

The secrets to producing great flour for pasta



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s we are all still unable to meet face-to-face with any real convenience, Ocrim have chosen to make their know-how widely available by organising a series of webinars held by their best experts.

This edition sees the return by popular demand of duo Marco Galli, Chief Technologist at Ocrim

and Anna Buffa, the food entertainer and author of the Fornelli a Spillo blog, who was charged with presenting this edition in her typically ebullient style.

So what are the key properties of good pasta?

Well according to Anna Buffa, good quality fresh pasta has a creamy texture, a better and more consistent texture, whereas poorer quality that contains semolina, has a much rougher texture.

The one example of a good quality type of pasta, which many of us are familiar with, is tagliatelle, which according to both Mr Galli and Ms Buffa is very popular in Bologna for festivities and celebrations, with it often being served with Ragu, which is a meat-based (veal, beef, lamb, pork, fish or poultry) sauce with a small amount of tomato sauce added.

Another demarcation in the pasta world are the categories of dry and fresh, with the qualifying conditions for each group each being fairly self explanatory.

However the key difference between these two varieties is cooking time, with fresh being ready in five minutes and dry pasta ready in 12 minutes.

The importance of low ash content

Continuing the discussion on the properties of good quality pasta, Mr Galli interjects by stating that the flour that is widely used to make pasta in Italy is, “Double Zero”, adding that this is a code that is identified by law to give some information about the flour. Double Zero satisfies the nine percent minimum protein requirement, adds Mr Galli.

To make pasta properly the flour must have at least 12 percent

protein content to guarantee true al dente. We can mix in semolina to give the pasta dough the proper content, with the only really noticeable difference being the ash content.

The other key point is that the pasta flour must be clean, which is why ensuring that the ash content is kept low is very important. In pasta dough the yellowness is something that we are looking for as it is widely recognised as a characteristic of a good quality product.

With regards to the thickness of the pasta, according to Ms Buffa, this can vary vastly as it often depends on the taste for each family. It depends on how you want to feel the pasta, continues Ms Buffa, adding that it is a matter of taste. For example, tagliatelle that is too long is fancy but not useful.

We also have to ensure that our strips of tagliatelle are separate after cooking, states Ms Buffa, adding that to achieve this we don't have to put any oil in the water, we just need to toss the pasta as we are cooking.

However, if you have the right dough consistency and protein content, then the pasta will always separate. Likewise, if we do not have the right flour then the pasta will stick together.

Ms Buffa also reminds us to make sure that we don't forget to use flour to stop the pasta from sticking together once it has been removed from the water.

The difference between bread and durum wheat

When it comes to making dough for pasta, the flour used can either be bread wheat with a high protein content, or if this is not available then durum wheat can be used, with the protein content supplemented with the addition of semolina.

The latter of the two used to produce dried pasta that is manufactured using industrial machines, with the semolina is added to the flour to give the pasta the consistency that we need.

Fresh pasta is typically made using white/durum flour which is also known as hard wheat or bread wheat and includes such strains as Red Spring and Red Winter. Pasta made with this flour will still be okay if we leave it for two or three days, with it even being able to survive for a week to 10 days in certain conditions.

What are the most obvious differences between the two types of flour?

Well durum wheat is harder than bread wheat, it's not surprising then that durum is Latin for the word "hard".

Therefore, more thorough grinding is required to produce flour, which damages some of its starch content. This makes durum wheat flour less suitable for making bread, which goes some way to explaining the differentiation.

Durum wheat, which includes such strains as Amber Durum is required when producing semolina flour when making pasta, with the re-grounded semolina flour being a popular bi-product that is used when producing dough for pizza, focaccia and other leavened products.

Simplicity equals success

One of the best ways of ensuring that you keep your pasta making as authentically Italian as possible is to keep it simple.

When asked if we can mix a percentage of dinkel flour or maize flour or barley flour or oat flour with durum wheat for making whole grain pasta, Mr Galli responds by stating that at an industrial level, the recipe must always be followed.

However, he does caveat this by adding that in smaller batches or with processed pasta, we may be able to stray from the recipe to a degree. The key consideration here is to make sure that we preserve the homogenous qualities of each type of flour and work within not against their strengths.

Mr Galli continues by once again stressing that the protein content is the key to making great pasta, with the very best containing 12.5 to 13 percent. If the content is lower then the pasta will glue together and if it is higher, then the pasta dough will be difficult to work with.

Getting particle size and absorption right

Mr Galli also adds that the granulation is also important as the rate of absorption must also be correct if we are going to produce good quality pasta flour. Granulation is relevant to the milling of flour as it is a quality control parameter of flour after it has been milled. Granulation is also often referred to as granularity or particle size.

The particle size of granular materials is commonly referred to as diameter, which is usually measured by geometric methods such as microscopy or by sieving a representative amount of sample. The particle size of a given flour depends on the processing conditions at the mill and it allows for the classification of milled products.

Hydration rate is greatly dependent on the granularity of the flour used, as the smaller the particle size of a flour, the greater its rate and extent of water absorption. In contrast, excessively coarse flours produce low-quality breads, since dough hydration is limited and takes longer to complete.

Finer flours provide a homogeneous, complete and almost instantaneous hydration of the protein macro-molecules vital for dough formation and development. As a rule of thumb, the coarser the flour particles, the longer the mixing time will be, thereby increasing power consumption of spirals/planetary mixers.

Ms Buffa responds by stating that as well as protein content and granulation, a further gauge of quality is opacity, "If you stretch the dough you have to be able to see your hand through it," adding that, the higher the thickness of the dough the harder it will be to the bite.

Mr Galli concludes the webinar by stating that making pasta with the right tools takes very little time, so always make pasta the right way and keep it simple, he adds.