



FOR MORE THAN 25 YEARS WE HAVE BEEN WORKING  
CLOSE TO PEOPLE WHO RESEARCH, PRODUCE AND LOVE THE ORGANIC FARMING.



THE BIOLOGICAL FOR TRADITION  
[www.molinograssi.it](http://www.molinograssi.it)

The professional information network magazine for pasta manufacturers

- [www.pastaria.it](http://www.pastaria.it)
- [www.pastariahub.com](http://www.pastariahub.com)
- [www.pastabid.com](http://www.pastabid.com)





# Kronos<sup>®</sup>

## Better a seed than a ship.



The Kronos project. It originated from a collaboration with Albert Carlton, an American breeder, father of Desert Durum from Arizona, the durum wheat of high quality, imported from the best Italian pasta factories to produce premium pasta. Molino Grassi since 1992 has managed to have the exclusive copyright to reproduce the

seeds and cultivate them in Italy, adopting and improving farming techniques adapted to the Mediterranean climate, thus keeping the organoleptic features intact. Kronos is a durum wheat with a unique protein content, resistance to cooking, taste and color, ideal for tasty and always al dente pasta.

Per saperne di più: [www.molinograssi.it](http://www.molinograssi.it)

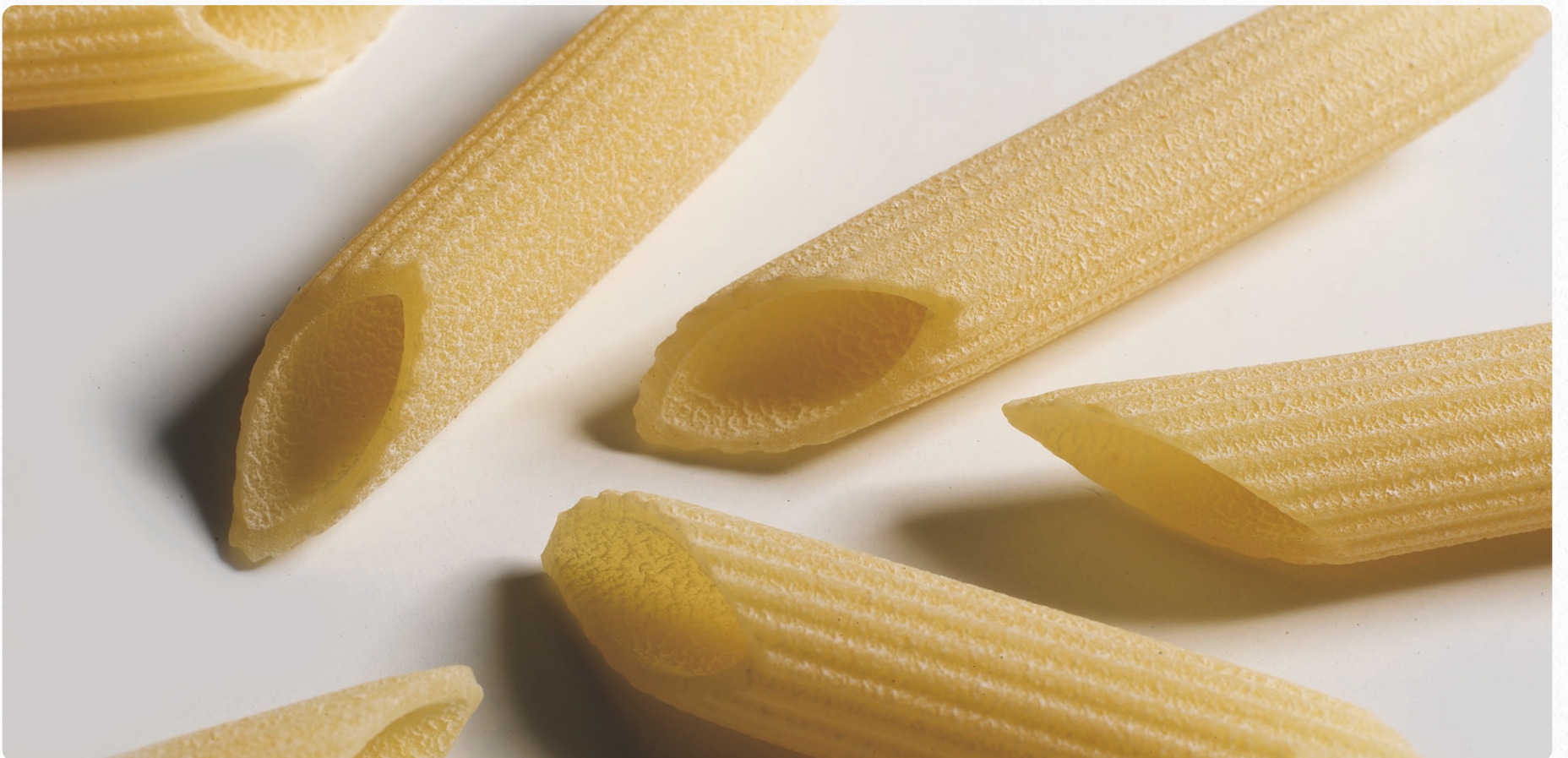






# Colophon

Pastaria International DE  
1/2023  
January



## **PUBLISHER**

**Kinski Editori S.r.l.**

*registered office*

Via Possioncella 1/1 • 42016 Guastalla

*operational headquarters*

Via Dall'Aglio 21/2 • 43122 Parma (Italy)

tel. +39 (0)521 1564934

fax +39 (0)521 1564935

Email [redazione@pastaria.it](mailto:redazione@pastaria.it)

ROC no. 23238

## **EDITOR-IN-CHIEF**

Lorenzo Pini

## **COPYRIGHT ©**

Being as we firmly believe that the sharing of information, ideas and knowledge can help make the world a better place, circulation of this magazine is not only allowed but is actually encouraged and incentivized. You can pass the magazine on to your friends and acquaintances, print it, distribute it, include a download link for it on your website, share it on your social networks and so on, as long as distribution is always without charge and no amendments are made to the original.

## **INTERNET SERVICE PROVIDER (ISP)**

xPlants.it (Levata di Curtatone, Mantova)



# Filled Pasta Equipment

## FJS300 Special Forming Machine



## FAD Ravioli Forming Machine



## FA Cappelletti Forming Machine



## Description

- Easy access for cleaning and maintenance
- Made of stainless steel AISI 304 and fully wash-down with high-pressure water and detergent.
- Control panel with user-friendly interface to control the recipes and the production parameters of the machine and its accessories
- Hygienic design
- Quick die change with no tools
- Lubricating system with central unit placed on the cover, easily accessible.





# Patrons & Sponsors







**Let's shape the future together**





# Patrons

Pastaria has obtained the patronage of the most prestigious national and international pasta manufacturer associations.

## Pastaria patrons



qualità, gusto e piacere




# Technology



*Your product is in very good hands.*

*We will take care of your product as delicately as our long experience in this field has taught us to do, and utilizing all the new technologies that are constantly developed in our R&D centres at the Cusinato Group establishments*



 [cusinato.com](http://cusinato.com)  
 +39 049 9440146  
 [info@cusinato.com](mailto:info@cusinato.com)



 **CUSINATO**  
Innovative Conveying and Storage Technologies



**CUSINATO** GROUP



# Sponsors

The information and professional update resources that are part of the Pastaria network are freely distributed without charge thanks to the collaboration and support of leading companies operating on an international level to supply ingredients, semi-processed products, equipment and systems for manufacturing fresh/dried pasta, gnocchi and ready meals.

## Pastaria sponsors

### Main sponsors



Creiamo qualità



### Leading sponsors





M O L I N O

DeVita



*Durum wheat semolina  
cultivated wheat and milled  
in Italy*



[www.molinidevita.it](http://www.molinidevita.it)

**Industria Agroalimentare De Vita srl**

Sede Legale: Via Donizetti 16 - 71033 Casalnuovo Monterotaro (Foggia - Italy)

Stabilimento: S.P. 11 Torremaggiore - Casalnuovo Monterotaro Km 14  
71030 Casalvecchio di Puglia (Foggia - Italy)

Tel. +39 0881.558556 - Fax +39 0881.558451 Tel. +39 3409832238 +39 3409641335

[www.molinidevita.it](http://www.molinidevita.it) - mail: [info@molinidevita.it](mailto:info@molinidevita.it)





## Leading sponsor



LEBEN  
INGREDIENTS



## Sponsors





**ANSELMO**



**ANSELMO  
BRAIBANTI**



**FEN**



**ANSELMO  
LTA**



**OMAR**

**5 technologies**

perfectly matched  
to be your partner  
for **dry pasta, fresh pasta and snacks**

**ANSELMO GROUP**

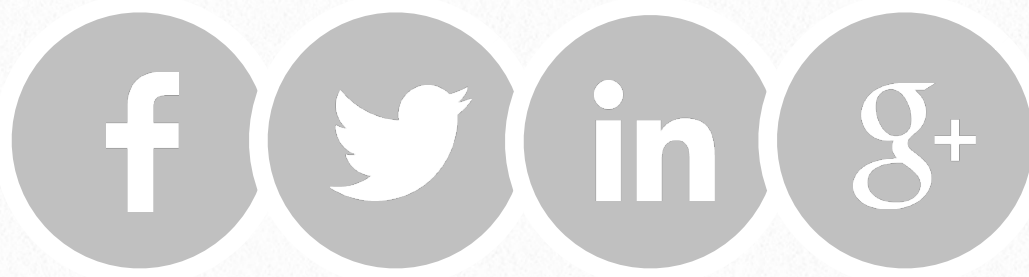
*complete solutions for food industry*

[www.anselmoitalia.com](http://www.anselmoitalia.com)

**ANSELMO IMPIANTI SRL** - Via Fossano, 33 - Bene Vagienna (CN) - ITALY | Tel. +39 0172 654755 - Fax + 39 0172 654811  
**LTA** - Via dell'Industria, 11 - Thiene (VI) - ITALY | Tel. +39 0445 370993 - Fax +39 0445 813114  
**FEN IMPIANTI SRL** - Via Sole, 72 Tezze sul Brenta (VI) - ITALY | Tel. +39 0424 868711 - Fax +39 0424 868777  
**OMAR IMPIANTI SRL** - Via Stelloni, 39/I - 39/O - Sala Bolognese (BO) - ITALY | Tel. +39 051 6814821 - Fax +39 051 727354



# 1



## Pasta and the new scenarios dictated by inflation

Pastaria Centre for Economic Research



The NielsenIQ analysis presented at Pastaria Festival 2023 at the conference on *Consumption, trends and opportunities for pasta in national and international markets.*



The high cost of living will set the pace for consumption in the months to come, with inflation – which shows no signs of slowing down – rising to 13.7 per cent in October, more than two points higher than the previous survey.

Presenting its report at the Pastaria Festival 2022, NielsenIQ assessed the implications by the end of the summer of a crisis which was already clearly on the horizon prior to the arrival of the pandemic. A state of affairs with a backdrop featuring an international crisis of almost unprecedented gravity, due to the serious consequences of the war in Ukraine and the earth-shattering energy shock following the breakdown of relations between Russia and the European Union, which turned the continent's economic scenario on its head.

Due to inflation, CPG (Consumer Packaged Goods) closed August with a 10.5% growth in turnover while volumes tended to be flat. The same wide gap in trends can be observed in the August progress report, which shows a +5.5% increase in value with a +0.2% annual increase in volume.

The price transmission mechanism, triggered by the maxi-price rises in gas and other energy products, had an almost immediate effect on the dynamics of household purchases, also impacting the

shopping trolley and the entire food sector. According to NielsenIQ's observations, considering the entire Modern Trade business, inflationary growth was across the board affecting all product sectors, with the entire CPG aggregate positioned at +10.1% in August, but with peaks of up to +15% for fish and +17% for meat. On the flip side of the coin, there was less pressure from sales promotions, which reached their lowest level in Italy since the beginning of the year, at 22.7% against 25.2% in the same month of 2021 (the data refer to August).

Among the various distribution channels, the value share of discount stores has grown by almost one percentage point (from 21.1% in 2021 to 22% this year). In contrast, supermarkets and self-services have suffered a slight downturn, from 38.8% to 38.4% and from 10.2% to 9.8%, respectively. The rest, have hung on, including e-commerce which recorded a 2.2% share in the CPG.

Private label (PL) products have experienced the most rapid growth, with +9.2% of CPG value sales in August, a trend that reversed the -0.9% of 2021. The dynamics of the Top-20 players (+2.6%) were much more subdued, in contrast to that of the Followers (+5.3%). The Small Players (+2.8%) slow advance nevertheless strengthened the already





# Since 36 years in Pasta World

**Italpast produces innovative, efficient and reliable technologies for all Pasta Makers who are looking for Excellence.**

We realize plants for production of Dry and Fresh Pasta, satisfying artisans and big Pasta Factories which looking for the best quality. Our Pasta production lines are:

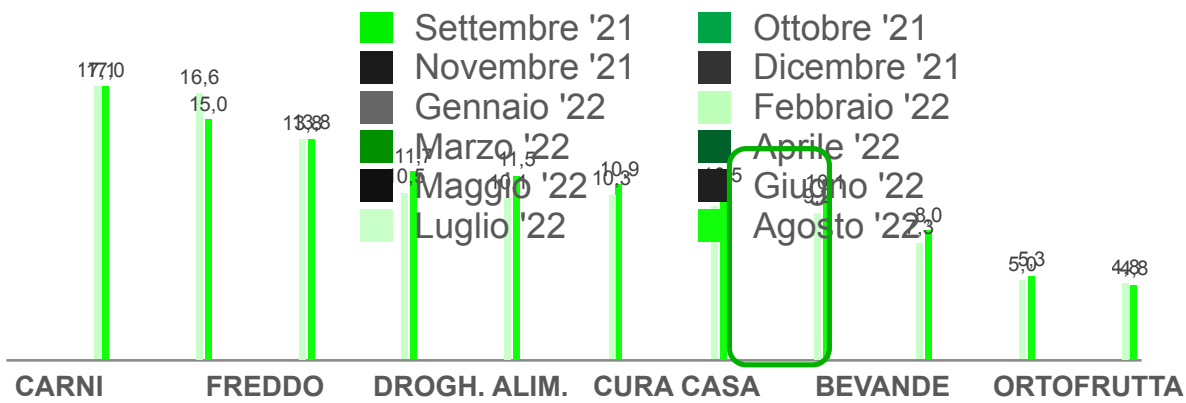
**EFFICIENT | FLEXIBLE | RELIABLE OVER TIME**

**OUR STRENGTH IS OUR METHOD!**

Beside our Customers with technical and technological support for the best choice of the plant with professional and constant assistance during the installation, commissioning and training.



## Cross-sectoral growth in inflation



Source: NielsenIQ Inflation Observatory – Hyper+Super+Self-Service  
© 2022 Nielsen Consumer LLC. All Rights Reserved.



## The Italians' shopping trolley - Private Labels on the up

Followers also performed well

### CPG Sales Trends

Hyper+Super+Self-Service+Discount – Prog. August 2022

	Top-20 (no Private Labels)	Followers (from 21 to 200)	Small Players (from 201 upwards)	Private Labels (with Discount Stores)
<b>2022</b>	<b>+2.6%</b>	<b>+5.3%</b>	<b>+2.8%</b>	<b>+9.2%</b>
<b>2021</b>	<b>-2.8%</b>	<b>-0.2%</b>	<b>+2.4%</b>	<b>-0.9%</b>
<b>2020</b>	<b>+4.5%</b>	<b>+6.0%</b>	<b>+6.5%</b>	<b>+9.0%</b>
<b>2019</b>	<b>-0.1%</b>	<b>+0.6%</b>	<b>+0.3%</b>	<b>+4.5%</b>
<b>2018</b>	<b>-0.8%</b>	<b>-0.3%</b>	<b>+3.7%</b>	<b>+2.8%</b>

Year 2021: Total CPGs +0.4%  
Prog. August 2022: Total CPGs +5.3%

Source: NielsenIQ Trade\* Mkt. Hyper+Super+Self-Service+Discount – Sales by Value Trend  
© 2022 Nielsen Consumer LLC. All Rights Reserved.





