



CORMAN

SINCE 1935

BASIC USER GUIDE
FOR LAMINATED DOUGH



Guaranteed success for the Chef

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Savencia®**

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FOREWORD

The purpose of this booklet is to give you a complete basic technical tool on the different types of laminated dough used for viennoiseries and puff pastries. We offer you tailored guidance on the best butter and flour options, as well as on the lamination methods to use, to help you succeed every day.

Your success is what matters most to us.

Because choosing Corman is opting for the pleasure of butter without constraint or difficulty, a stable performance and top quality all year long which gives you more time to stimulate your own creativity.

With Corman, you make the choice of the guaranteed success.

La maison de l'Excellence®



La Maison de l'Excellence Savencia® passes on its expertise and its values of listening and sharing throughout the world.

Located in Viroflay, just outside of Paris, La Maison de l'Excellence Savencia® is not only a place for French and international restaurant, bakery and pastry Chef professionals to share and learn, but also a place for thinking about the cuisine of tomorrow.

Throughout the year, pastry Chef and winner of Best Craftsman in France for Pastry in 2000, Nicolas Boussin and Michelin-starred Chef Sébastien Faré host Chefs, Bakers and pastry Chefs for individual and group training sessions at La Maison de l'Excellence Savencia®. A team of ten Chefs in the field supports professionals throughout the world.



The chefs' missions



INSPIRE

professionals through recipe collections from La Maison de l'Excellence Savencia®



PROVIDE

professionals with practical advice and techniques



THINK

on future innovations in collaboration with professionals



SHARE

their product knowledge and expertise



CHEF'S TIPS



TYPE OF FLOUR TO BE USED

☉ FLOUR FOR CROISSANT DOUGH

Protein content

For croissant dough, we recommend you use quite a strong flour, i.e. one with **protein content above 13%**.

If you use a flour that is not strong enough, the volume, the structure and flavour of the end product will be affected.

Strong flour gives the croissant a more robust structure and greater stability during proofing and baking. High protein content combined with the temperature of the dough produce a lot of gluten, which will give more taste to the end product, as well as longer preservation of the gases generated by the yeast. There is also the advantage of additional shelf life for the product. Keeping the dough in the freezer for several days will give a far better result since the product will remain stronger.

Why is kneading so important?

Kneading forms the gluten structure in the dough. It needs this structure to retain gas during the final proofing. A well-kneaded dough develops gluten that is strong enough to stretch in. Stretchy gluten is ideal at retaining gas. The gluten window test is used to evaluate if your gluten structure has developed. The dough temperature should not exceed 24-25°C. Be aware that during the lamination process the dough structure will be reinforced.

Degree of milling

Regardless of protein content, flour that has been **milled to a French T55 type** is fine. However, flour that has been milled to a French T45 type will produce similar results.

TIP

For pastries other than croissants, you can use flour with a 12.5% protein content.

☉ FLOUR FOR PUFF PASTRY

Unprocessed flour with no additive

Unlike croissants which require a very strong flour, the opposite is true with puff pastry. Choose a **very plain flour**, preferably unprocessed or, what the French call a “traditional” flour. The key factor is that the flour must contain **no extra additive**. These additives strengthen the flour and cause the dough to retract when being worked.

Plain flour produces less gluten, which means less structure and less working of the dough. So, make sure that the **protein content is low (10%)** as this affects the dough's structure and strength. The volume in the baked products comes from the lamination and the choice of butter.

Degree of milling

For puff pastry, flour that has been **milled to a French T55 type** is fine, but you can also use a T65 type.



TURNING AND FOLDING THE DOUGH

There are several turning methods, and each baker has their favourite. Here, Corman offers its advice.

☞ WHY DO THE TURNS MATTER?

Turning is what determines the structure of the end result. Therefore, a 2x4 turning method and a 3x3 turning method will produce different structures and a more or less airy texture in the end product. A 2x4 turning method will produce a bigger structure and a more airy texture. Adding more turns, for example in the 3x3 method, will produce a smaller structure.

