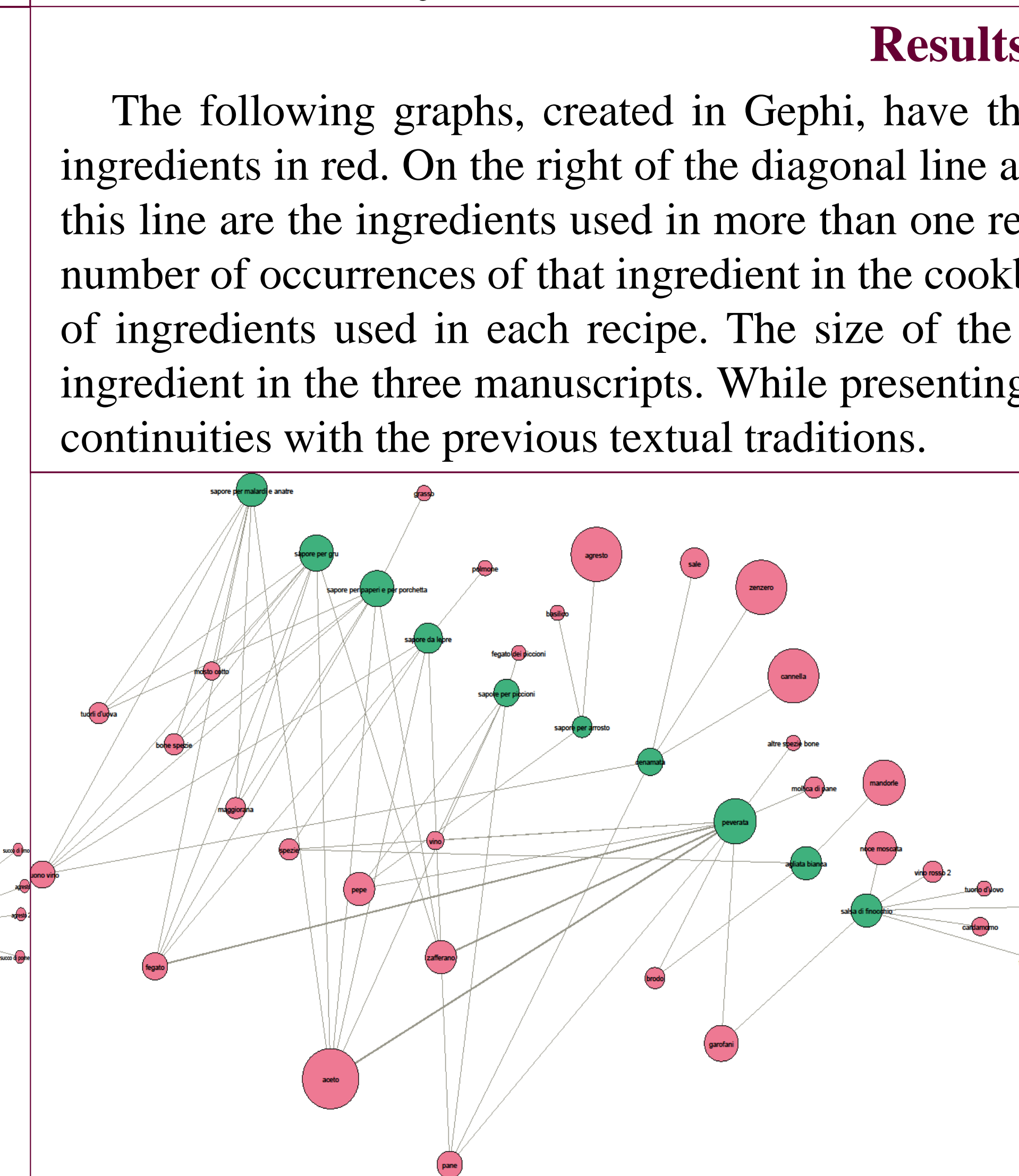


Fig. 2b: Anonimo Toscano 1

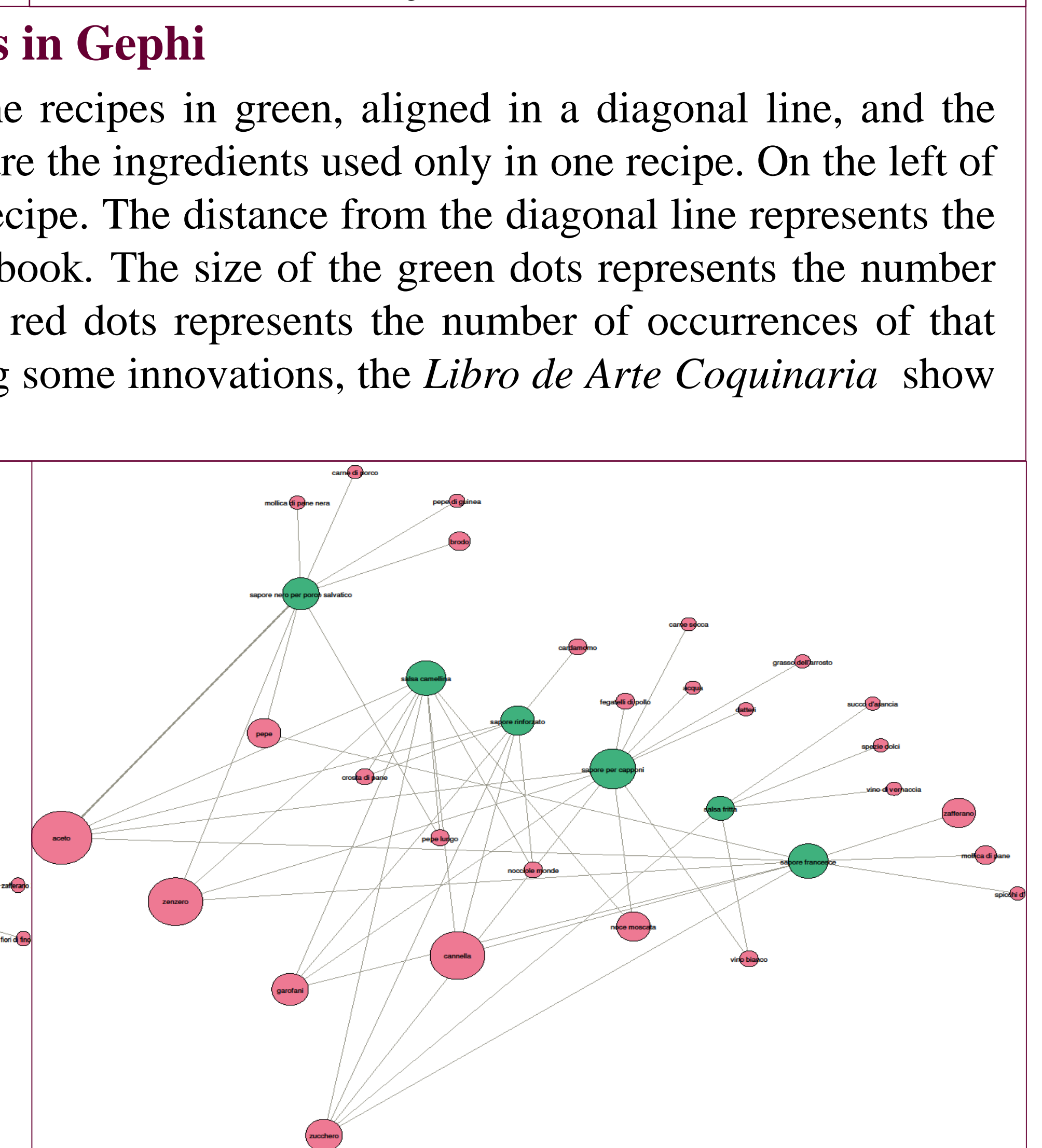


Fig. 3b: Anonimo Fiorentino

Results in Gephi

The following graphs, created in Gephi, have the recipes in green, aligned in a diagonal line, and the ingredients in red. On the right of the diagonal line are the ingredients used only in one recipe. On the left of this line are the ingredients used in more than one recipe. The distance from the diagonal line represents the number of occurrences of that ingredient in the cookbook. The size of the green dots represents the number of ingredients used in each recipe. The size of the red dots represents the number of occurrences of that ingredient in the three manuscripts. While presenting some innovations, the *Libro de Arte Coquinaria* show continuities with the previous textual traditions.

Suggestions for further research

Expanding this pilot to include all the recipes from the three manuscripts, and possibly from all the manuscripts of the textual traditions before Maestro Martino, will give a clearer idea of both the continuities and the innovations of the *Libro de Arte Coquinaria* with respect to the preceding textual traditions. Further research should go beyond ingredients and examine procedures, tools, and measurements. Another line of research should focus on the writing style used in the different cookbooks in order to identify the characteristics of the readership intended by each recipe collection.