# *The first sustainable supply chain of durum wheat certificated*



*100% Made in Italy*



**Molino De Sortis**

SS 545 Km. 3,300 Industrial Area 71042 Cerignola (FG) Italia

Tel. 0885 449016 (6 linee a.r.) Fax 0885 444077

[www.desortis.it](http://www.desortis.it) | [marketing@desortis.it](mailto:marketing@desortis.it)



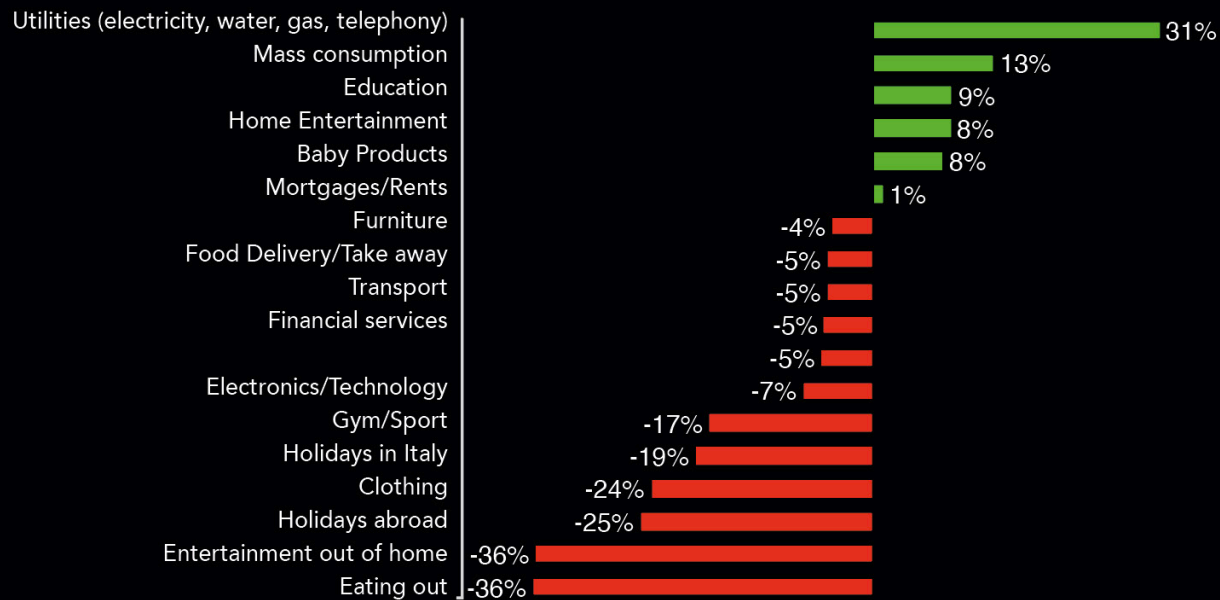


## The home is leader in spending intentions

Spending intentions are focused on essential items and the home

### Spending intentions for the next 12 months (April 2022)

Net balance of responses



© 2021 Nielsen Consumer LLC. All Rights Reserved.

positive trend of 2021.

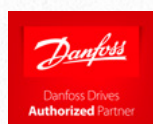
The spending intentions of Italian households speak volumes: over the next 12 months they will be focused on essential items and strictly on the home. In fact, based on their statements, spending priorities for Italians will be utilities (electricity, water, gas, telephony), consumer goods, education, home entertainment and baby products; all non-domestic items, including eating out at restaurants, food delivery services, sports, clothing, transport, entertainment and holidays will all be penalised. Being compelled to reshuffle their spending plans, the Italians, 96% of whom are intent on adopting saving strategies, will tend to

buy less expensive products from the usual categories (according to 68% of those interviewed by NielsenIQ), or chase after promotions by selectively targeting the cheapest products available at any given moment (28%).

Although penalised as regards purchasing intentions, since last February, the away from home sector has experienced a maxi-rebound, returning to pre-Covid levels. NielsenIQ data for August shows a 4.7% growth in sales on a like-for-like basis, compared to a 13.2% increase in 2021 and a 21.4% decrease in 2020, the year of the first and strictest lockdown. The unknown factors, in this phase of tremendous uncertainty, are mainly related



# CONFESSIONE SOLUTION DESIGNER DESIGNER





## The first course: flat in volume but up in value

dry semolina is in the lead, positively reversing the trend in volume, driving growth in value with an average price increase of over 22%.

### Total First Course

**838 K tonnes**

+0.2%

### Dry Semolina

**480 K tonnes**

+0.6%

### First Course Without dry semolina

**358 K tonnes**

-0.4%

### Total First Course

**€2.1 bn**

+10.8%

### Dry Semolina

**€794 m**

+23.3%

### First Course Without dry semolina

**€1.3 bn**

+4%



Source: NielsenIQ Market Track - Top 200 - Volume and value trends - Trend value - YTD value 11/08/2022  
© 2022 Nielsen Consumer LLC. All Rights Reserved.

to the fate of away from home consumption, expected to be affected by the reduction in household purchasing power. But other questions remain in the background, including the performance of discount stores in the coming months and the development of promotional sales, once the increases in list prices have passed.

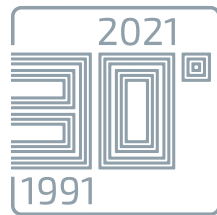
## First course

Focusing on first courses, based on NielsenIQ data, there appears to be an almost flat volume trend (+0.2%) and double digit growth (+10.8%) in turnover. Dry semolina is leading performance regarding the first course total, with a

growth of +0.6% in volume and of +23.3% in value; other types of first courses show a slight downturn in volume (-0.4%) and lower sustained growth in value (+4%).

Entering further into detail, the categories which, with the return to “post Covid normality”, manage to satisfy the need for service content, i.e. ready first courses, both chilled and shelf-stable, are confirmed to be on the rise; similar proposals linked to frozen technology (frozen first courses and soups) are suffering. Dry semolina and traditional rice, i.e. ‘classic first courses’, are on the up, benefiting in volume from the performance recorded in the first months of the year





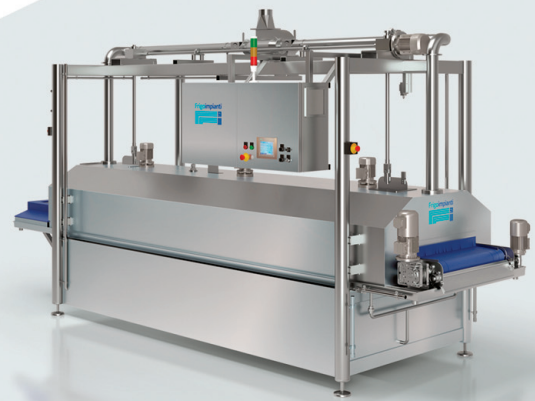
# Custom designed and manufactured machines

Pasteurisation tunnels with  
temperature and humidity control  
Ideal for fresh pasta

HIGH ENERGY EFFICIENCY

NATURAL APPEARANCE  
AFTER TREATMENT

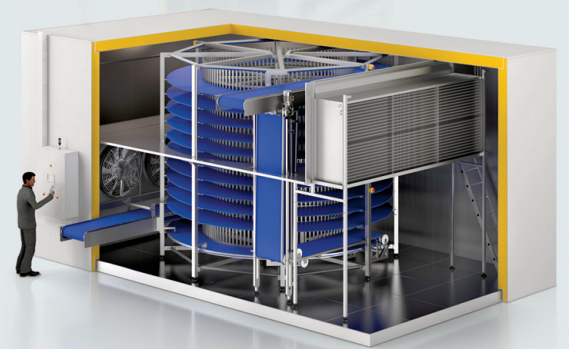
LARGE PRODUCTIONS  
IN SMALL SPACES



PASTEURISER "P.V.R."



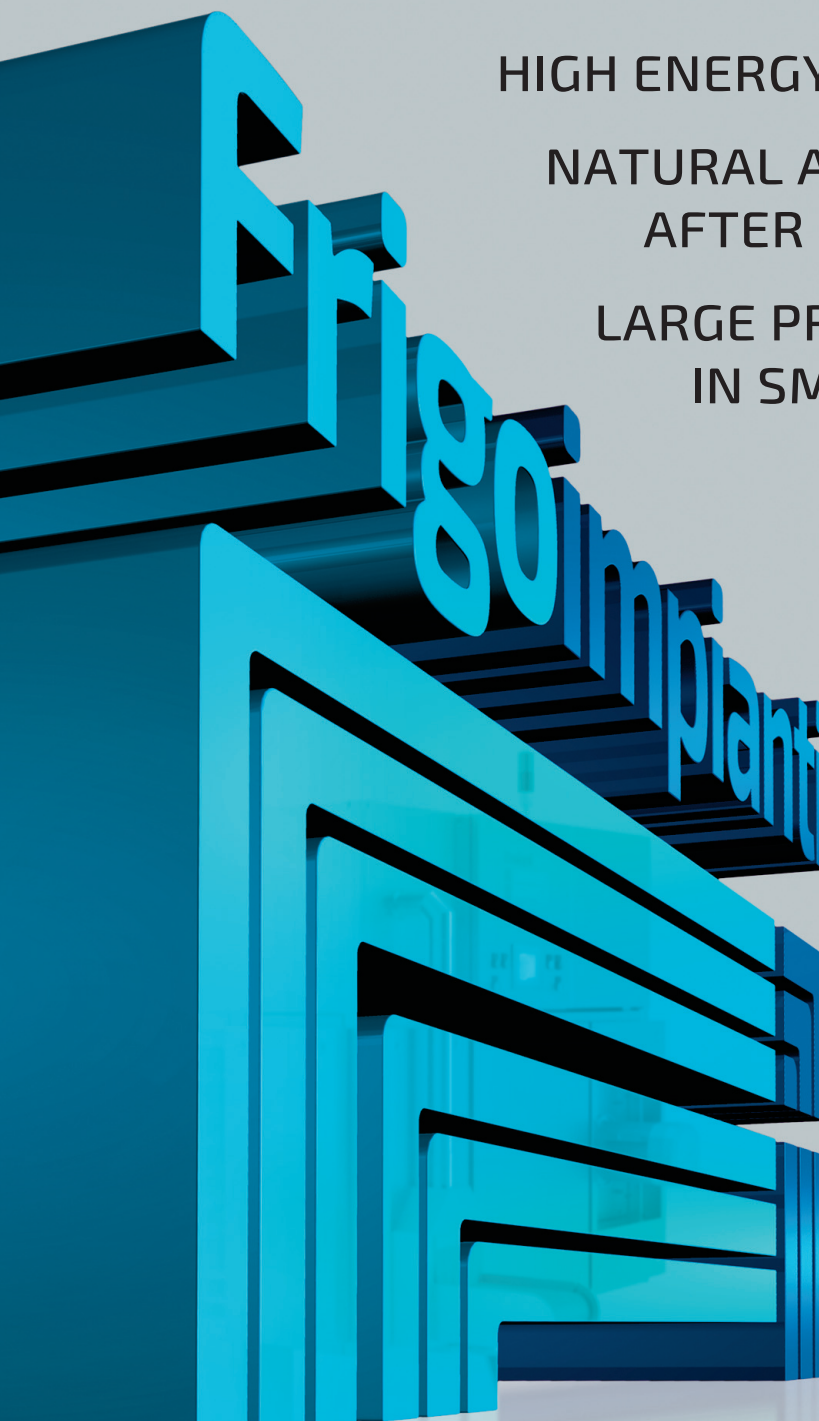
DROP TUNNEL "D"



SPIRAL TUNNEL



SPIRAL PASTEURISER  
"COMPACT"





**First course 2022 volume: dry semolina and traditional rice are holding up, growth of proposals with service content (fresh and shelf-stable) on the rise**



**Semolina**

+0.6% Dried  
-2% Fresh



**Filled**

-6.5% Dried  
-2.1% Fresh



**Egg**

-6.6% Dried  
-6% Fresh



**Rice**

-1.5%

Traditional: +0.8%



**Ready first courses in bags**

+5.7%

Soups: +7.7%



**Grain cereals**

-2.7%



**Frozen minestrone and soups**

-2.2%



**Frozen first courses**

-1.5%



**Fresh ready meals**

+16.4%

Source: NielsenIQ Market Track – Italy Total – YTD volume trend (14/08/2022)  
© 2022 Nielsen Consumer LLC. All Rights Reserved.

(February/March), as macro-economic phenomena that changed the balance in the national/international scenario (Ukraine war, wheat crisis and the first signs of inflation) began to emerge.

The price increase affects all first course proposals, impacting the “traditional” categories with production processes and use of the raw materials that have been most affected by the changed macro-economic scenario. Specifically, dry semolina shows the highest growth in average €/kg price, with an increase of 22.6%, followed by dry egg pasta (+10.4%) and rice (+7.8%).

Focusing on the internal dynamics of the semolina market, the progressive increase

of the impact in volume of premium white semolina and the progressive decrease of mainstream white semolina is confirmed. In terms of value, over the last year there was a greater impact in mainstream, despite the higher price increase, compared to premium.

A premium that does, however, manage to limit its price increase and keep up the normal level of promotions, while changing the promotional mix by offering smaller discounts.

Semolina products linked to the wellness concept are suffering: wholemeal and other grains are struggling to recover after the slowdown of the Covid period. Among the other healthy products, the Gluten Free





Innovation and tradition,  
**always**

**Listening, designing, personalizing and creating**  
solutions to produce dry pasta **from 30 to 300kg/h.**



since 1950

**Pama Parsi Macchine s.r.l.** ■ [pamaroma.it](http://pamaroma.it)





**The impact in volume of premium white semolina increases, while mainstream semolina and healthy proposals decrease**

**66%** (-0.7 pts)



**Standard mainstream**

Trend vs 2021: -0.4%

**26%** (+0.9 pts)



**Premium standard**

Trend vs 2021: +4.3%

**7%** (-0.2 pts)



**Healthy + Gluten free**

Trend vs 2021: -1.9%

Source: NielsenIQ Market Track – Italy Total – Trends and impact in Volume - YTD (14/08/2022)  
© 2022 Nielsen Consumer LLC. All Rights Reserved.

Classic is doing well, while legumes are suffering.

Approaching the semolina market from a long-term perspective (2017 to the present), linked to household consumption dynamics, what can be observed is a mature and stable market in terms of households reached, but over time these families have gradually reduced their shopping volumes. Since 2017, Italian families have been purchasing 100 grams less of pasta. These dynamics may have been impacted by attitudinal rather than structural-demographic factors.

The spread of alternative diets, which has intensified thanks to the exponential power of social media and the social status of

some of their advocates, have over time generated false myths about pasta, effectively demonising its values and its functional – as well as nutritional – benefits.

Finally, the downsizing of the family shopping trolley may also be dictated by a preference for eating pasta at lunchtime, a moment which many Italians actually spend outside the home.

In the short-to-medium term, with clouds on the horizon and a somewhat unfathomable scenario, pasta is still a must on the Italian table, with a consumption rate of around 4.4 times a week for 91% of the population (who eat pasta at least once a week) and an



**DURUM WHEAT SEMOLINA.  
THE GREAT MASTERS OF PASTA  
CHOOSE **MININNI**.**

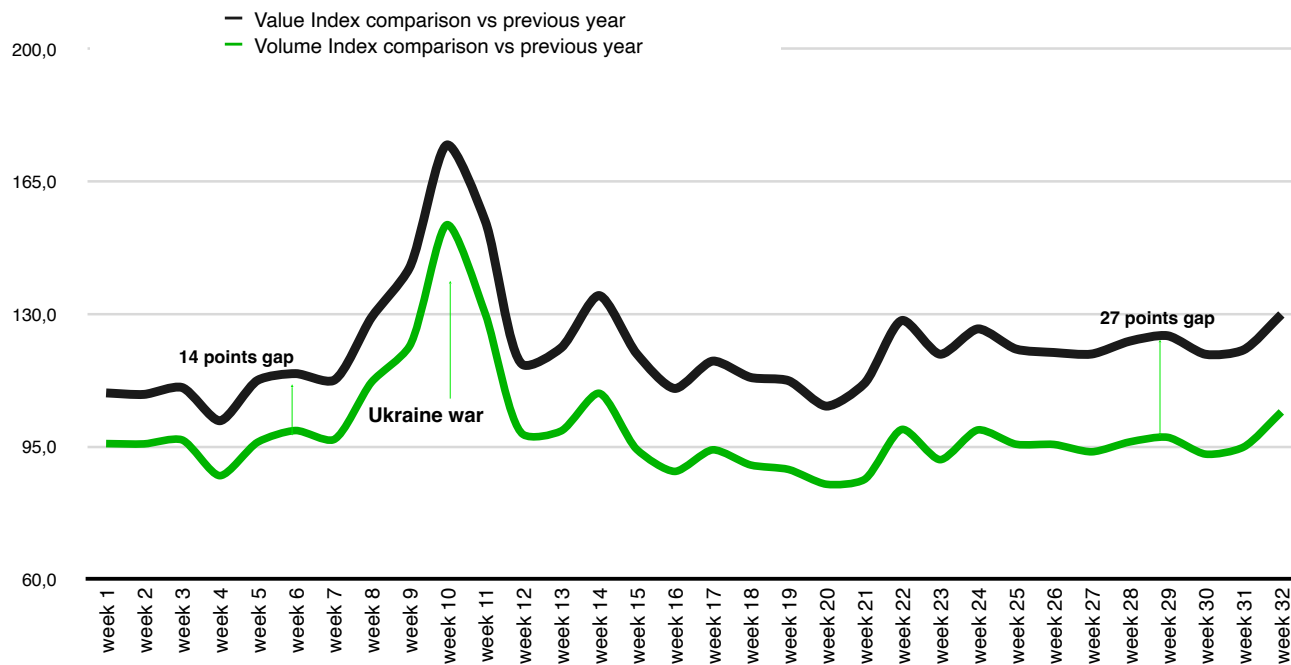
**INDUSTRIA MOLITORIA MININNI SRL**  
ALTAMURA (BA) - ITALY  
Tel. +39 080 3103625  
[www.molinomininni.com](http://www.molinomininni.com)





## Dry Pasta within Top 3 European countries (IT, FR, DE)

TOP 3 COUNTRIES | DRY PASTA | VOLUME and VALUE WEEKLY INDEX COMPARED TO PREVIOUS YEAR



YTD 2022  
VALUE INDEX  
121

YTD 2022  
VOLUME INDEX  
100

Source: NielsenIQ, Strategic Planner, IT + FR + DE

© 2022 Nielsen Consumer LLC. All Rights Reserved.

average cost of around 0.18 cents for a 100 g portion. In a nutshell, for less than a euro (500 gram packet of dry semolina pasta) a nutritional intake for at least five people is guaranteed at meal time. Finally, looking to the future of the pasta and first course market, the evolution in demographics (explains Nielsen IQ) is the predictive variable that should be given greatest consideration. The Covid effect on births was highly negative, considering that in just a little over a decade, newborns in Italy decreased by 30%. Demographics have a crucial impact on mass consumption trends and, in the absence of catastrophic events, represent a variable with an increasingly long-term evolution.