Often, **croissants** are turned using a 2x4 method since this gives them **more internal structure**, for a larger pastry product.

Other pastries, such as pains au chocolat, use a **3x3 lamination method**. If you are using a stuffing or filling, we recommend that you work with a slightly finer **structure**, that fits more closely around the stuffing.

TIPS

Different lamination methods will affect the structure of your croissant, as well as the taste experience. Adjust the number of turns to suit your customer's tastes. Test and compare!

Do not use flour during lamination, and only use a light dusting when rolling out the dough. Using flour between turns can damage the structure.

HOW MANY TURNS FOR EACH PRODUCT

The number of turns depends on the type of dough and the end product being made.

See below for the final outcomes of the various lamination methods.



- "False" turn
3 and a 1 x 5 turn**
- Only 10 layers of butter
 - Revisited old way



- 3 x 3**
- 27 layers of butter
 - For all other kinds of pastries with fillings



- 1 x 3 and 1 x 4**
- 12 layers of butter
 - French croissants



- 2 x 4**
- 16 layers of butter
 - Croissants and all-butter pastries

TIP

More than 3x3 turns is not recommended for croissants. For example: 2x3 and 1x4 turns = 36 layers of butter = only suitable for cream pastries due to the tight honeycomb texture.

INCASING BUTTER

1.



LAMINATING BUTTER AND DOUGH

2.



ROLL A 1.5 KG DOUGH PIECE INTO A 30 CM X 40 CM RECTANGLE (8 MM THICK); 3 KG PIECE = 40 CM X 60 CM; 6 KG PIECE = 60 CM X 80 CM

3.



LAY THE BUTTER OVER THE DOUGH

4.



ENCASE THE DOUGH

5.

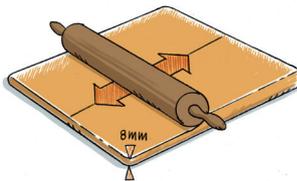


SLICE INTO THE DOUGH

6.



7.



NOTE

ROLL OUT THE DOUGH IN VARIOUS STAGES.

ROLL ACROSS THE SEAM. CHOOSE THE APPROPRIATE LAMINATION METHOD FOR YOUR APPLICATION

GIVE THE DOUGH A QUARTER TURN BETWEEN EACH TURN

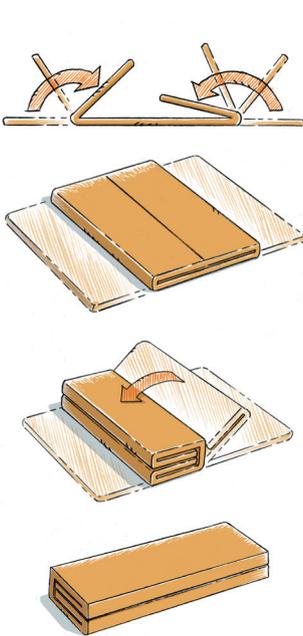
TIP

Slice the thicker side after each fold, not just at the beginning. Slicing the sides allows the dough, especially on the sides, to open up and make sure you get the same amount of layers on the outside.

LAMINATION METHODS

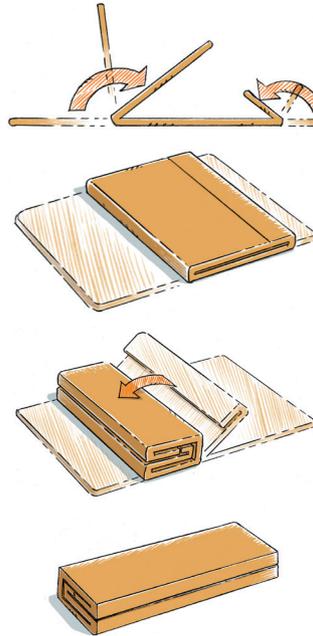
2 X 4

TRADITIONAL METHOD.
PERFECT FOR CROISSANTS.



