



# Forum on Best Practices in the Agri-Food Supply Chain Farm to Fork Forum

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Instituto Andaluz de Investigación  
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Consejería de Agricultura,  
Pesca, Agua y Desarrollo Rural

# Index

## 1 . IFAPA

### 2. Agri-Food Industry at IFAPA

#### 2.1 Black Garlic & Small Company

#### 2.2 (Organic) Vegetable Drinks + Cooperative + Local Products

#### 2.3 Traceability + Added Value + Biodiversity

# Andalusian Institute of Agricultural and Fisheries Research and Training (IFAPA)



# Index

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## Black garlic

Chamber Control  
Humidity and  
Temperature



0.50-1 €/kg



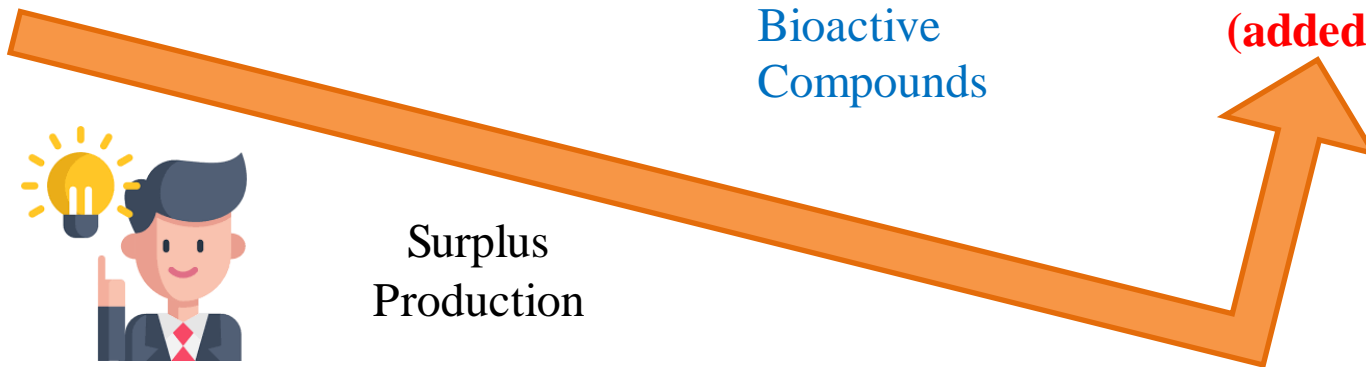
T (70-80 °C)  
HR 85-90%  
20-45 days



- No pungency
- Liquorice taste
- Bioavailability  
Bioactive  
Compounds



4-5 euro / 80  
grs. pack  
50-70 € /kg  
(added value)



Surplus  
Production



## Black garlic

-3°C y 70% HR (storage x 8-9 months)  
+ circulating air



Continuos  
Refrigeration  
Needs

Junta de Anunciación



Discontinuos use





## Black garlic

Other spill-over effects

Increase Self-life at room temperature



Use of health claim as marketing strategy

Use of aged garlic (lower quality) for Black Garlic production with same quality

## Black garlic



### *In Vitro* Colonic Fermentation of (Poly)phenols and Organosulfur Compounds of Fresh and Black Garlic

Alicia Moreno-Ortega, Giuseppe Di Pede, Gema Pereira-Caro,\* Luca Calani, Pedro Mena, Daniele Del Rio, and José Manuel Moreno-Rojas\*







*antioxidants*



Article

### Bioavailability of Organosulfur Compounds after the Ingestion of Black Garlic by Healthy Humans

Alicia Moreno-Ortega <sup>1,2,\*</sup>, Gema Pereira-Caro <sup>1,2</sup>, Iziar A. Ludwig <sup>3,†</sup>, María-José Motilva <sup>3,†</sup> and José Manuel Moreno-Rojas <sup>1,2,\*</sup>









*nutrients*



Article

### Effect of Black Garlic Consumption on Endothelial Function and Lipid Profile: A Before-and-After Study in Hypercholesterolemic and Non-Hypercholesterolemic Subjects

Déborra Villano <sup>1,†</sup>, Javier Marhuenda <sup>1</sup>, Raúl Arcusa <sup>1,\*</sup>, José Manuel Moreno-Rojas <sup>2,3</sup>, Begoña Cerdá <sup>1</sup>, Gema Pereira-Caro <sup>2,3,\*</sup> and Pilar Zafrilla <sup>1</sup>



## Black garlic



**Food Bioactives and health  
as marketing strategy**

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# Organic Vegetables Drinks

Oatmeal

Oatmeal Drink (8-14%)

0.50-1 €/kg

1.50-2.50 €/L

**Small Local Organic Producers (vegetables, cereals and fruits)**



**Cooperative Association**

1er Premio Innovación Sostenible 2020



**returnable glass bottles**



**Consumers**



**Traders/Intermediaries**



**Network Local shops/stores**

Proximity trade (short distribution circuits, intraregional trade)

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## Traceability + Added Value. Iberian Pig Products



*DEHESA (Open field)*  
*Acorn + grass*  
**BELLOTA**

*Mixed systems*  
**CEBO DE CAMPO**



*FARMS*  
*Feed*  
**CEBO**



***BELLOTA***

***80-100 Euro/Kg***

***CEBO DE CAMPO***

***25-35 Euro/Kg***

***CEBO***

***15-25 Euro/Kg***

***Developing tools  
for assuring food  
traceability***



## Traceability + Added Value + Biodiversity DEHESA systems

- *Unique savannah-like ecosystem*
- *Low livestock density*
- *Adapted to the ecosystem*
- *Animal welfare*
- *Differentiated quality products*







# Thank you for your attention

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## Junta de Andalucía

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