How can we expect demographics to evolve over the next ten years? Today, the barycentre of the Italian population is in the 46-56 age bracket and, since time does not run backwards, we can be certain that this peak will shift over the next decade to those aged 56-70, with a continuous decline in the younger age brackets (down to 18 year-olds and those aged 35-55). Overall, there will be two million people less in the Italian population which will be more aged, peaking in the 56-70 bracket. This will have significant implications:

- the demographic evolution will have a neutral impact on mass consumption, fewer customers who will spend more





# DEMACO Titan Series

## Superior Pasta Quality



**FLOW X** is **DEMACO's** proprietary dough processing and rheology system for optimized pasta quality.

We make the most of your raw materials.







## Pasta has the lowest price per portion among categories...



Category	Dry Pasta	Rice	Frozen Pizza	Frozen Soup
Price €/Kg	€1.81	€2.60	€5.98	€3.56
Grams per Portion	100	80	330	150
Price per Portion	€0.18	€0.21	€1.97	€0.53

### ...bringing to a low price elasticity

«Hard-to-replace» categories	
CATEGORY	ELASTICITY
BABY FOOD	-0.95
FLOUR	-0.86

Pasta	
CATEGORY	ELASTICITY
SEMOLINA PASTA	-1.38
EGG PASTA	-1.10

«Elasticity-sensitive» categories	
CATEGORY	ELASTICITY
WINE	-2.30
GROUND COFFEE	-1.76

© 2022 Nielsen Consumer LLC. All Rights Reserved.

LAST 6 MONTHS  
(end. 14/8)

## Dry Pasta Sales Worldwide

58 COUNTRIES | DRY PASTA | LAST 6 MONTHS VS 2021 (last week ending 14 August)



### Modern Trade Dry Pasta sales account for €5.5 bn (2.5 bn tonnes) in the last 6 months

- Volume sales are generally growing
- Value sales are widely impacted by inflation

		World Grand Total										
Volume Sales (in mio KG)	Last 6 months ending 14/08	2.509	437	306	247	208	193	105	100	89	65	56
	% vs last year	2.4	1.5	3.3	1.8	1.8	10.2	4.2	3.7	3.0	9.1	-5.1
Value Sales (in mio €)	% vs last year	24.9	21.9	23.9	30.0	22.0	35.4	33.7	26.8	16.9	37.7	14.4

Source: NielsenIQ, Strategic Planner – Modern Trade

© 2022 Nielsen Consumer LLC. All Rights Reserved.

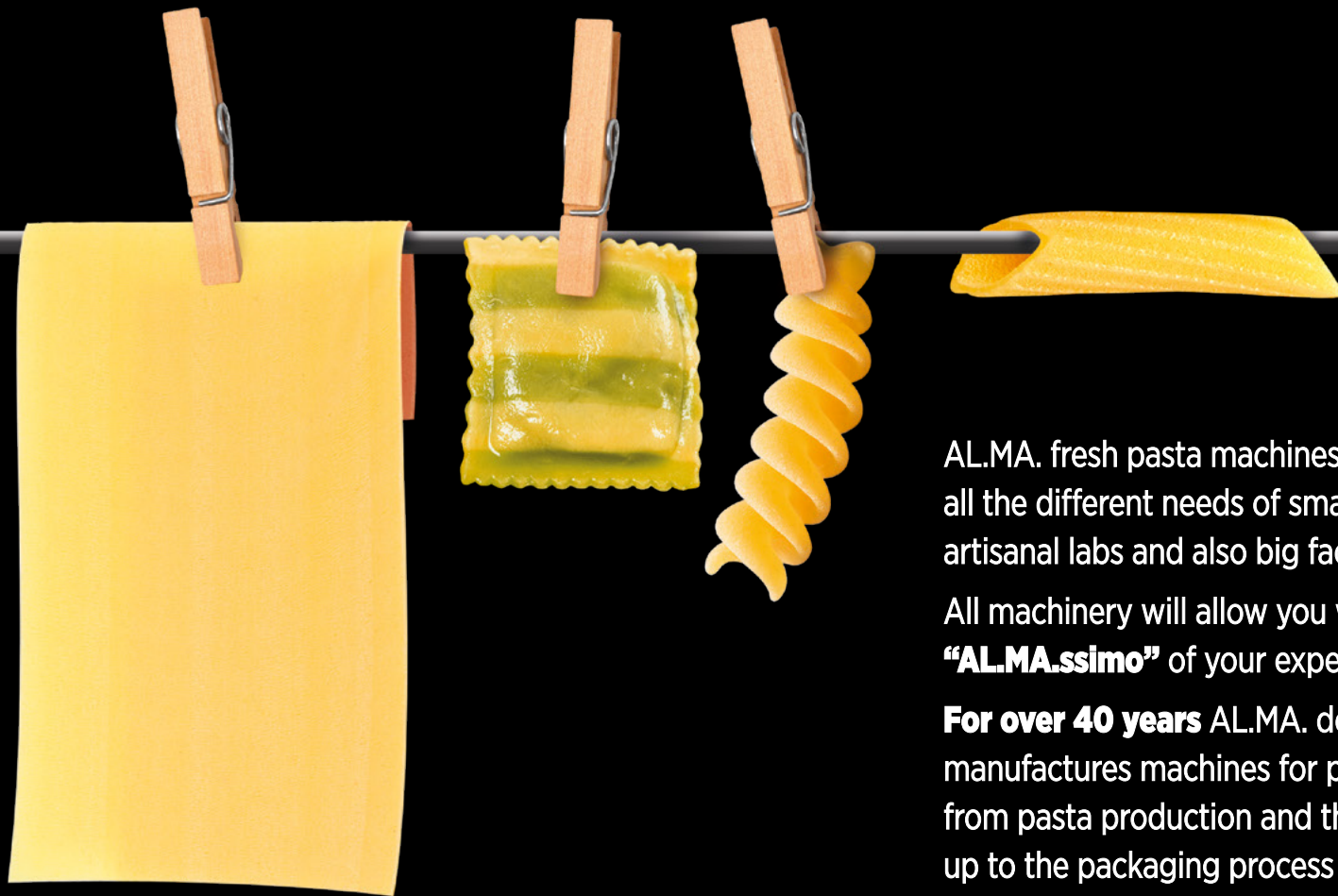
(the average mass consumption expenditure rises as people age),

therefore the quantitative impact will be negligible;



# AL.MA.SSIMO

Top quality PASTA only speaks ITALIAN



AL.MA. fresh pasta machines can meet all the different needs of small pasta shops, artisanal labs and also big factories.

All machinery will allow you working **"AL.MA.ssimo"** of your expectations.

**For over 40 years** AL.MA. designs and manufactures machines for pasta factories: from pasta production and thermal treatment, up to the packaging process in modified atmosphere and labelling.

**Contact us and give us the chance to show you our potential!**

## COMBINED MACHINES

CA160R



PA55R

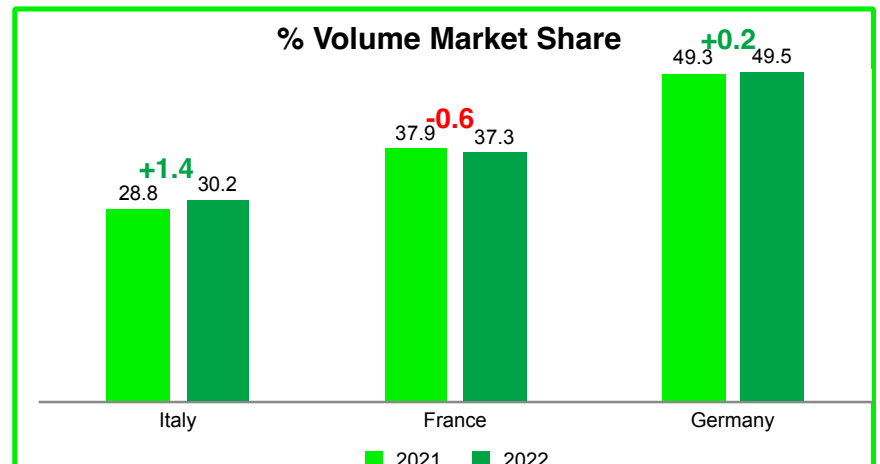
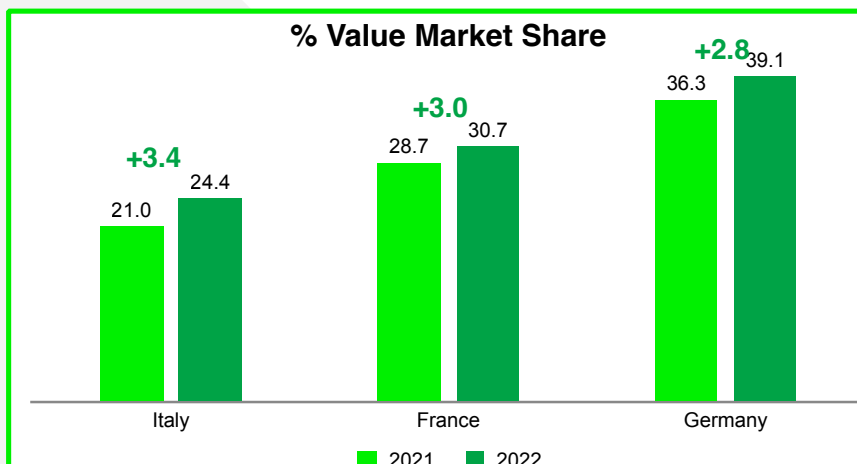


[alma-pasta-machinery.com/en/index](http://alma-pasta-machinery.com/en/index)





Private Labels are significantly improving their shares.



Source: NielsenIQ RMS DBs – last 6 months and comparison vs last year  
© 2022 Nielsen Consumer LLC. All Rights Reserved.

- on the qualitative level, however, the prospects will be weightier: the drivers and underlying motivations regarding dietary choices change considerably with age and while those in older age brackets are concerned with health and well-being, enjoyment is what interests younger brackets. In coming years, the macro-area of health and well-being will grow significantly as a result of demographic change. And there is more, because the concept of well-being is broad and is interpreted differently depending on age. While older age brackets are grounded in a very traditional concept of well-being with “medical” overtones (no sugar, no salt,

easy to digest, etc.), central age groups favour a more all-round concept of well-being that is advanced and more-inclusive involving questions of sustainability, certification and services – in short, well-being without compromise that offers players in mass consumption an open field in terms of added value.





# PENTA ENGINEERING

The **extruder machines** and the **dryers** have been designed to satisfy the pasta factory.



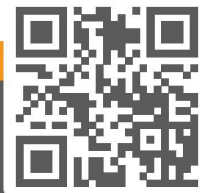
TECHNOLOGY  
made in Italy



FOLLOW US!

**WE DESIGN  
YOUR IDEAS!**

SCAN ME!



39 02 9370494

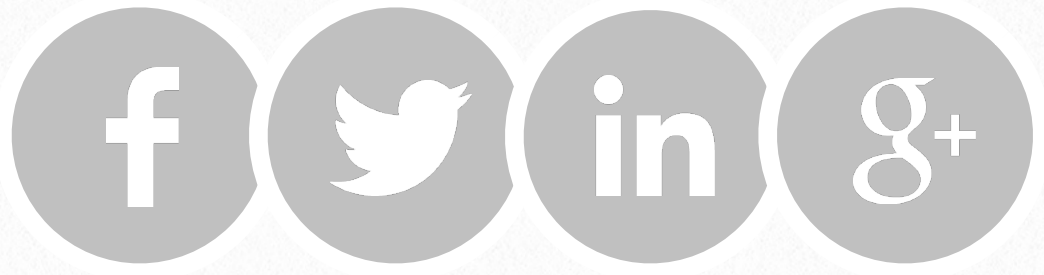
info@pentapastamachine.com

Viale del Lavoro 15 | 20003 - Casorezzo





# 2



## **An innovative process extends the shelf life of fresh pasta by 30 days**

Delia Sebelin



**The result of a 100% Italian study, the method combines conventional analytical technologies with highly innovative technologies.**



By adding “good bacteria” and changing the packaging protocols, the shelf life of fresh pasta can be extended by 30 days. The new method, outlined in the *Frontiers in Microbiology* journal, was developed by a group of researchers at the Institute of Biomembranes, Bioenergetics and Molecular Biotechnologies of the Italian National Research Council (Ibiom-Cnr), in collaboration with the University of Bari Aldo Moro and the Food Safety Lab private laboratory.

The researchers worked in various ways to optimise the modified atmosphere packaging (MAP) of trofie, a specific type of short pasta. On the one hand, they made changes both to the plastic films used in the packaging and to the proportion of gases; on the other, they added a particular mix of commercial bioprotective probiotic micro-organisms to the pasta itself.

A portion of the fresh pasta sample was produced and packaged conventionally. A second set was produced traditionally but stored under the experimental MAP conditions. The mix of probiotic micro-organisms was added to a third set of fresh trofie, which was then stored in the experimental packaging.

The fresh pasta was then examined up to the expiry date and beyond, to monitor the appearance of deterioration. The sets were

tested by applying a multi-omic approach that combined the conventional analytical technologies (traditional chemical analysis and microbiological analysis) with highly innovative technologies such as metagenomic analysis of the bacteria and fungi communities, proteomic analysis, and mass spectrometry aimed at profiling volatile organic compounds. The integrated data obtained clearly demonstrated the effectiveness of the experimental protocols tested, giving rise to a 30-day extension of the shelf life of fresh pasta.

## **Not limited to short pasta**

While trofie pasta was used for the study, the method can also be applied to long shapes.

“The results demonstrate that the change in MAP conditions combined with the use of probiotic bioprotective cultures acted in synergy to control the microbial deterioration of fresh pasta during refrigerated storage”, explained Francesca De Leo, researcher at Cnr-Ibiom. The technique developed by the team could be implemented at an industrial level, adding 30 days’ shelf life compared to a standard product.

Indeed, “the probiotics used are easy to obtain and work with, as they are



# SIDE

Machines and plants for food industry

## PASTEURIZING, PRE-DRYING AND FREEZING PLANT FOR STUFFED PASTA

Production capacity: 1000 Kg/h



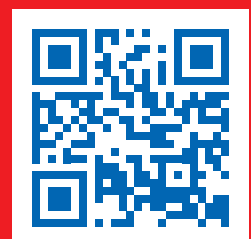
Nowadays, the needs in pasta factories are ever greater: production plants must be more compact, easily washable and highly efficient.

**SIDE** responds by building innovative machinery from time to time, acting on the basis of specific customer requests.

The combined pasteurizing/drying machine and the cooling/freezing spiral are valid examples, so much so that they now represent two leading elements of the wide range available.