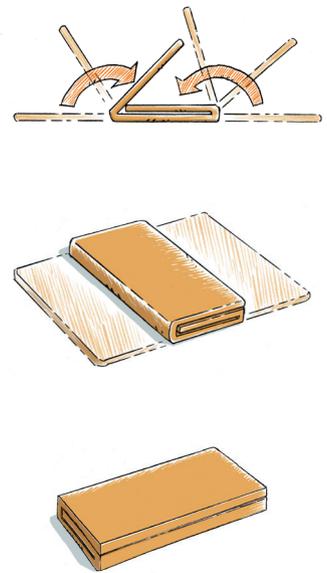
2 X 4 - 3/4 METHOD

ADVISED OF FOLDING THE DOUGH.
PERFECT FOR CROISSANTS.
EASY LAMINATION METHOD.



3 X 3

PERFECT FOR PASTRIES AND
CROISSANTS WITH A
TIGHT HONEY COMB TEXTURE.



PROS AND CONS OF THE VARIOUS LAMINATION METHODS

⊖ ISSUES WITH CROISSANTS MADE USING A 3X3 METHOD (ESPECIALLY DURING THE SUMMER)

Using the 3x3 lamination method places extra pressure on the dough since the layers are thinner. In the case of croissants, the top **layer is easier to damage**. In fact, the **heat of your hands** melts the butter layer and damages the top layer of the croissants, which will be visible on the final result.

For the last of the three turns, the dough will be weaker and could tear easily during handling. **For that reason, we recommend performing the last turn separately and leaving the dough to rest well in between the second and third turns.** Repeat the importance of resting the dough between the 2nd and 3rd folds as well as cooling the dough after the last fold and before the end of the rolling and processing.

When you are working in higher temperatures, such as in summer, the slightest handling of the dough can press down through the layers. The resulting dough will be very fragile and it can swiftly damage the structure.

⊖ THE REVISITED OLD WAY OF LAMINATING

The old way of laminating was a false single fold and an extended double fold. This method of lamination is making a come back with a new, revisited version.

Two turns are performed, each involving a totally different folding method: **the “false” turn in third and a second turn in five.** Used in combination with a leavened dough, this lamination method is less restrictive. Next, the dough piece should be rolled to produce a longer and thinner croissant.

Once the dough piece is cooled down to 3°C, place the butter sheet over 2/3 of the surface, and fold 1/3 towards the middle then the last part is folded over the remainder (a “false” turn in third). Roll the dough straight away, as the butter will solidify on the cold surface. For the second turn in five, the first fold is to 2/5. Next, fold the longer side of the dough over the 2/5 you just folded. In this way, you will have a piece in two and a piece in three. Finally, fold the piece in two over the piece in three.

⊖ LAMINATING MACHINE

Always adjust the weight of the dough piece according to the laminating machine.

Older models can handle a maximum thickness of between 3.2 cm and 3.5 cm. Newer models can even work with thicknesses ranging between 4.2 cm and 4.5 cm. The widths can vary between 50 cm and 60 cm.

For older models that handle thinner dough pieces and/or narrower widths, we recommend a maximum dough piece weight of 3 kg to 3.5 kg. You should take 1 kg of laminating butter and start with a dough piece which, once folded, will quickly reach a thickness of 3 cm.

For a thicker and wider laminating machine, you can use heavier dough pieces: between 6 kg and 7 kg with 2 kg of butter.





RECIPES

CROISSANT DOUGH

2X4 LAMINATION METHOD



1 | TO MAKE THE DOUGH

(to make 3.15 kg of dough)

1,770 g strong flour

36 g salt

850 g water/milk

100 g sugar

40 g inverted sugar

90 g yeast (+ 90 g milk powder if using water)

140 g Corman Roasted Butter tub 98% fat or Corman Dairy Butter block 82% fat for a more neutral taste

26 g improver

TIPS

- Minimum flour strength: 12.5% (13% to 15% protein content is best). A stronger flour adds volume in the end product and keeps it from sinking once baked.
- Where freezer storage is involved, use a suitable yeast for this purpose.
- Use half of the advised percentage recommended by the producers, of the improver. Use something to protect against frosting and to strengthen the structure or to improve the crunchiness.