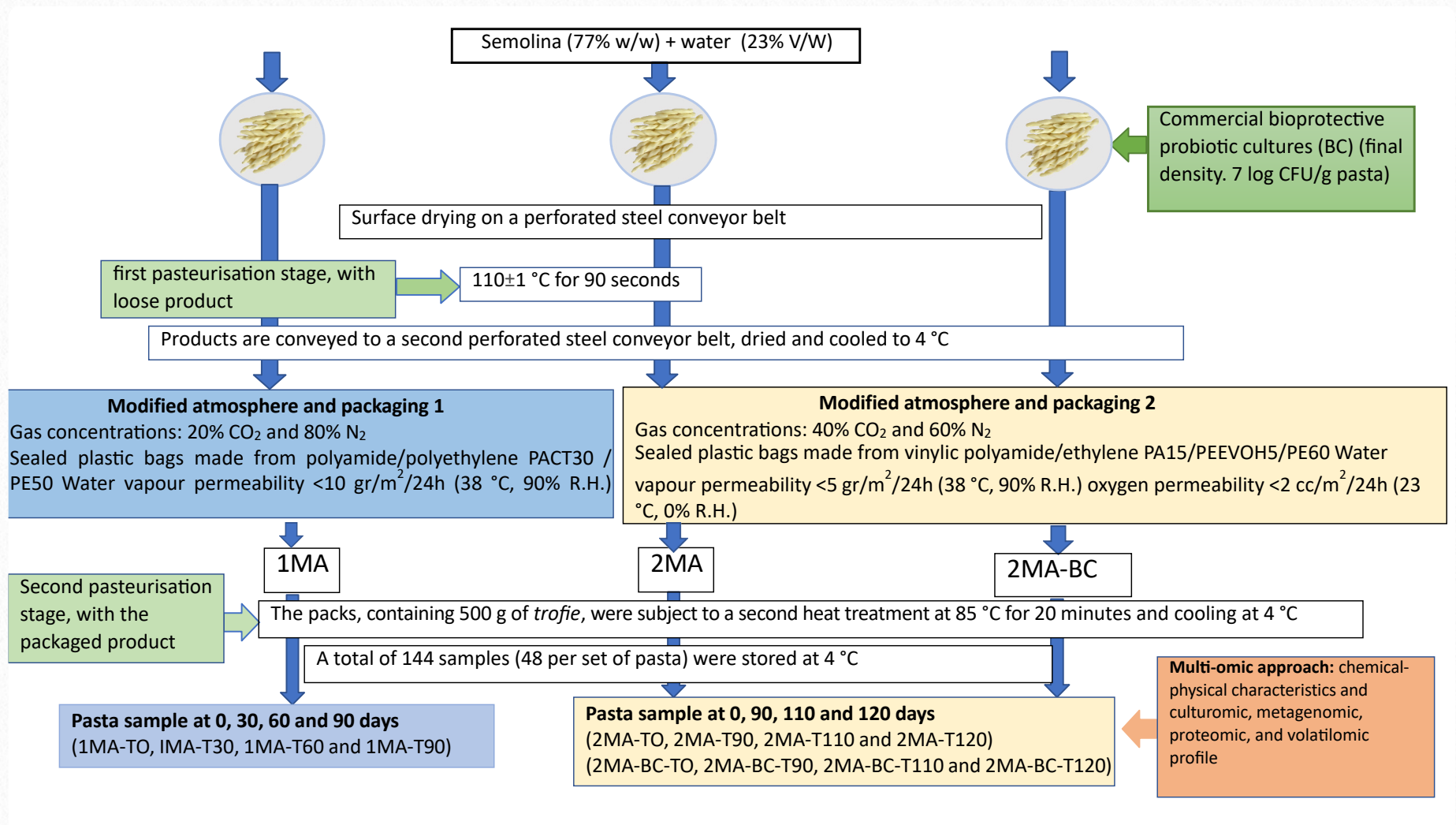
[www.sideprotech.com](http://www.sideprotech.com)

Viale Giovanni Falcone, 16 - 31037 Castione di Loria (TV) - Italy  
Tel. +39 0423 078 217 - E-mail: [info@sideprotech.com](mailto:info@sideprotech.com) - Site: [www.sideprotech.com](http://www.sideprotech.com)





**Figure 1 DIAGRAM OF THE NEW METHOD FOR EXTENDING THE SHELF LIFE OF FRESH PASTA**



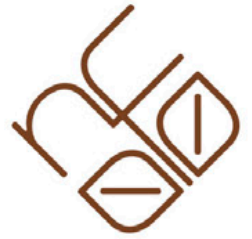
commercial products. The mix contains: *Lactobacillus acidophilus*, *Bifidobacterium animalis*, *Lacticaseibacillus paracasei* (basonym *Lactobacillus paracasei*), *Lacticaseibacillus casei* (basonym *Lactobacillus casei*) and *Bacillus coagulans* (Montefarmaco OTC Spa, Bollate, Milan, Italy).”

“From a consumer perspective, the advantage of this product is its greater shelf life, as well as that it is easy to store while retaining the typical organoleptic properties”, continued De Leo. “This could be particularly important given the increasing trend among consumers towards reducing the frequency of their

food shopping, and therefore towards storing products for as long as possible between purchasing and consuming”. It should be noted that no medium-long term feasibility plan has been carried out to date at a company level, and therefore the costs associated with applying this technology in an artisanal production facility are unknown.



# NATURAL FLAVOURINGS WITH MORE TASTE AND ZERO ALLERGENS



NEW  
**FLAVOURS**<sup>®</sup>  
ITALIAN SENSATIONS



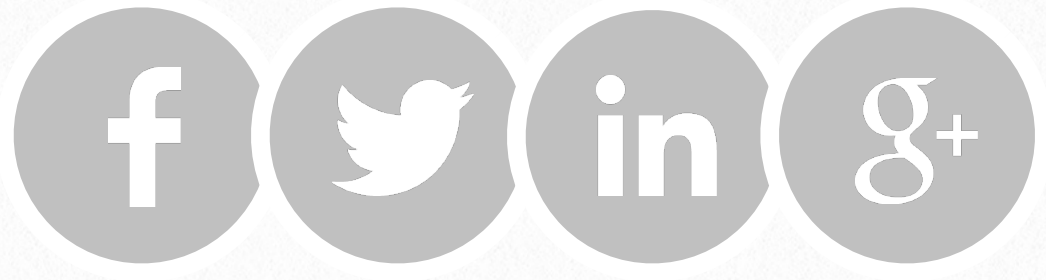
**THANKS TO THE RESEARCH OF NEW FLAVOURS, YOU CAN NOW HAVE  
ALL THE TASTE OF CELERY, NUTS AND MORE IN A NATURAL,  
ALLERGEN-FREE FLAVOURING.**

**NEW FLAVOURS SRL**

Via dell'Artigianato 7 | zona Ind.le Gioiello | 06010 Monte Santa Maria Tiberina (PG) | ITALY  
info@new-flavours.com | Tel. +39 075.857.82.95 | www.new-flavours.com



# 3



## National Pasta Association's 2023

National Pasta Association

# Annual Meeting: registration is now open



Closing dinner and awards ceremony at the Annual Meeting of the National Pasta Association 2022

**The 2023 Annual Meeting of the National Pasta Association is scheduled for 19-21 March. Registration for the event is now open.**



The National Pasta Association (NPA) will hold its 2023 Annual Meeting in Ponte Vedra Beach, FL, from March 19-21, 2023. The NPA Annual Meeting is the premier industry event each year that allows for critical conversations to be had and relationships to be built leading to a better and bigger pasta industry.

The annual meeting brings together pasta manufacturers, millers, ingredient suppliers, pasta equipment manufacturers, and others in the field for industry updates, education, and networking opportunities, including the popular executive one-on-one sessions, and the annual golf and bocce tournaments where attendees can spend time forming relationships with customers, suppliers, and partners.

“The NPA Annual Conference is a space for the industry to come together to connect on issues of importance and share knowledge,” said NPA Executive Director, Delia Murphy. “The impressive lineup of speakers, industry-leading presentations and networking opportunities are not to be missed.”

The program will feature presentations on a variety of relevant topics, including:

- *A State of the Industry report, featuring data and trends in the industry*
- *Understanding and Influencing Modern Consumers*
- *Pasta Solution Trends Using Novelty*

### *Ingredients*

- *2023 Economy Outlook - What Now? Recession, Recovery, Another Black Swan?*
- *2023 World & U.S. Durum Situation*
- *Legislative & Regulatory Updates*
- *Updates on NPA ongoing programs, including work on communications, nutrition research, and U.S. Standards of Identity.*

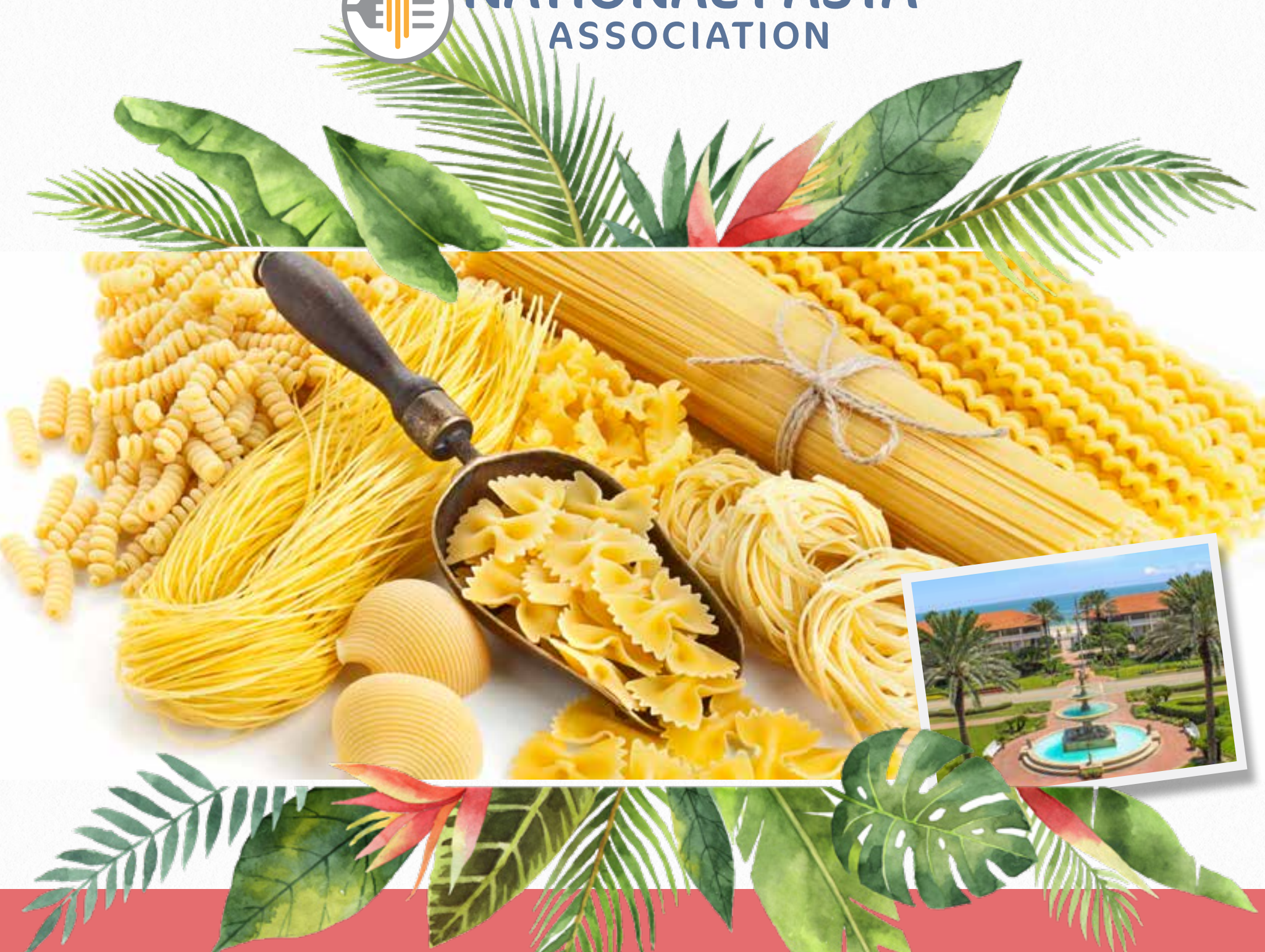
Sponsorship opportunities will be available for companies to promote their brand and gain exposure to number manufacturers and product/services providers in the industry.

Registration for the event is now open. Please visit [www.ilovepasta.org](http://www.ilovepasta.org) for more details on registration, sponsorship opportunities, and the full schedule of events. Registration is discounted for NPA members, but non-members are encouraged to attend to network and participate in conversations to help the industry grow.





**NATIONAL PASTA  
ASSOCIATION**



# 2023 *Annual Meeting*

Join us **March 19-21, 2023**

**Ponte Vedra Inn and Club in Ponte Vedra Beach, FL**

Visit [ilovepasta.org](http://ilovepasta.org) for more information



# 4



## Attributing value to chickpea bran in the production of gluten-free fresh pasta high in fibre and bioactive compounds

Michela Costantini, Carmine Summo, Michele Faccia, Francesco Caponio, Antonella Pasqualone  
University of Bari "Aldo Moro",  
Department of Soil, Plant and Food Science



The evaluation of the effect produced by adding chickpea bran to the nutritional and sensory characteristics of gluten-free Apulian *orecchiette*. A summary of Antonella Pasqualone's presentation<sup>1</sup> at the *Fresh pasta: production, innovative ingredients and preservation* conference held as part of the Pastaria Festival 2022.



## Introduction

Fresh pasta is ideal for the production of traditional shapes with a wide appeal to local consumers and tourists, such as Apulian orecchiette (Delvecchio and Pasqualone, 2013; Pasqualone *et al.*, 2017). The demand for gluten-free products, including fresh pasta, has notably increased over the years, but these products do not always meet nutritional requirements in terms of dietary fibre and micronutrients (Thompson *et al.*, 2005). Some studies have recommended increasing the fibre content of gluten-free fresh pasta by adding spirulina (Fradinho *et al.*, 2020), or fenugreek, tiger nut and chickpea flour (Llavata *et al.*, 2020). The latter, in particular, important for a healthy and sustainable diet, is also widespread in Apulia, where the local pigmented variety known as the ‘*Apulian black chickpea*’ is cultivated. This variety differs genetically from the common black desi chickpea variety (Pavan *et al.*, 2017) and has been the subject of a nutritional characterisation that has underlined its high concentration of antioxidant compounds, such as anthocyanins (Summo *et al.*, 2019). Apulian black chickpea flour is used in bakery products (Pasqualone *et al.*, 2019) and dried pasta (De Pasquale *et al.*, 2021). But the production of chickpea flour

generates waste in the form of bran, which should – in a circular economy perspective – be retrieved, being a source of dietary fibre and bioactive compounds (Niño-Medina *et al.*, 2017). The aim of this work was, therefore, to evaluate the effect produced by adding chickpea bran to the nutritional and sensory characteristics of gluten-free Apulian orecchiette. Both black Apulian chickpeas and the more common beige-coloured kabuli chickpeas were considered.

## Materials and methods

### Production of gluten-free fresh pasta

The dough was made by mixing equal parts of rice flour and a gel consisting of 2.5 g of xanthan gum and 2.5 g of carob seed flour, mixed in 100 g of room temperature water. The dough was then shaped by hand into Apulian orecchiette, as described by Pasqualone *et al.* (2017). The pasta was then placed on trays and left for a few hours at room temperature until it reached 28% humidity and 0.95  $a_w$ . The enriched pasta was obtained by incorporating Apulian black chickpea or kabuli chickpea bran at 8% w/w instead of rice flour, but no other modifications were made.





## DEEP FREEZING CONVEYOR BELT

Spiral freezing conveyor belts are industrial machinery with high efficiency. Thanks to their design, they offer high flexibility in the production management. Those machines are suitable for industrial pasta factories for the deep freezing of fresh pasta or ready meals such as lasagne and cannelloni. Furthermore by means of a dedicated electrical panel, the machine is able to save specific programs for each product. The plant is the perfect solution for freezing ready meals, desserts, fish, meat, sauces and more!



Fresh pasta machines  
Industrial plants for pasta factory  
[www.castiglioninedo.it](http://www.castiglioninedo.it)  
Made in Italy since 1955

Watch the video  
of the machine





## Chemical, physical and sensory analyses

The protein, fat, fibre, ash and moisture content was determined according to AOAC methods 979.09, 945.38 F, 991.43, 923.03 and 925.10 (AOAC, 2006).

Carotenoids and anthocyanins were quantified according to Pasqualone *et al.* (2013), while phenolic compounds and antioxidant activity (AA) according to Pasqualone *et al.* (2015). For the cooking tests, the pasta was cooked in boiling water at a ratio of 1:10 (w/v) pasta/water, without salt being added, as reported by Pasqualone *et al.* (2017). The optimal cooking time (OCT) was determined according to the AACC method 16-50 (AACC, 2000). Cooking loss was evaluated as described by Pasqualone *et al.* (2016). The texture of the cooked pasta was determined by means of a shear test using the Z1.0 TN texture analyser (Zwick Roell, Ulm, Germany) equipped with a guillotine blade, according to AACC method 66-50.01 (AACC, 2000). All experimental results were statistically analysed by a one-way ANOVA test, followed by Tukey's HSD test ( $p < 0.05$ ).

The sensory test was conducted by 17 semi-trained panelists on the basis of a sorting test (ISO 8587:2006), i.e. the 3 types of pasta were sorted on a rating scale of 1 (least appreciated) to 3 (most

appreciated). The sum of the ratings for each pasta type were analysed using the Friedman test. Post hoc analysis with the Wilcoxon test was conducted, applying the Bonferroni correction ( $p < 0.05$ ).

## Results and discussion

### Nutritional composition and firmness during cooking

The nutritional composition of gluten-free Apulian orecchiette pasta enriched with chickpea bran, shown in [Figure 1](#) and [Figure 2](#), was significantly different from the control ( $p < 0.05$ ) for all of the parameters considered. In particular, pasta fortified with Apulian black chickpea bran was distinguished by a higher protein and fat content than the other pasta types analysed, while pasta enriched with kabuli chickpea bran had the highest fibre content. The addition of chickpea bran always brought about a reduction in energy value. The results observed are in line with the composition of legume brans (Kaya *et al.*, 2018).

The fibre content found in the enriched pasta was higher than the minimum value required (6 g/100 g) for the use of the “high fibre” label in accordance with EU Regulation 1924/06.

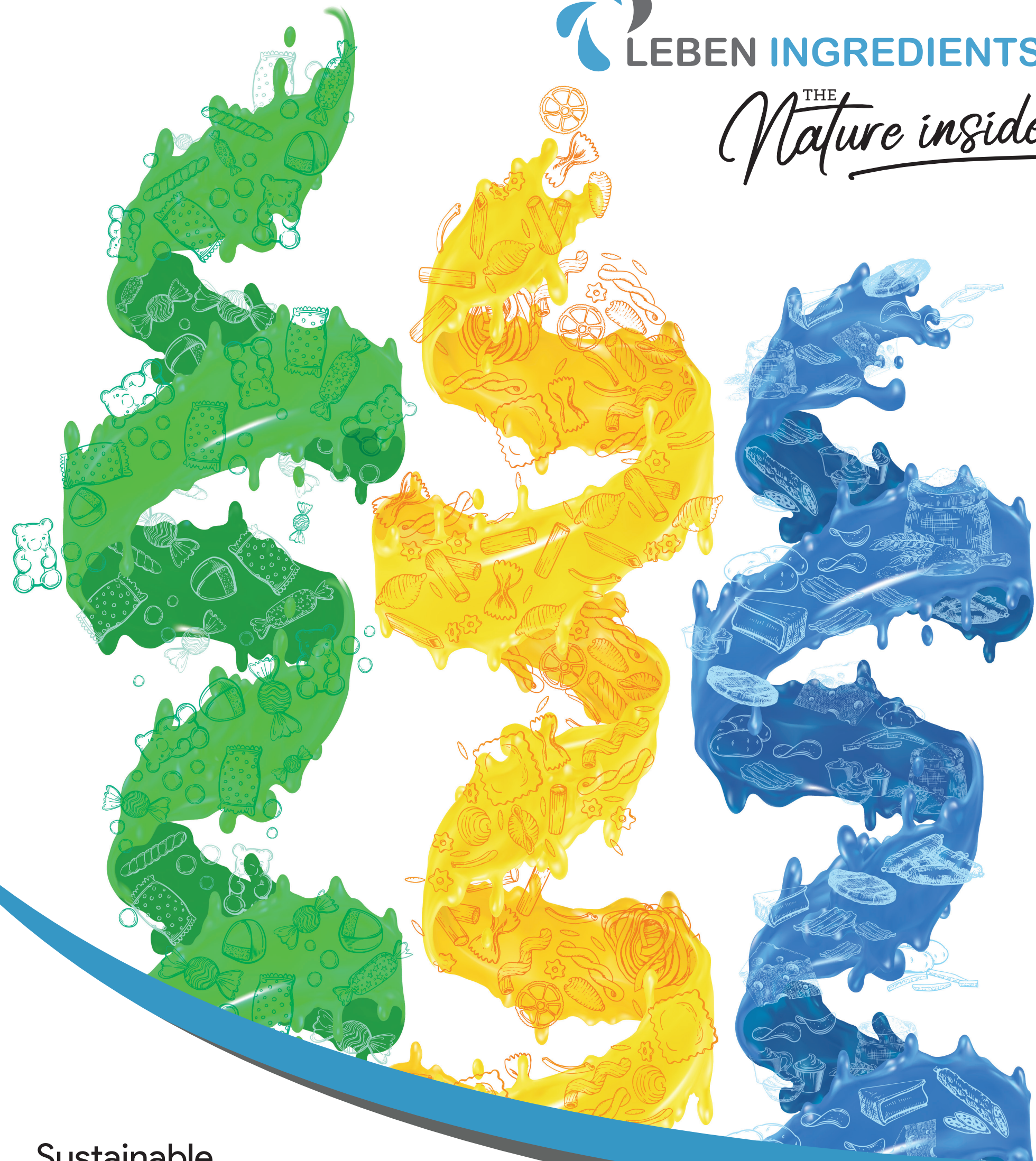
The pasta enriched with chickpea bran had greater firmness during cooking than





LEBEN INGREDIENTS

THE  
*Nature inside*



Sustainable  
*raw materials* from renewable sources.

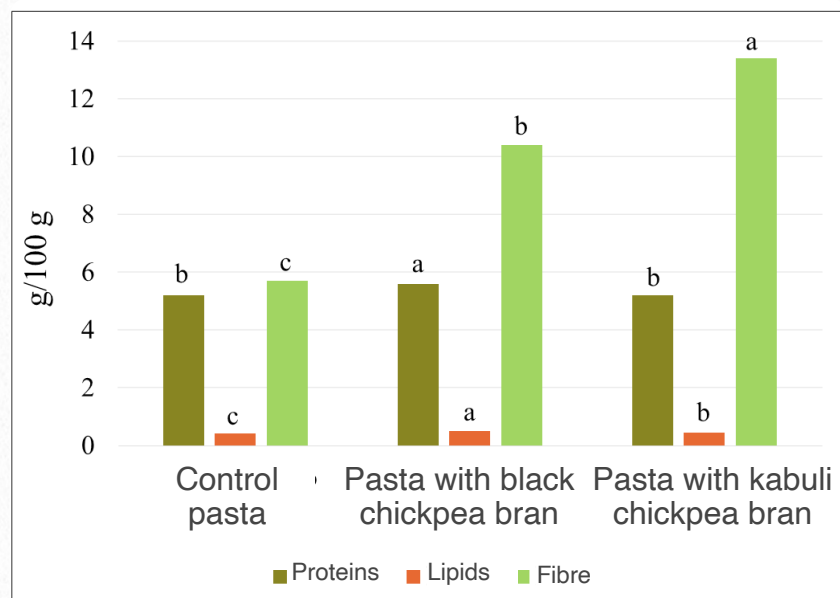
LEBEN INGREDIENTS

via Dante Alighieri, 43 - Lissone (MB) ITALY - Tel. +39 039 9405130

[www.lebeningredients.it](http://www.lebeningredients.it)



**Figure 1** PROTEIN, FAT AND FIBRE CONTENT OF GLUTEN-FREE APULIAN ORECCHIETTE MADE FROM RICE (CONTROL) OF APULIAN BLACK CHICKPEA OR KABULI CHICKPEA BRAN



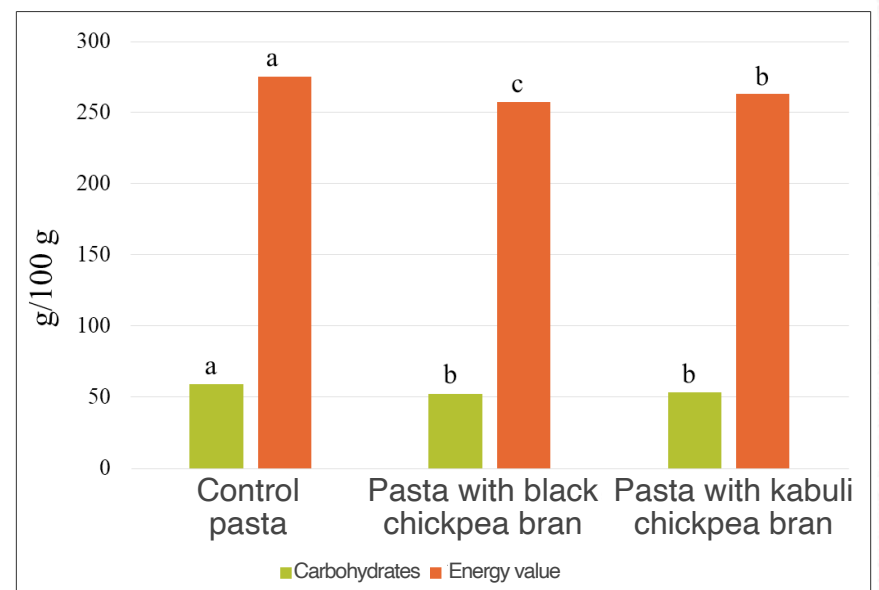
*Different letters for the same parameter indicate significant differences when  $p < 0.05$*

the control pasta, a superior texture and a lower cooking loss (Figure 3). These characteristics are typical of a good quality product.

### Bioactive compound content after cooking

The cooked pasta had interesting levels of bioactive compounds, even although these compounds are subject, to a certain extent, to thermal and oxidative degradation during cooking. Furthermore, phenolic compounds and anthocyanins are hydrophilic molecules that tend to pass into the cooking water (Fradinho *et al.*, 2020).

**Figure 2** CARBOHYDRATE CONTENT AND ENERGY VALUE OF GLUTEN-FREE APULIAN ORECCHIETTE MADE FROM RICE (CONTROL) OR ENRICHED WITH 8 g/100 g OF APULIAN BLACK CHICKPEA OR KABULI CHICKPEA BRAN



*Different letters for the same parameter indicate significant differences when  $p < 0.05$ .*

In particular, the pasta enriched with Apulian black chickpea bran showed a very high anthocyanin content (around 20 mg/kg), which was totally absent in the other two types of pasta (Figure 4). This result was expected, since the dark appearance of black chickpea bran is due to the anthocyanins, which are red and so concentrated that they generate a dark purple or black colour. Carotenoids and total phenolic compounds were also greater in the pasta with black chickpea bran than in the other two types (Figure 5). The higher content of bioactive compounds brought about a higher antioxidant activity in the pasta enriched with the black chickpea bran than in the



Imbutini®  
Forming machine

MF15/45®

MF25/75®



INDUSTRY 4.0

Tradition  
has a  
New Shape



@Imbutini

Sapori in Forma S.r.l.

051 0190912

Via dell'Industria, 24

Argelato 40050 (BO)



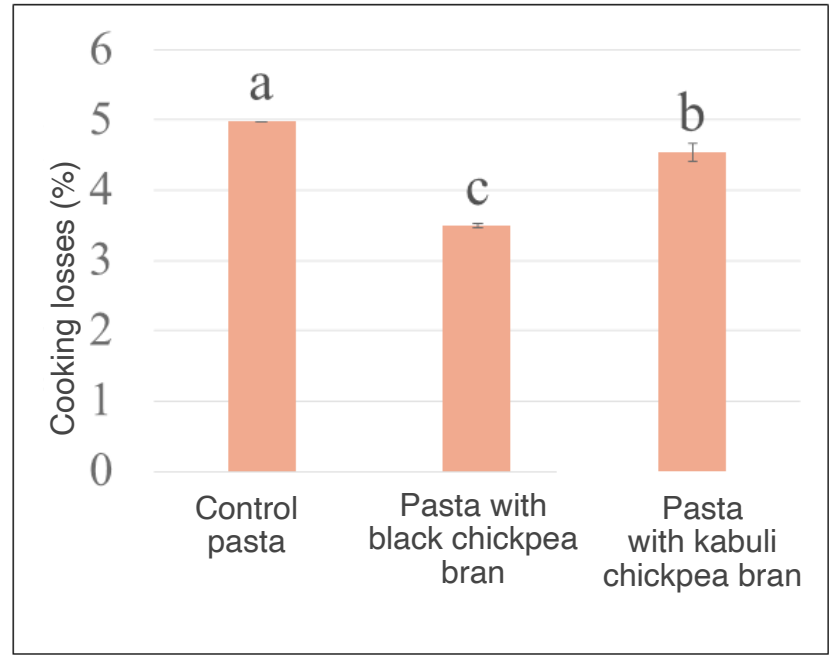
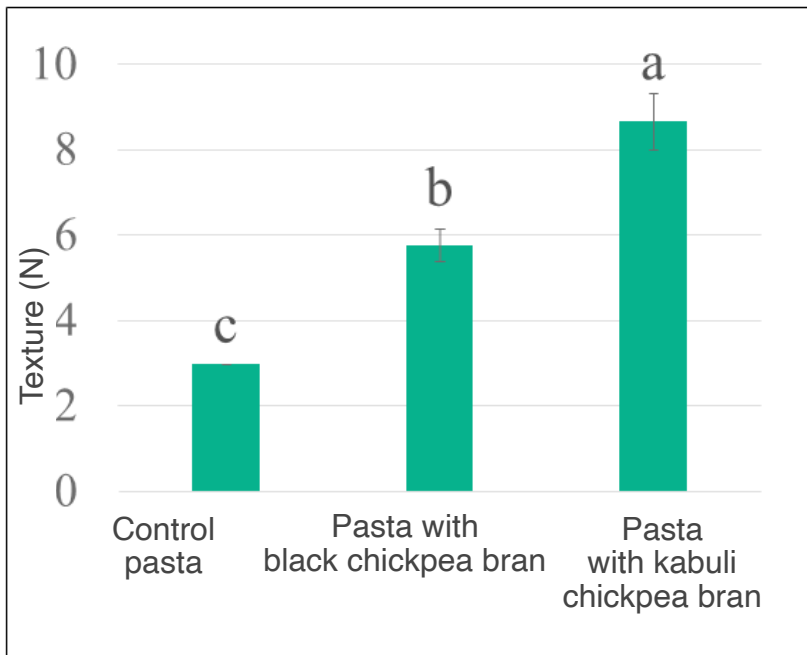
[www.saporiinforma.it](http://www.saporiinforma.it)

[info@saporiinforma.it](mailto:info@saporiinforma.it)



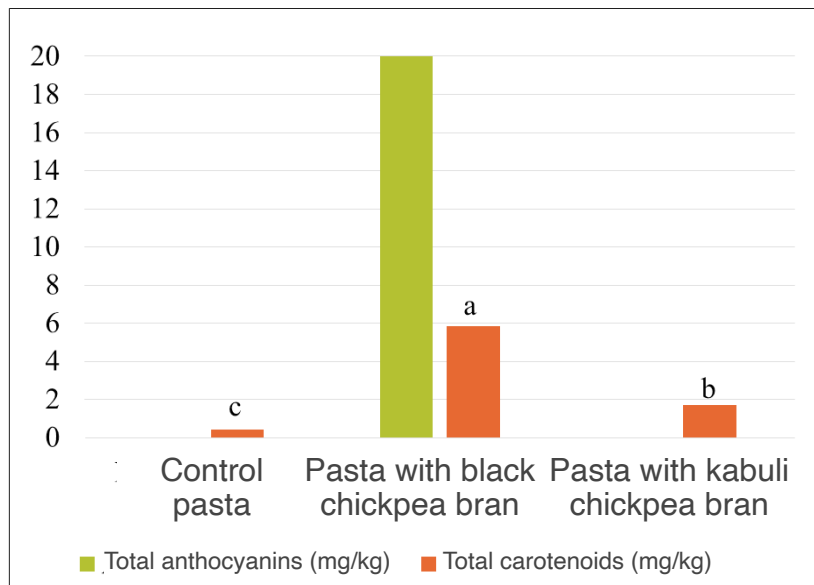


**Figure 3 TEXTURE AND COOKING LOSS OF GLUTEN-FREE APULIAN ORECCHIETTE MADE FROM RICE (CONTROL) OR ENRICHED WITH 8 g/100 g OF APULIAN BLACK CHICKPEA OR KABULI CHICKPEA BRAN**



*Different letters for the same parameter indicate significant differences when  $p < 0.05$*

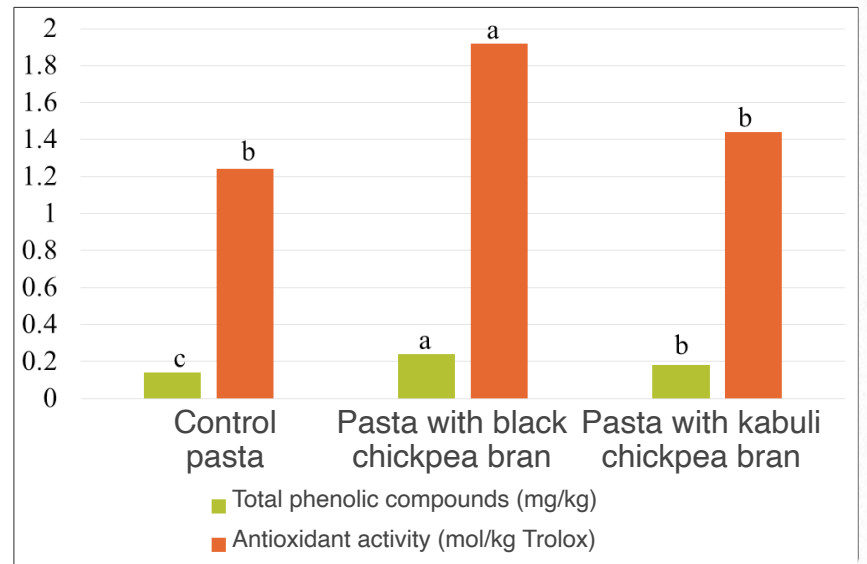
**Figure 4 TOTAL ANTHOCYANIN AND TOTAL CAROTENOID CONTENT IN GLUTEN-FREE APULIAN ORECCHIETTE MADE FROM RICE (CONTROL) OR ENRICHED WITH 8 g/100 g OF APULIAN BLACK CHICKPEA OR KABULI CHICKPEA BRAN**



*Different letters for the same parameter indicate significant differences when  $p < 0.05$*

other two types of pasta. Pasta enriched with kabuli chickpea bran presented

**Figure 5 TOTAL PHENOLIC COMPOUNDS CONTENT AND ANTIOXIDANT ACTIVITY IN GLUTEN-FREE APULIAN ORECCHIETTE MADE FROM RICE (CONTROL) OR ENRICHED WITH 8 g/100 g OF APULIAN BLACK CHICKPEA OR KABULI CHICKPEA BRAN**



*Different letters for the same parameter indicate significant differences when  $p < 0.05$*

characteristics halfway between the control pasta and that containing the black





## A PASSION FOR BASIL SINCE 1919

We supply semi-finished products of P.D.O. Genovese basil for food industries, whether fresh, frozen or pasteurized, for industrial delis, small delis and restaurant chains.