Use all the ingredients to make a dough. Add the liquid to the yeast and stir until well mixed. Only add the salt once all the ingredients are combined. Mix the ingredients on a low-speed setting for about 5 minutes. Add the Corman Roasted Butter or Dairy Butter and knead the dough on the second lowest speed until you have a smooth dough. Make sure that the dough is not too soft. Knead for 7 to 8 minutes. After kneading, the dough temperature should be 24°C. Otherwise, continue kneading until it reaches that temperature. After kneading, cover the dough with plastic film and rest for 10 minutes.

2 | ROLLING AND RESTING THE DOUGH

Roll out the dough into a 40 cm x 60 cm rectangle and leave to rest for at least 30 minutes in the freezer at -18°C. Always cover with plastic film.

TIP

When working with several dough pieces, it's best to prepare them the day before. After resting them in the freezer, store overnight at 2°C.

3 | TEMPERING AND ROLLING THE BUTTER

1 kg Corman Butter sheet

3.15 kg croissant dough

Take the butter sheet out of the refrigerator depending on the type of butter, between 15 minutes for the dairy range and 30 minutes for the extra range, before pre-laminating to a 8 mm thickness. The ideal working temperature is 17°C to 19°C.

Once rolled out, after pre-laminating to 8 mm, the butter is sufficiently elastic to be incorporated into the dough straight away.

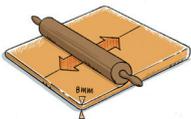
4 | LAMINATION METHOD



1. Begin the dough lamination by laying the tempered butter over one half of the dough. Fold the dough over the butter, covering it entirely.

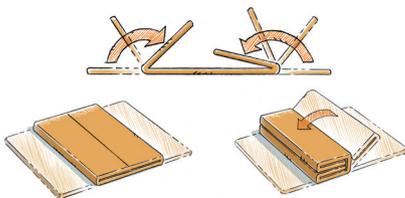


2. Make an incision on both sides of the dough seam. This will reduce the tension on the dough and help the butter distribute evenly during the turns.



3. Roll out the dough in various stages. Ensure that the dough retains a nice rectangular shape.

Roll out the dough to a thickness of about 8 mm.



4. Fold the dough in 4 (first turn). Once folded, turn the dough sideways.

Roll it out in stages, then fold in 4, and mark it with 2 small indents (second turn).

Cover the dough with plastic film and leave to rest for 30 minutes.

TIP

With Corman butter, you can start lamination right away, but when working at higher temperatures, we recommend that you rest the dough in the refrigerator if necessary.

5 | CUTTING THE CROISSANT DOUGH

The finest puff pastry is obtained by rolling out nicely chilled dough to the desired thickness. Next, cut out the croissants using a very sharp knife. Feel free to make your own customised cut. Our recommendation is 21 cm x 8 cm (3 mm thick) for classic croissants. To make small croissants, we recommend a 12 cm x 8 cm cut (2.5 mm thick).

6 | PROOFING

Proof the croissants for 95 to 100 minutes in a proofing oven between 26 and 31°C depending on the type of butter used for the lamination. Check your technical sheet to get the right temperature to proof.

The time allowed for proofing depends on the percentage of yeast and on the temperature in the proofing oven.

TIPS

Pay close attention to the proofing temperature.

- Too high and you risk the butter melting, the layers of dough can stick together and the croissant may not puff correctly.
- Too low and you risk the butter cracking, and the croissant may have an irregular shape.
- Humidity must not be excessive or this will dilute the butter and prevent steam bubbles from forming during baking. If there is high humidity, leave the croissants to dry before baking.

7 | BAKING

Bake for 15 to 17 minutes in a fan-assisted oven or 18 to 20 minutes in a deck oven. Set the oven temperature to achieve these cooking times.

CROISSANTS MADE WITH POOLISH

1X4 AND 1X3



1 | TO MAKE THE POOLISH

(to make 3.72 kg of dough)

480 g water

40 g yeast

480 g strong white flour (T55 type)

Mix the water and the yeast then add the flour until you have a smooth mixture.