*The flavor of Liguria  
for unforgettable recipes!*



AZIENDA AGRARIA ANFOSSI



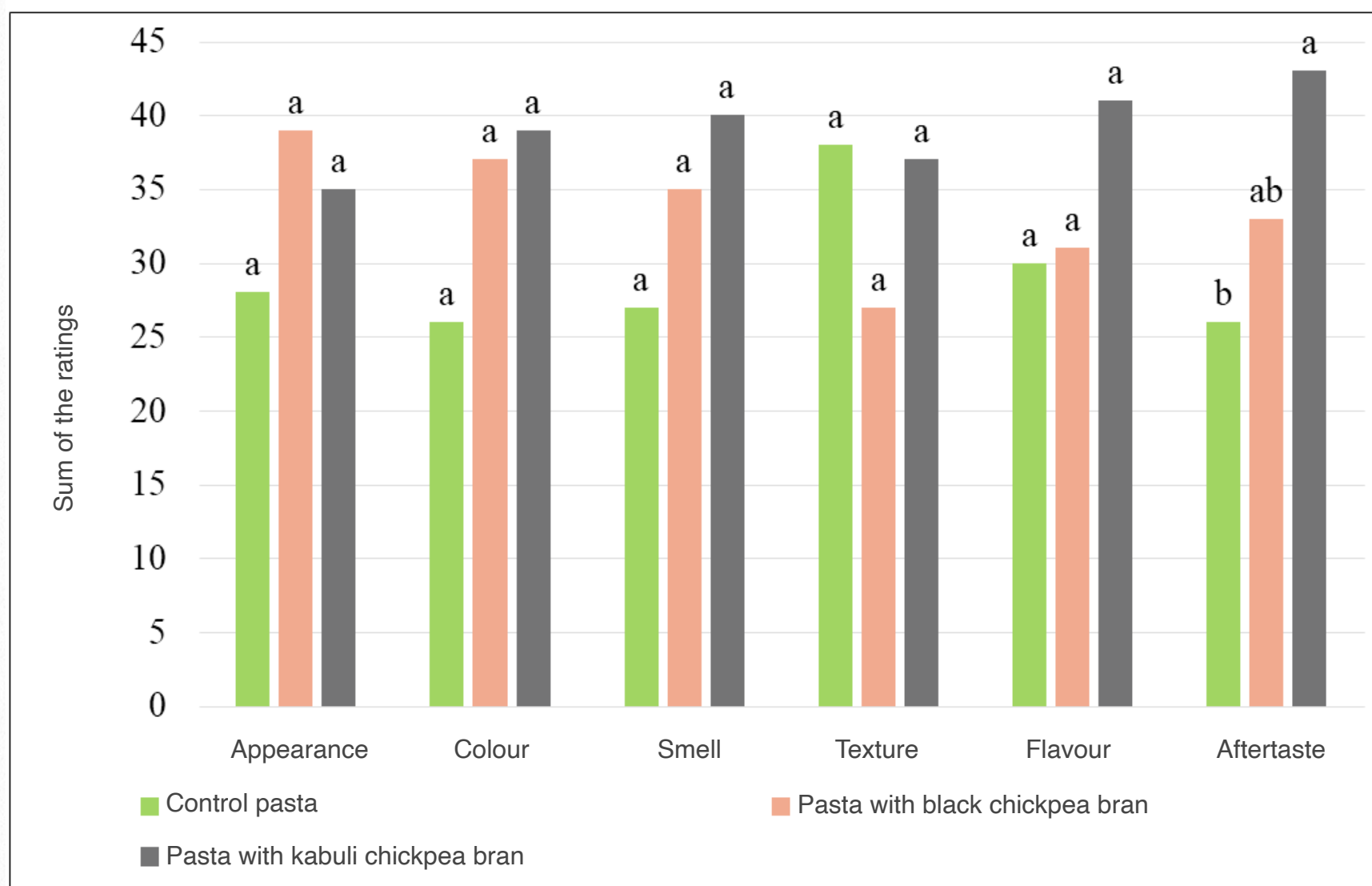
Tel. +39 0182 20024

[www.basilicodop.eu](http://www.basilicodop.eu)





**Figure 6 THE SCORE OBTAINED IN THE SENSORY SORTING TEST OF THE GLUTEN-FREE APULIAN ORECCHIETTE MADE FROM RICE (CONTROL) OR ENRICHED WITH 8 g/100 g OF APULIAN BLACK CHICKPEA OR KABULI CHICKPEA BRAN**



*Different letters for the same parameter indicate significant differences when  $p < 0.05$*

chickpea bran for all of the parameters considered.

### Sensory test

The sensory appreciation of the three types of pasta was not significantly different (Figure 6), with the exception of the “aftertaste” of the pasta containing the kabuli chickpea bran, which was the most appreciated, followed by the pasta enriched with the black chickpea bran and the control pasta.

In general, although not statistically significant, the pasta enriched with the kabuli chickpea bran was more highly appreciated than the pasta enriched with the Apulian black chickpea bran. Furthermore, the “appearance” and “colour” of the enriched pasta were judged to be more aesthetically pleasing than the control, indicating that the presence of bran particles on the surface of the dough (Figure 7) was considered a positive aspect.



# MACHINES FOR PASTA PRODUCERS



from A to Z • *New & Second hand*



Gnocchi machines



Combined machines



Industrial lines



Extruders for pasta



Pasteurizers



Nests machines



Dryers



Presses



Automatic sheeters



Cappelletti machines

Contact us:

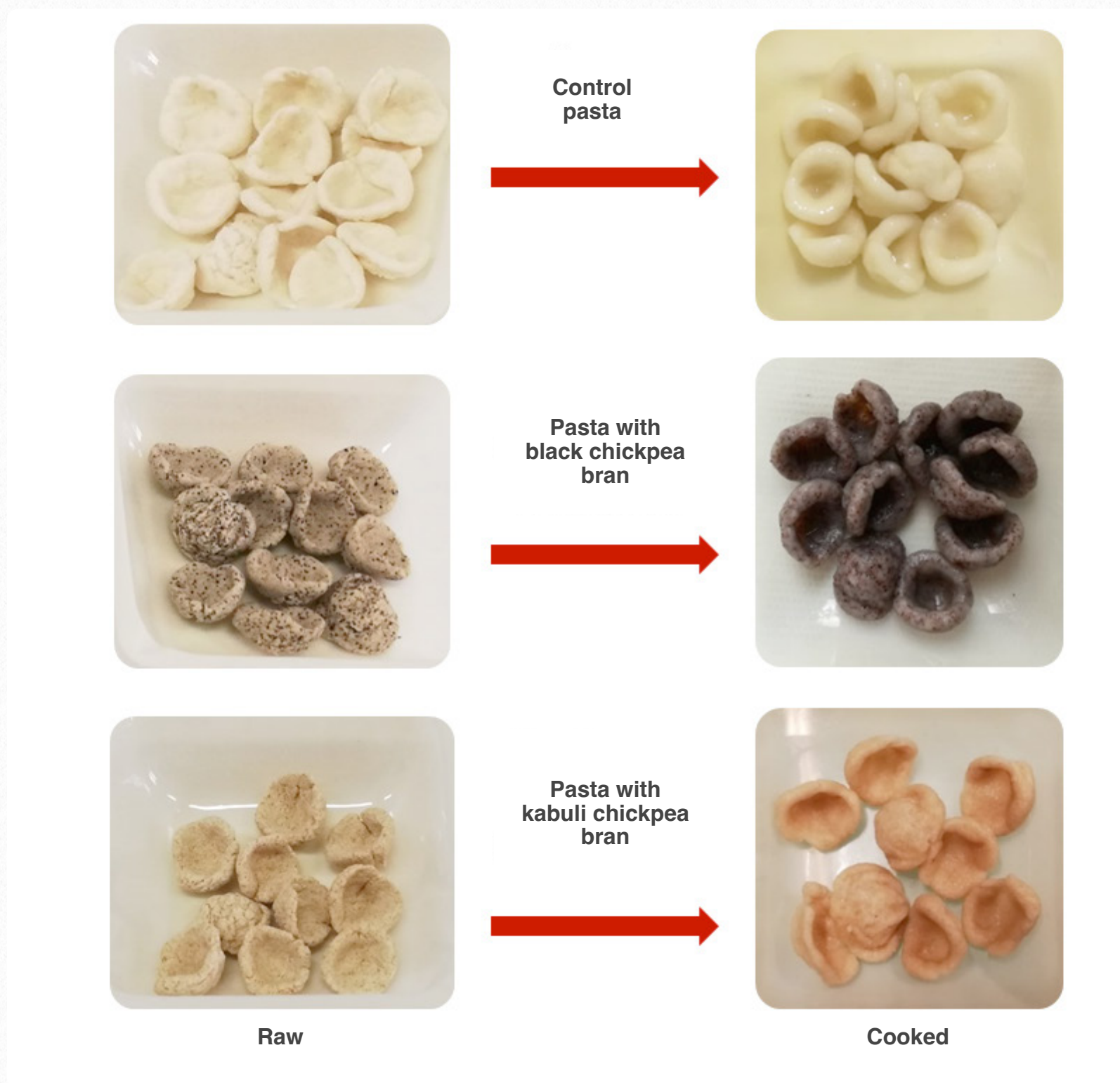
T. (+39) 0331 557200

info@aldocozzi.it • www.aldocozzi.it





**Figure 7 APPEARANCE BEFORE AND AFTER COOKING OF THE GLUTEN-FREE APULIAN ORECCHIETTE MADE FROM RICE (CONTROL) OR ENRICHED WITH 8 g/100 g OF APULIAN BLACK CHICKPEA OR KABULI CHICKPEA BRAN**

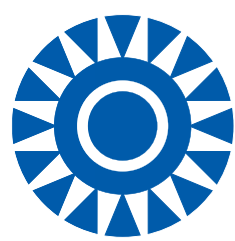


## Conclusions

A high content of fibre and bioactive compounds makes the chickpea bran, particularly that of the Apulian black chickpeas, a suitable ingredient for the development of new functional food products. The results obtained show, in

fact, that it is possible to improve the nutritional, structural characteristics and the cooking performance of gluten-free fresh pasta, even with a relatively low enrichment (8 g/100 g). This strategy adds value to the chickpea milling waste and helps increase the dietary intake of





# APPAFRE

Associazione produttori pasta fresca  
della piccola e media impresa



## INSIEME PER ESSERE PIÙ FORTI!

**A.P.PA.FRE.** associa imprenditori della piccola e media impresa, produttori di pasta fresca e gnocchi, per meglio tutelare una categoria di produttori, troppo spesso dimenticati. I nostri associati, sono riconosciuti dalle istituzioni e dal mercato, come categoria di pastai che rappresentano la vera tipicità e la migliore tradizione culinaria italiana. Fiore all'occhiello del made in Italy, riconosciuta e apprezzata anche all'estero.

**A.P.PA.FRE.** si caratterizza per la capacità di offrire gratuitamente ai propri associati, qualsiasi consulenza di carattere tecnico e normativo, oltre alla divulgazione di informazioni su iniziative legislative.

Per info e/o contatti:  
Virna Soncin (segretario) - Cell. 348.6593130

### SOCI SOSTENITORI / FORNITORI

Ecochimica S.r.l. Casalzuigno (VA)  
PRC Impianti S.r.l. Borgo Ticino (NO)  
Molino Grassi S.p.a. Fraore (PR)  
IPAM S.r.l. Zibello (PR)  
Flavourland S.r.l. Pero (MI)  
G&Partners S.A. Taverne (CH)

Italgi S.r.l. Carasco (GE)  
Milani Foods S.r.l. Verona (VR)  
Parmovo S.r.l. Colorno (PR)  
Pastaria - Kinski Editori Parma (PR)  
ePublic S.r.l. Novara (NO)  
Vercelli S.p.a. Formigliana (VC)



A.P.Pa.Fre. Sede operativa c/o CNA PIEMONTE NORD  
Viale Dante Alighieri 37 - 28100 Novara (NO)  
Tel. 0321.399564/5 - Fax 0321.398488  
info@appafre.it - www.appafre.it

*Piemonte Nord*



bioactive compounds with antioxidant properties.

## Notes

1. Contribution presented at Pastaria Festival 2022 by Antonella Pasqualone and taken from Costantini, M., Summo, C., Faccia, M., Caponio, F. and Pasqualone, A., 2021. *Kabuli and Apulian black chickpea milling by-products as innovative ingredients to provide high levels of dietary fibre and bioactive compounds in gluten-free fresh pasta*. *Molecules*, 26(15), p.4442.

## Bibliography

- De Pasquale, I., Verni, M., Verardo, V., Gómez-Caravaca, A.M., Rizzello, C.G. (2021). *Nutritional and functional advantages of the use of fermented black chickpea flour for semolina-pasta fortification*. *Foods*, 10, 182. <https://doi.org/10.3390/foods10010182>.
- Delvecchio, L.N., Pasqualone, A. (2013). *Production trials of fresh pasta enriched with phenolic compounds extracted from wheat by KOH-induced hydrolysis*. *Progress in Nutrition*, 14, 247– 251.
- European Commission. Regulation (EC) No 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006R1924&from=EN>.
- Fradinho, P., Niccolai, A., Soares, R., Rodolfi, L., Biondi, N., Tredici, M.R., Sousa, I., Raymundo, A. (2020). *Effect of *Arthrospira platensis* (spirulina) incorporation on the rheological and bioactive properties of gluten-free fresh pasta*. *Algal Research*, 45, 101743. <https://doi.org/10.1016/>

## GET THE MOST OUT OF THE PASTARIA NETWORK.

### ✓ Read the **Digital Magazine**

Published on odd months. Download it from [pastaria.it](http://pastaria.it) or read it using the App.

### ✓ Read the **Paper Magazine**

To receive future issues please register on [pastaria.it](http://pastaria.it) and activate a free subscription  
Published on even months

### ✓ Read the articles published on **Pastaria.it**

Log on daily to discover what's new in the sector.

### ✓ Follow and share what we do on our **social media channels**

Facebook: <https://www.facebook.com/PastariaMagazine/>

Twitter: <https://twitter.com/rivistapastaria>

### ✓ Take part in **Pastaria Festival**

### ✓ Install the **Free App**

For smartphones and tablets, iOS and Android

*And there's more:*

✓ Find and request offers for machines, ingredients and services on **[pastariahub.com](http://pastariahub.com)**





# MACCHINE ED IMPIANTI PER PASTA



ITALGI S.R.L. VIA PONTEVECCHIO 96A - 16042 CARASCO (GE) - ITALY  
TEL. (+39) 0185.350206 (+39) 0185.351525 - E-MAIL: ITALGI@ITALGI.IT - WEB: WWW.ITALGI.IT



[j.algal.2019.101743.](https://doi.org/10.1007/s13197-018-3086-1)

- Kaya, E., Tuncel, N.Y., Tuncel, N.B. (2018). *Utilization of lentil, pea, and faba bean hulls in Turkish noodle production*. Journal of Food Science and Technology, 55, 1734–1745. <https://doi.org/10.1007/s13197-018-3086-1>.
- Llavata, B., Albors, A., Martin-Esparza, M.E. (2020). *High fibre gluten-free fresh pasta with tiger nut, chickpea and fenugreek: Techno-functional, sensory and nutritional properties*. Foods, 9, 11. <https://doi.org/10.3390/foods9010011>.
- Niño-Medina, G., Muy-Rangel, D., Urías-Orona, V. (2017). *Chickpea (Cicer arietinum) and soybean (Glycine max) hulls: Byproducts with potential use as a source of high value-added food products*. Waste Biomass Valori, 8, 1199–1203. <https://doi.org/10.1007/s12649-016-9700-4>.
- Pasqualone, A., Bianco, A.M., Paradiso, V.M. (2013). *Production trials to improve the nutritional quality of biscuits and to enrich them with natural anthocyanins*. CyTA-Journal of Food, 11, 301–308.
- Pasqualone, A., Bianco, A.M., Paradiso, V.M., Summo, C., Gambacorta, G., Caponio, F., Blanco, A. (2015). *Production and characterization of functional biscuits obtained from purple wheat*. Food Chemistry, 180, 64–70.
- Pasqualone, A., De Angelis, D., Squeo, G., Difonzo, G., Caponio, F., Summo, C. (2019). *The effect of the addition of Apulian black chickpea flour on the nutritional and qualitative properties of durum wheat-based bakery products*. Foods, 8, 504. <https://doi.org/10.3390/foods8100504>.
- Pasqualone, A., Gambacorta, G., Summo, C., Caponio, F., Di Miceli, G., Flagella, Z., Marrese, P.P., Piro, G., Perrotta, C., De Bellis, L., Lenucci, M.S. (2016). *Functional, textural and sensory properties of dry pasta supplemented with lyophilized tomato matrix or with durum wheat bran extracts produced by supercritical carbon dioxide or ultrasound*. Food Chemistry, 213, 545–553.
- Pasqualone, A., Punzi, R., Trani, A., Summo, C., Paradiso, V.M., Caponio, F., Gambacorta, G. (2017). *Enrichment of fresh pasta with antioxidant extracts obtained from artichoke canning by-products by ultrasound-assisted technology and quality characterisation of the end product*. International Journal of Food Science & Technology, 52, 2078–2087. <https://doi.org/10.1111/ijfs.13486>.
- Pavan, S., Lotti, C., Marcotrigiano, A.R., Mazzeo, R., Bardaro, N., Bracuto, V., Taranto, F., D’Agostino, N., Schiavulli, A., De Giovanni, C., Montemurro, C., Sonnante, G., Ricciardi, L. (2017). *Distinct genetic cluster in cultivated chickpea as revealed by genome-wide marker discovery and genotyping*. Plant Genome, 10, plantgenome2016-11. <https://doi.org/10.3835/plantgenome2016.11.0115>.
- Summo, C., De Angelis, D., Ricciardi, L., Caponio, F., Lotti, C., Pavan, S., Pasqualone, A. (2019). *Nutritional, physico-chemical and functional characterization of a global chickpea collection*. Journal of Food Composition and Analysis, 84, 103306. <https://doi.org/10.1016/j.jfca.2019.103306>.
- Thompson, T., Dennis, M., Higgins, L.A., Lee, A.R., Sharrett, M.K. (2005). *Gluten-free diet survey: Are Americans with coeliac disease consuming recommended amounts of fibre, iron, calcium and grain foods?* Journal of Human Nutrition and Dietetics, 18, 163–169. <https://doi.org/10.1111/j.1365-277X.2005.00607.x>



BRAZILIAN  
BISCUITS, PASTA  
AND INDUSTRIALIZED  
BREADS & CAKES  
ASSOCIATION

**TOGETHER WE  
ARE STRONGER**

We represents more than **40 billion** in sales per year, **3.5 million** tons of products consumed and **158k tons** of brazilian Biscuits, Pasta and Industrialized Breads & Cakes around the World.

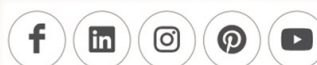


Brazilian Manufacturers Association of Biscuits,  
Pasta and Industrialized Breads & Cakes

**BRAZIL IS IN THE TOP 10  
IN THE BAKERY INDUSTRY**

3<sup>rd</sup> place for **biscuits** in the world;  
3<sup>rd</sup> place in the dried **pasta** in the world;  
9<sup>th</sup> package **bread** in the world.

Follow us on:





# 5



## Commodity price observatory 1/2023

Pastaria Centre for Economic Research



Pastaria's four-monthly feature on the prices of the main raw materials used by pasta manufacturers.



The dominant theme in commodity markets is still uncertainty. But the feeling – if the prevailing opinions of economic research offices and institutes are to be believed – is that a phase of stagflation is imminent: flat, or, at worst, marginally negative growth, associated with a still highly inflationary environment, albeit one that is gradually improving. This is something closer to stagnation than to the full-blown recession feared in recent months, when Prometeia’s experts were forecasting a 0.4% growth in Italy’s GDP for the whole of 2023, but a 0.3% drop in the first quarter. In the meantime, the central banks seem – and declare themselves to be – determined, the ECB first and foremost, to keep tightening their monetary policies, choices that symbolise and will in fact take the form of new rises in interest rates and further cash haemorrhaging, for as long as inflation remains far from its target of 2%.

Predictably, in response to these dynamics and worsening expectations, speculative activities are likely to be less audacious, and lower consumption pressure, dampened by the fall in household purchasing power, is likely to reduce inflationary pressure, starting from commodities, including agricultural and food commodities. At the beginning of January, thanks to the mild winter and the

EU price cap agreement, which put a ceiling of €180 per megawatt-hour on the Dutch TTF, i.e. the European reference market, the price of natural gas fell to less than € 70 in Amsterdam, a level far below the peaks of last summer (which reached € 350 in August), and to the lowest level since February 2022, prior to the outbreak of the war in Ukraine. On the basis of this evidence and the importance of the energy component in the weighted basket of consumer prices, a scenario characterised by a gradual easing of inflationary pressures is expected, the effects of which could, however, become more evident and more firmly-rooted in the course of 2024. Entering into the details of certain commodities, it is also useful to assess the impact of the current (and future) prices of staples, which seem at this stage to confirm, albeit with the necessary caution, the forecast that prices are likely to cool, especially in the cereal market. For wheat in particular, high availability on international markets and the pressure of Russian grain (with Moscow retaining its world leadership in export volumes this year), together with the renewal of agreements on the Black Sea corridor for the passage of Kyiv’s merchant vessels, are all factors that should steer prices onto a downward path, with knock-on effects also downline of the agricultural phase,









FOOD TECHNOLOGIES

*Fresh filled or non-filled pasta, dry, special, raw flour, pre-cooked, pasteurized, frozen pasta, gluten-free or not, using or not special flours: there are no limits to the customization of your industrial plant of pasta production.*



## PASTA MACHINERY

-  FRESH PASTA
-  PRE-COOKED PASTA
-  DRY PASTA
-  GNOCCHI

In collaboration with Pangea srl

[www.sarp.it](http://www.sarp.it) - T. +39 0423482633



## PRICES AND TRENDS OF CERTAIN FOOD RAW MATERIALS (DECEMBER)

	Price (€/ton)	Monthly variation	Annual variation	Forecast
<b>National fine common wheat</b>	341.5	-7.9%	4.8%	▼
<b>Fine durum wheat from North Italy</b>	484.5	-3.2%	-10.1%	▼
<b>00 type common wheat flour</b>	725	-3.3%	9%	▼
<b>Semolina above min. leg. req.</b>	817.5	-2.2%	-6.8%	▼
<b>Eggs M</b>	18.5	0.8%	28.5%	▼
<b>Pork hams for Prosciutto 12 kg and over</b>	4.9	0.4%	24.1%	▼
<b>Beef – veal meat half-carcass, prime quality</b>	6.86	2.1%	24.5%	▼
<b>Raw milk</b>	63.94	-5%	34.2%	=
<b>Centrifuged butter</b>	5.6	-10.3%	0.5%	▼
<b>Grana Padano aged for 9 months or more</b>	9.43	1.3%	32.8%	=
<b>Extra virgin olive oil</b>	6.15	0%	43%	▲

*Source: Centro Studi Economici Pastaria elaboration based on various data sources. Grain, flours and semolina: Granaria, Bologna; Eggs: CCIAA, Forlì; Pork and beef: Commodity Exchange, Modena; Milk, butter and Grana Padano: Commodity Market, Milan; Olive oil: CCIAA, Bari.*



# AL.MA.SSIMO

of protection

The packaging of a food product is essential to preserve its excellence.

**AL.MA. thermoforming packing machines** guarantee the correct conservation of the exceptional chemical-physical and organoleptic properties of fresh pasta.

Discover our thermoforming machines for the packing of fresh pasta in modified atmosphere.

**The high quality journey deserves the best protection.**



[almapackaging.com](http://almapackaging.com)





**PRICE MONITORING**

FAO Food Price Index	Price (2014-2016=100)	Monthly variation	Annual variation	Forecast
	132.4	-1.9%	-1%	▼
Hard Red Winter US Gulf port	Price (USD/ton)	Monthly variation	Annual variation	Forecast
	422.68	-3.5%	12.2%	▼
Mais, U.S. No. 2 Yellow FOB US Gulf port	Price (USD/ton)	Monthly variation	Annual variation	Forecast
	320.92	-6.6%	21.3%	▼

*Fao Food Price Index: December 2022; Hard Red Winter, Mais: November 2022*

particularly on flour and pasta price lists. This phenomenon, which is already underway, could further undermine wheat prices on the national commodity exchanges, even although high production costs and probable further price flutters, concerning fertilisers and other technical equipment used in agriculture, could limit the deflationary tendencies currently in course. On the subject of staples, China, which does not seem to be sailing in calm waters, has also to be taken into consideration. The serious health emergency, due to the escalation of Covid infections, and the country's lower economic growth due to the long-term repercussions of the pandemic and the initial difficulties in maintaining consumption levels, signify that China is likely to be less dominant on international markets, with spillover effects on global demand. On the supply side, climate

change will still be the factor to be considered most closely due to its potential repercussions on the upcoming harvests, which look positive so far, at least in terms of wheat allocations, also in Europe. With regard to the livestock sectors (meat and dairy), a slower downward adjustment of prices is expected, with possible further tensions attributable to the still limited supply, and tensions relating to production costs, especially for the feed component. Supply gaps pave the way for inflationary scenarios in the olive oil markets, given the deficits experienced in Spain and Italy, where – in addition to the phenomenon of productive off years linked to the alternating cycle of the olive groves – the weather also played a significant part in the season's results. On the basis of these assessments, 2023 should, therefore, be a year of transition, ushering in a gradual exit

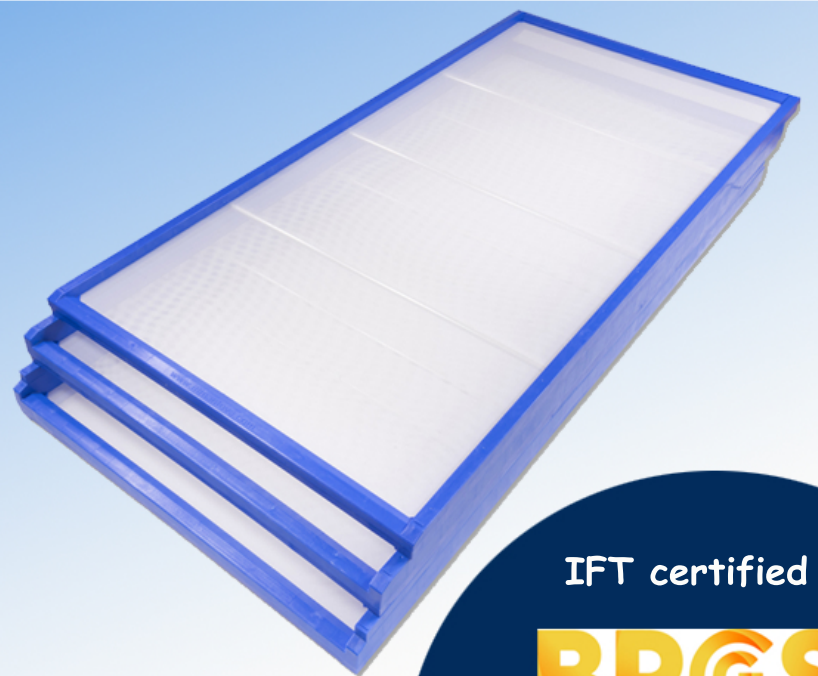


# PLASTIC FRAME FOR DRYING PASTA Standard CE

*Successfully used in  
prestigious pasta maker  
in Italy and worldwid*

## Models:

TPP35: mm 1200x600xh35  
TPP54: mm 1200x600xh54  
TPP70: mm 1200x600xh70





# PASTARIA HUB

[www.pastariahub.com](http://www.pastariahub.com)

TECHNOLOGIES  
INGREDIENTS  
SERVICES  
FOR PASTA  
MANUFACTURERS

from the hyperinflationary environment that has characterised the past twelve months. In its usual monthly food commodity monitoring, the FAO too certified the ninth consecutive drop in agricultural and food commodity prices in December. The further downward correction, of 1.9% compared to November, reflects in the summarised data the negative trend of international prices for cereals, vegetable oils and meat, partially offset by moderate increases in December in sugar and dairy products.

The year 2022, assessed as a whole in economic terms, left as its legacy a maxi-increase of 14.3% for aggregated agricultural and food commodities,

although the trend in December reduces the positive year-on-year gap to just one percentage point.

The cereal price index reached a new all-time high, with an increase of 17.9% compared to 2021. Vegetable oils and dairy products also set a new record, with price increases of 13.9% and 19.6%, respectively, over the past twelve months. Meat is up by 10.4%, but there are indications of possible deflationary developments for beef cuts, which have been subject, in the medium term, to a gradual flagging in global demand.



FROM THE LAND OF WHEAT  
· SINCE ·  
**PASTA**  
**ARGENTINA**  
· 1860 ·

*La mejor Pasta de  
Sudamérica*



VIENE DE  
NUESTRO TRIGO

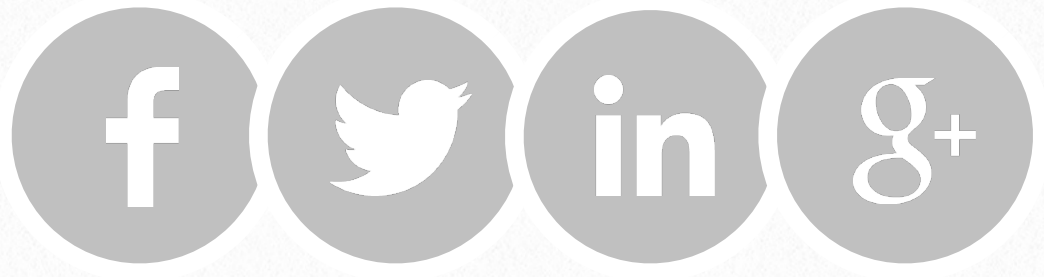


SALE DE  
NUESTRO CORAZÓN





# 6



## The out-of-home market and performance of pasta

Matteo Figura  
NPD Group



Based on its most recent surveys, the NPD Group has updated the data on pasta consumption in Italy and Europe in the “out-of-home” channel, presented at the 2022 edition of the Pastaria Festival.



In Italy and across Europe, the autumn got off to an uncertain start for the eating-out-of-home market. Months after the end of the pandemic, we now find ourselves in a situation characterised by dynamics that inevitably impact upon the decisions of consumers when they choose to eat out of home. Of greatest concern is the increase in prices resulting from the increase in energy and ingredients costs. Both phenomena are associated with the tail end of the pandemic, but also with the conflict in Ukraine.

The surveys by The NPD Group, which has measured consumer sentiment over the past two years, reveal that 43% of consumers interviewed believe their financial situation will worsen in the coming months. Recorded in October, this figure represents a net worsening compared to previous surveys. Increased prices and economic security are obviously a source of concern for Italian consumers. This crisis and this state of uncertainty differ from the crises we have faced in the past. Previous crises were characterised by caution, but the consumer did not sacrifice gratification as an element in their decision-making. Now we are faced with a systemic crisis that is impacting the purchasing power of households, inevitably requiring them to make choices.

The most recent NPD survey found that, faced with the increased prices, 33% of interviewees are thinking of reducing, postponing, or giving up eating at bars and restaurants. The good news is that, though bars and restaurants are among the top five items Italians are considering giving up, they come after live events, shopping, hairdressers, cinemas, theatres, museums and gyms. That said, the sacrifices indicated by Italian consumers paint a picture of reduced mobility, with all of these activities linked in some way, albeit indirectly, to opportunities to eat out of home.

This scenario, characterised by reduced activity outside the home, goes a long way to explaining the current state of the eating-out-of-home market. Since the end of the pandemic, the market continued to grow, to the point of approaching 2019 levels. CREST – the NPD tool that monitors eating OOH (out of home) in Europe – recorded a shortfall of -9.3% in spending and -17% in trade in the first half of the year compared to 2019. The figure for the first half of the year is negatively offset by a winter marked by restrained consumption. In the summer months, consumption exceeded pre-pandemic levels in terms of spending, driven by an increase in prices, while trade for the month of June was found to be down -4%



**ANSELMO**



**ANSELMO  
BRAIBANTI**



**FEN**



**ANSELMO  
LTA**



**OMAR**

**5 technologies**

perfectly matched  
to be your partner  
for **dry pasta, fresh pasta and snacks**

**ANSELMO GROUP**

*complete solutions for food industry*

[www.anselmoitalia.com](http://www.anselmoitalia.com)

**ANSELMO IMPIANTI SRL** - Via Fossano, 33 - Bene Vagienna (CN) - ITALY | Tel. +39 0172 654755 - Fax + 39 0172 654811  
**LTA** - Via dell'Industria, 11 - Thiene (VI) - ITALY | Tel. +39 0445 370993 - Fax +39 0445 813114  
**FEN IMPIANTI SRL** - Via Sole, 72 Tezze sul Brenta (VI) - ITALY | Tel. +39 0424 868711 - Fax +39 0424 868777  
**OMAR IMPIANTI SRL** - Via Stelloni, 39/I - 39/O - Sala Bolognese (BO) - ITALY | Tel. +39 051 6814821 - Fax +39 051 727354



compared to the same period in 2019. NPD's continuous tracking revealed a similar picture in Italy. The trade and spending figure suggests that consumers in Italy are already implementing strategies. While individual average spending per visit increased by +6.4%, the number of items purchased fell. In other words, while spending more, Italians are consuming less. Strategies to reduce menu components are under way. These strategies may take the form of forgoing a component of the meal, or choosing venues that offer simpler menus.