Cover with plastic film and leave to rise at room temperature for about an hour. The mixture should double in volume.

2 | TO MAKE THE DOUGH

(to make 3.72 kg of dough)

1,520 g flour (14%)

40 g salt

240 g sugar

40 g inverted sugar

40 g yeast

400 g Corman Dairy Butter block 82% fat

480 g milk

Add all the other ingredients and combine at low speed (in first gear). The dough should be firm, but flexible

Next, knead in the second speed for about 6 minutes.

After kneading, the dough temperature should be 24°C. If not, continue kneading until this temperature is reached.

3 | ROLLING AND RESTING THE DOUGH

Roll out the dough into a 40 cm x 60 cm rectangle, and cover with plastic film. Rest overnight at -2°C to avoid the dough to start proofing.

4 | LAMINATION METHOD

1 kg Corman Butter sheet

3.72 kg croissant dough made with polish

CLASSIC PUFF PASTRY

4X3 AND 1X4 LAMINATION

We advice this type of lamination for general use, mille feuille and other adaptations.

For the classic "galette des rois" we advice 6 x 3 turns/folds.



1 | TO MAKE THE DOUGH

(to make 3.4 kg of dough)

2 kg traditional flour (10% or less protein content)

30 g salt

760 g water at 3 °C

600 g Corman Dairy Butter block 82% fat

For longer storage in the freezer: 20 g vinegar as an antioxidant

Combine the butter cubes at room temperature, salt and flour in a stand mixer fitted with a dough hook. Mix until you have a smooth dough and no lump remaining. Add the water and mix briefly (do not knead).

TIPS

- ▶ A dash of vinegar prevents black stains in the puff pastry. It stops oxidisation of the dough, keeping it whiter for longer in case it is stored for a long period in the refrigerator or freezer.
- ▶ You can, if you wish, increase the amount of 82% fat laminating butter to 1.25 kg.

2 | ROLLING AND RESTING THE DOUGH

Roll out the dough into a 40 cm x 60 cm rectangle, and cover with plastic film. Rest overnight at 2°C maximum (the temperature should not be higher, otherwise the dough will start to oxidise).

3 | TEMPERING AND ROLLING THE BUTTER

1 kg Corman Express sheet

3.4 kg classic puff pastry

Take the butter sheet out of the refrigerator one hour ahead of time during summer and 1.5 hours ahead of time during winter. Roll out the butter to a thickness of 8 mm. The ideal working temperature is 17°C to 19°C.

After pre laminating the butter to a 8 mm thickness, the butter is sufficiently elastic to be incorporated into the dough straight away.

INVERTED PUFF PASTRY

4X3 AND 1X4 LAMINATION



1 | TO MAKE THE DOUGH

(to make 3.4 kg of dough)

2 kg traditional flour (less than 10%)

30 g salt

760 g water at 3 °C

600 g Corman Dairy Butter block 82% fat or part substitute with Corman Roasted Butter 98% fat for a more intense flavour

For longer storage in the freezer: 10 g vinegar as an antioxidant

Cut the butter into cubes and allow to soften.

Combine the butter cubes, salt and flour in a stand mixer fitted with a dough hook. Mix until you have a smooth dough and no lump remaining. Add the water and mix briefly (do not knead).

2 | ROLLING AND RESTING THE DOUGH

Roll out the dough into a 30 cm x 40 cm square.

Cover with plastic film and rest in the refrigerator for at least 2 hours.

3 | INCORPORATING THE BUTTER

2 x 1 kg Corman Express Butter sheet

3.4 kg inverted puff pastry dough

Take two sheets of Corman Express butter out of the refrigerator and roll out into a 40 cm x 40 cm square, 6 mm thick.

Lay the dough piece over a sheet of Corman Express Butter then place another sheet of Corman Express Butter on top. The dough is in the middle and the butter on the outside.

Leave to rest in the refrigerator for 10 minutes.

10 minutes allows the dough and the butter to reach the same temperature before you start the laminating process.