In fact, 81% of consumers interviewed stated that they prefer restaurants that offer clear and simple menus, painting a picture in which frugal choices help satisfy consumer needs. In this context, the consumer goes from rational to strategic, evaluating different alternatives. Just 8% are thinking of giving up eating out of home entirely, while the rest will implement strategies primarily associated with reducing spending. How is pasta performing in Europe and Italy given the dynamics characterising consumer choices? In the past year, 2.7 billion portions of pasta were eaten out of home across

## GET THE MOST OUT OF THE PASTARIA NETWORK.

### ✓ Read the **Digital Magazine**

Published on odd months. Download it from [pastaria.it](http://pastaria.it) or read it using the App.

### ✓ Read the **Paper Magazine**

To receive future issues please register on [pastaria.it](http://pastaria.it) and activate a free subscription  
Published on even months

### ✓ Read the articles published on **Pastaria.it**

Log on daily to discover what's new in the sector.

### ✓ Follow and share what we do on our **social media channels**

Facebook: <https://www.facebook.com/PastariaMagazine/>

Twitter: <https://twitter.com/rivistapastaria>

### ✓ Take part in **Pastaria Festival**

### ✓ Install the **Free App**

For smartphones and tablets, iOS and Android

*And there's more:*

✓ Find and request offers for machines, ingredients and services on **[pastariahub.com](http://pastariahub.com)**



# la baresina

## Gold 300



Regional pastas from A to . . .

# ZINDO

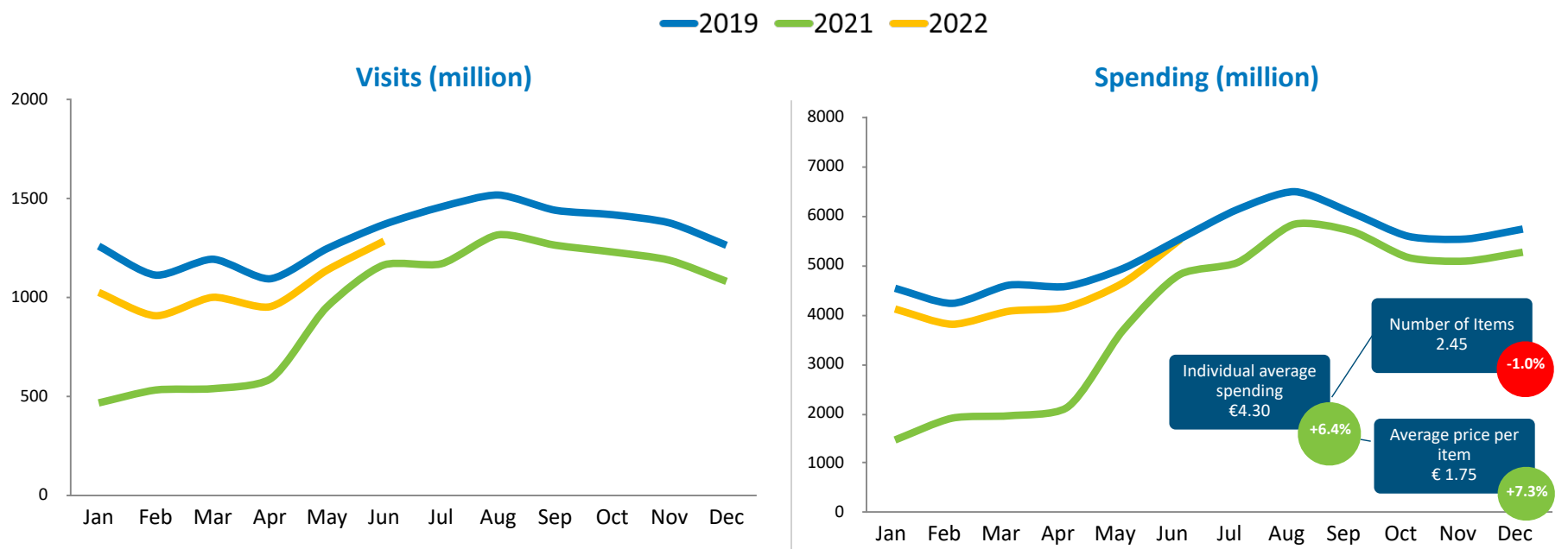
Pasta Machines & Processing

[zindo.it](http://zindo.it)



# Tot. OOH – Visits and spending

The market is recovering but still below pre-pandemic levels



Source: The NPD Group / CREST Italy

The NPD Group, L.P. | Proprietary and confidential

Pastaria

1

the 5 leading countries in Europe: Italy, UK, Spain, France and Germany. The inclination to eat pasta has not changed in recent years in Europe, but has remained stable, with an incidence of 4.2% of total visits. Across Europe, the consumer chooses pasta on 4 out of 100 visits. The drop in volume of -26% recorded by NPD compared to 2019 is not linked to consumer choices, but to a decrease in consumers eating out of home.

The general decline in mobility already mentioned has in fact impacted pasta consumption, with the negative impact seen across non-commercial channels such as workplace and university canteens. Indeed, in France, where these channels carry greater weight than in other

countries, a greater decline is recorded in pasta eaten out of home. Overall, at a European level, the share of pasta dishes served in non-commercial channels dropped from 47% to 38% in 3 years. In Italy, the tendency to eat pasta out of the home, which we measure in terms of incidence, is recorded as 7.2%, an increase of 0.2 points over the past two years. Italians are more likely to choose pasta when eating out of home. In the year ending June 2022, 722 million dishes of pasta were served in Italy compared to 735 million in the same period in 2019. The gap has now reduced to -1.5%. Consumers' needs for greater frugality and simplicity offer fertile ground for the out-of-home pasta sector. Furthermore,



TECHNOLOGY PERFORMANCE RELIABILITY

# CUOCITORE LINEARE LINEAR COOKER

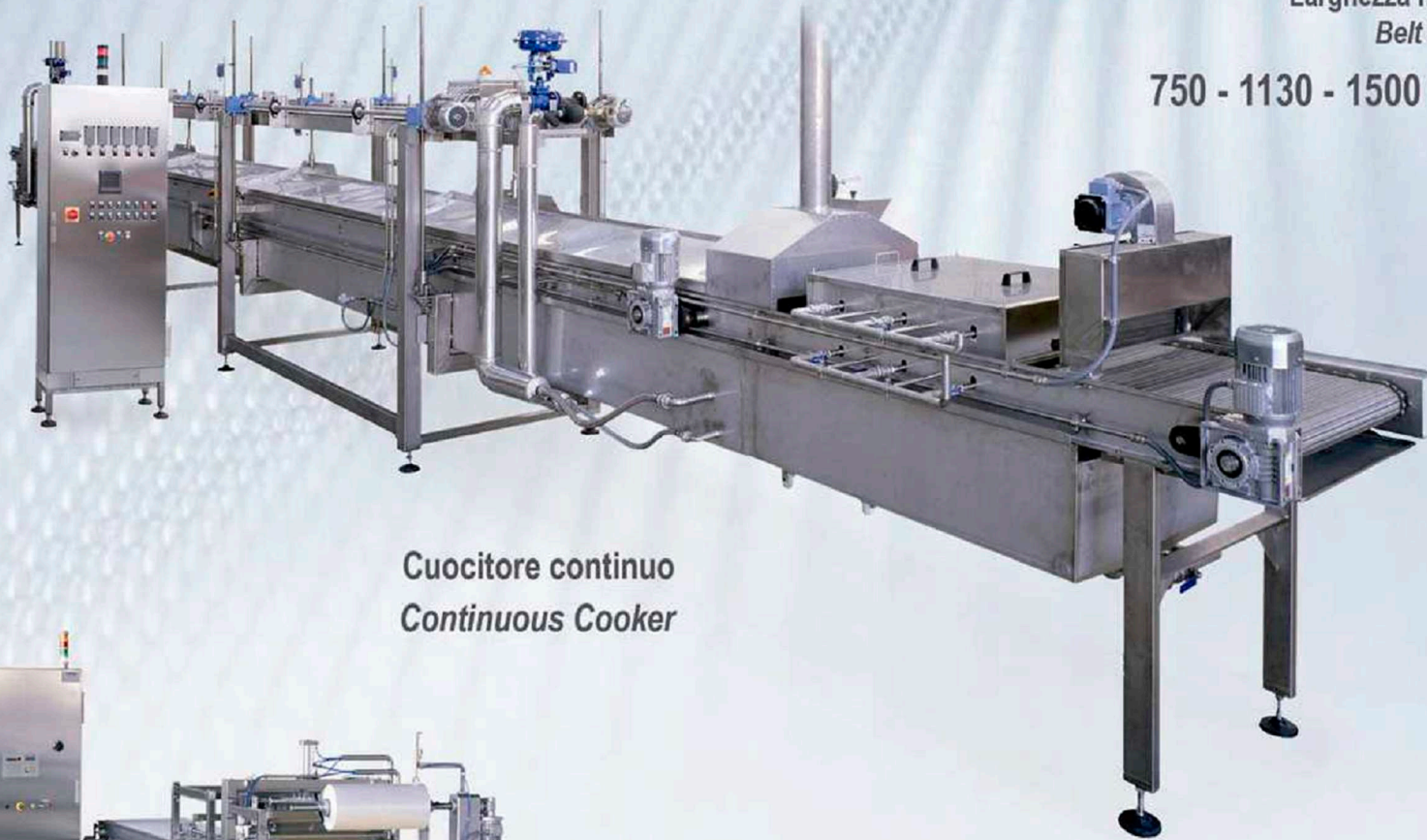
100 - 1000 kg/h

Prodotti: paste ripiene, sfoglie con interfoglio, cannelloni  
For processing filled pasta, sheet with interleaf film, cannelloni

**FOODTECH** S.R.L.  
FOOD PROCESSING EQUIPMENT

Larghezza nastro  
Belt width

750 - 1130 - 1500 mm



Cuocitore continuo  
Continuous Cooker



Interfogliatrice  
Line for sheet  
with interleaf film



Paste ripiene  
Filled pasta



Sfoglie per Lasagne  
Lasagne sheets



Sforgia con interfoglio  
Sheets with interleaf film



Cannelloni

AZIENDA CON SISTEMA DI GESTIONE  
QUALITÀ CERTIFICATO DA  
TÜV ITALIA S.r.l. secondo la norma  
UNI EN ISO 9001:2015

CAMPOSAMPIERO (PD) - ITALY - Via Martiri della Libertà, 6  
Tel. (+39) 049 9303590 - Fax: (+39) 049 5791258 - info@food-tech.it - [www.food-tech.it](http://www.food-tech.it)



# Key strategies for dealing with increased prices in hospitality

The most common way to save money is to reduce the number of visits

- 42% I will go to Bars and Restaurants less often
- 19% I will go to my usual restaurant but order less
- 16% I will seek out a restaurant other than my usual with better prices and promotions
- 15% I will go to my usual restaurant but seek out better prices and promotions
- 8% I will not change my habits concerning going to Bars and Restaurants



What key strategy are you willing to apply to deal with the increase in prices at restaurants, fast food outlets, pubs/bars, cafés and coffee shops?

Source: The NPD Group/COVID-19 Foodservice Sentiment Study W7, Italy, September 2022

The NPD Group, L.P. | Proprietary and confidential

Pastaria

2

## Over the past year in Europe

# 2,586 million

## Plates of pasta were consumed across the whole OOH segment

### (-26% vs AT June 2019)



Source: The NPD Group/CREST

The NPD Group, Inc. | Proprietary and confidential

Pastaria

3

the consumer is currently forgoing eating at times that are not significant for pasta,

such as breakfast and snacks, while lunch performs better, driving pasta



Siamo i principali produttori  
di pasta fresca e gnocchi  
in Italia, in Europa e nel Mondo  
**E questo non è casuale.**



**Associazione  
Produttori  
Pasta Fresca**

*Unisciti  
a Noi*

*"Il Presidente"  
Giovanni Rama*



Tra le nostre  
specialità da oggi  
**piatti pronti**



### **I NOSTRI OBIETTIVI**

- Ottimizzare il mercato italiano ed inserirsi maggiormente in quello europeo con l'incentivazione e l'adozione anche nel mondo della pasta fresca dei **"piatti pronti o da cuocere a base di pasta fresca"**.
- Per tutelare pasta fresca e gnocchi, anche da un punto di vista legislativo nel loro progressivo inserimento nei mercati europei attraverso **ECFF** (European Chilled Food Federation).

### **I NOSTRI SERVIZI**

- **Una guida anticipata sui trend di mercato e su quelli tecnici.**
- Un appoggio sicuro su problemi legislativi generali ed aziendali dove A.P.P.F. è tradizionalmente informata.
- Una gestione associativa concorde e non burocratizzata dove il Presidente e gli Associati hanno diritto ad un voto e la segreteria è sempre vicina.

### **SOSTENITORI FORNITORI**

- EUROVO S.R.L.
- IBERCHEM AROMAS S.R.L.
- MOLINI BONGIOVANNI S.P.A.

- MOLINI LOIZZO S.R.L.
- BAYERNLAND S.R.L.
- KERRY INGREDIENTS & FLAVOURS S.P.A.
- DI CURZIO S.R.L.

- IDA S.R.L.
- NEW FLAVOURS S.R.L.
- PARMOVO S.R.L.
- SALUMIFICIO LANZARINI S.R.L.

- CEREAL BROKER SARTIRANA CONSULTING S.R.L.
- VALPAN S.R.L.
- MANE ITALIA S.R.L.



via Dei Borromeo, 16  
Padova - Italy  
T. +39 049 8760941

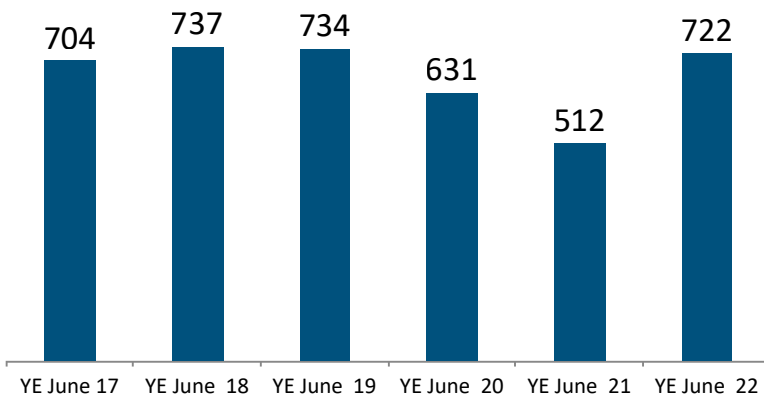
E. info@appf.it  
W. [www.appf.it](http://www.appf.it)



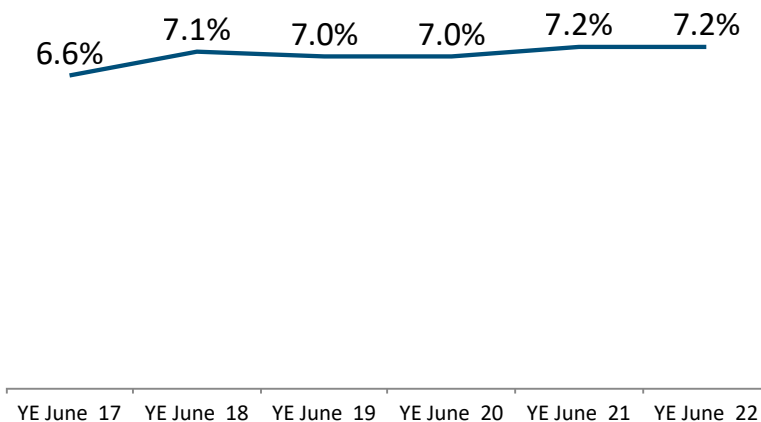
# Com. Rest. Consumption of pasta in Italy

Shortfall of 22 Million servings compared to pre-pandemic levels

## Pasta Serving (million)



## Incidence %



Source: The NPD Group/CREST

The NPD Group, Inc. | Proprietary and confidential

Pastaria

4

consumption. And despite the shift towards frugality, the consumer is not sacrificing experience, leading to an increase in the proportion of fresh and filled pasta dishes, from 31% to 35%. Younger consumers are poorly represented, but this is a structural issue. The 25-34 year age group is in decline in the market, and this is reflected in pasta consumption, which has an ageing consumer profile. Young people are the future of eating out of home, and the most important challenge for the coming months. The industry and operators in the sector are called upon to seriously reflect on how to attract this target group, which is losing interest in eating out of home. To conclude, while the market has reached

pre-pandemic levels, the recovery is slowing in terms of trade. Price increases and financial means are of greatest concern to a more rational and more frugal consumer. Pasta is benefiting from the recovery. Setting aside the data for workplace canteens, the inclination to eat pasta out of home is increasing, thanks to consumers' preference for frugal occasions but greater experience.



# PASTARIA HUB

[www.pastariahub.com](http://www.pastariahub.com)

TECHNOLOGIES  
INGREDIENTS  
SERVICES  
FOR PASTA  
MANUFACTURERS



technologies  
tecnologie  
tecnología  
technologies



ingredients  
ingredienti  
ingredientes  
ingredientes



services  
servizi  
servicios  
services