LAMINATED PUFF BRIOCHE DOUGH

3X3 LAMINATION METHOD



1 | TO MAKE THE DOUGH

(to make 3.1 kg of dough)

1,770 g strong white flour

40 g salt

700 g water

150 g eggs

150 g sugar

90 g yeast

90 g milk powder

100 g Corman Roasted Butter tub 98% fat

26 g improver

TIPS

- Use half of the advised percentage recommended by the producers, of the improver. Use something to protect against frosting and to strengthen the structure or to improve the crunchiness.
- Minimum flour strength: 12.5% (13% to 15% protein content is best). A stronger flour adds volume in the end product, and keeps it from sinking once baked.
- Where freezer storage is involved, use a suitable yeast for this purpose

Use all the ingredients to make a dough. Add the liquid to the yeast and stir until well mixed. Only add the salt once all the ingredients are combined. Add the roasted butter at the end. Mix the ingredients on a low-speed setting for about 5 minutes. Next, knead the dough on the second lowest speed until you have a smooth dough. Make sure that the dough is not too soft. Knead for 7 to 8 minutes. After kneading, the dough temperature should be 24°C. If not, continue kneading until this temperature is reached. After kneading, cover the dough with plastic film and rest for 10 minutes.

2 | ROLLING AND RESTING THE DOUGH

Roll out the dough into a 40 cm x 60 cm rectangle and leave to rest for at least 30 minutes in the freezer at -18°C. Always cover with plastic film.

TIP

When working with several dough pieces, it's best to prepare them the day before. After resting them in the freezer, store overnight at 2°C.

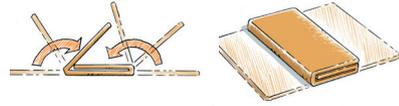
3 | TEMPERING AND ROLLING THE BUTTER

1 kg Corman Butter sheet

3.1 kg puff pastry brioche dough

Take the butter sheet out of the refrigerator one hour ahead of time during summer and 1.5 hours ahead of time during winter. Roll out the butter to a thickness of 8 mm. The ideal working temperature is 17°C to 19°C.

Once rolled out, the butter is sufficiently elastic to be incorporated into the dough straight away.



3. Fold the dough in 3 (first turn).

Once folded, turn the dough sideways.

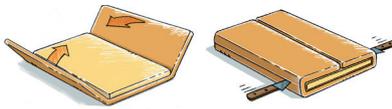
Roll it out in stages, then fold in 3, and mark with 2 small indents (second turn). Let the dough rest, covered in plastic film for 30 minutes.

After resting the dough, proceed to perform the final turn in 3.

TIPS

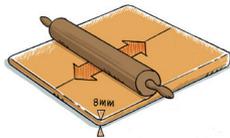
- ▶ Once folded, you can cover and store the dough pieces in the refrigerator until lamination has been completed, and they are ready to work with once they have been adequately rested in the refrigerator.
- ▶ With Corman butter, you can start the lamination right away, but when working at higher temperatures, we recommend that you keep the dough chilled.

4 | LAMINATION METHOD



1. Begin the dough lamination by laying the tempered butter over one half of the dough. Fold the dough over the butter, covering it entirely.

Make an incision on both sides of the dough seam. This will reduce the tension on the dough and help the butter distribute evenly during the turns.



2. Roll out the dough in various stages. Ensure that the dough retains a nice rectangular shape. Roll out the dough to a thickness of about 8 mm.

5 | CUTTING THE BRIOCHE DOUGH

The finest puff pastry is obtained by rolling out nicely chilled dough, then cutting out the croissants or other pastries using a very sharp knife. It is better to use a cutter than a dull knife.

NOTES

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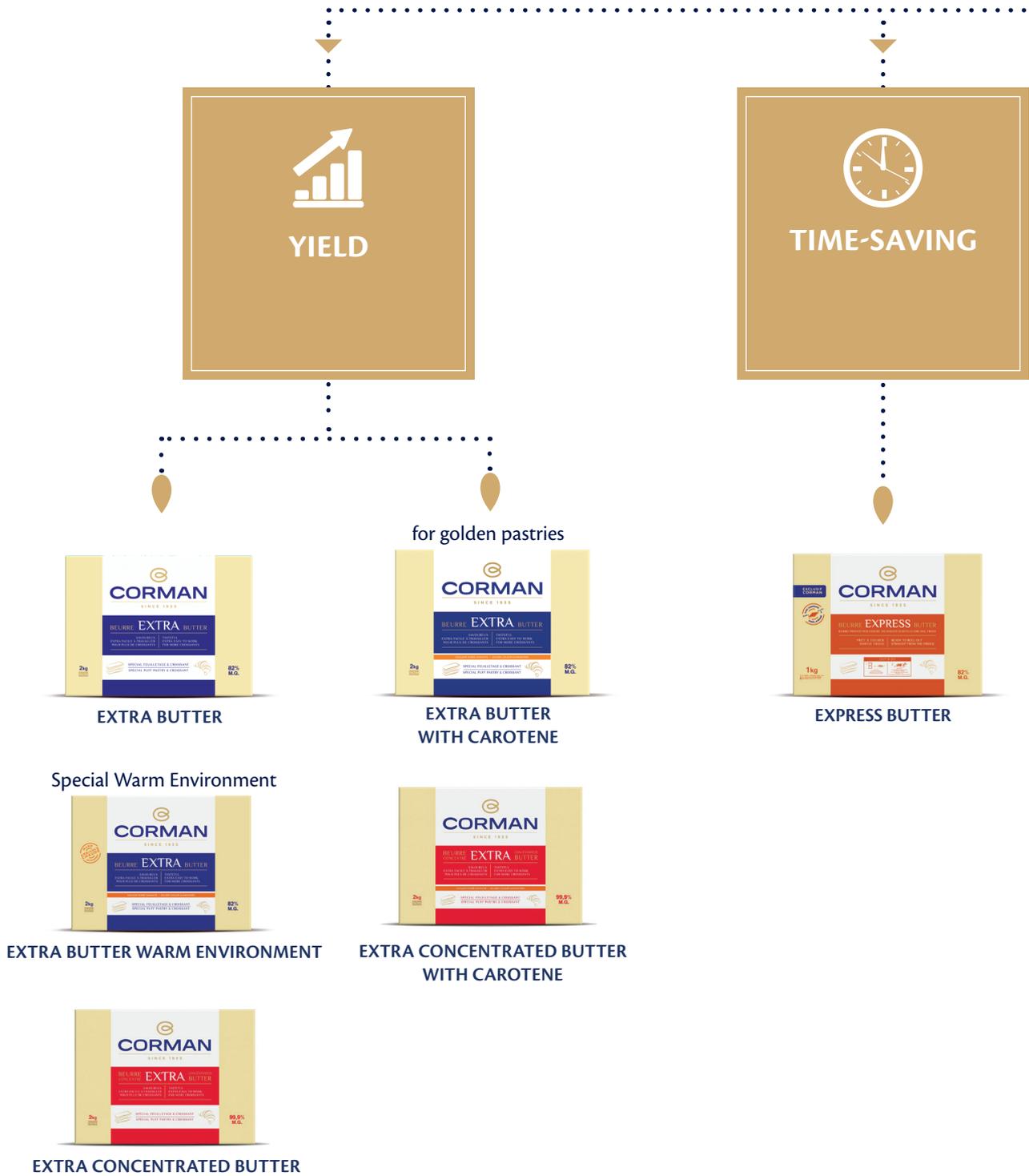
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CHOOSING THE RIGHT BUTTER

Tailored to your needs,
Corman guides you through the right choice of butter.




**RICH AND
UNIQUE BUTTER
TASTE**


**NICE CREAMY
TASTE**



ROASTED BUTTER (tub)



DAIRY BUTTER (block)



DAIRY BUTTER (sheet)



ORGANIC DAIRY BUTTER (block)



ORGANIC DAIRY BUTTER (sheet)



Guaranteed success for the Chef