

WORLDWIDE PERSPECTIVES ON GEOGRAPHICAL INDICATIONS:

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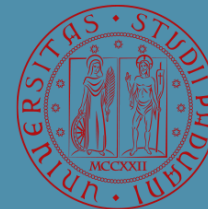
Climate change effects and the responses of the agri-food GI agents:

Evidence from the Veneto Region (Italy)

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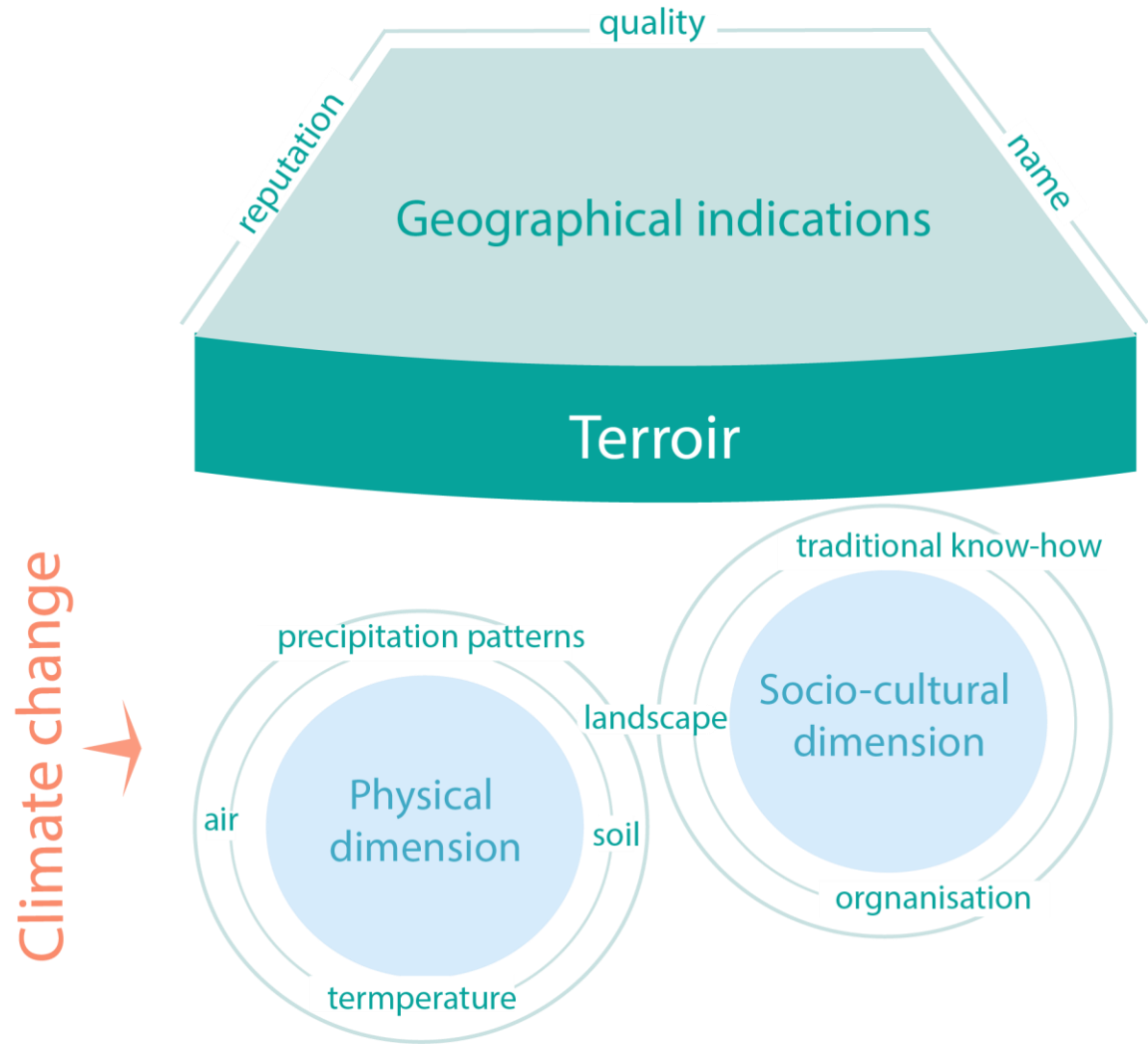
**UNIVERSITÀ
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Montpellier, 6 July, 2022

Geographical indications (GIs) and climate change

Climate change can heavily affect some characteristics of the **terroir**, on which agri-food GIs rely.

Modification of agricultural practices described in corresponding Product Specifications is lengthy and resource-consuming process (see Quiñones-Ruiz et al., 2018).



Source of Infographic: Authors

Geographical Indications

Are these effects common to different types of agri-food GIs?
And how GI agents are responding to CC effects?

Climate change has a significant impact on the terroir, and therefore on the quality of geographical indications (GIs) registered in the EU.

Modification of a GI's characteristics may lead to the corresponding Protected Geographical Indication (PGI) becoming resource-consuming (EC, 2018)



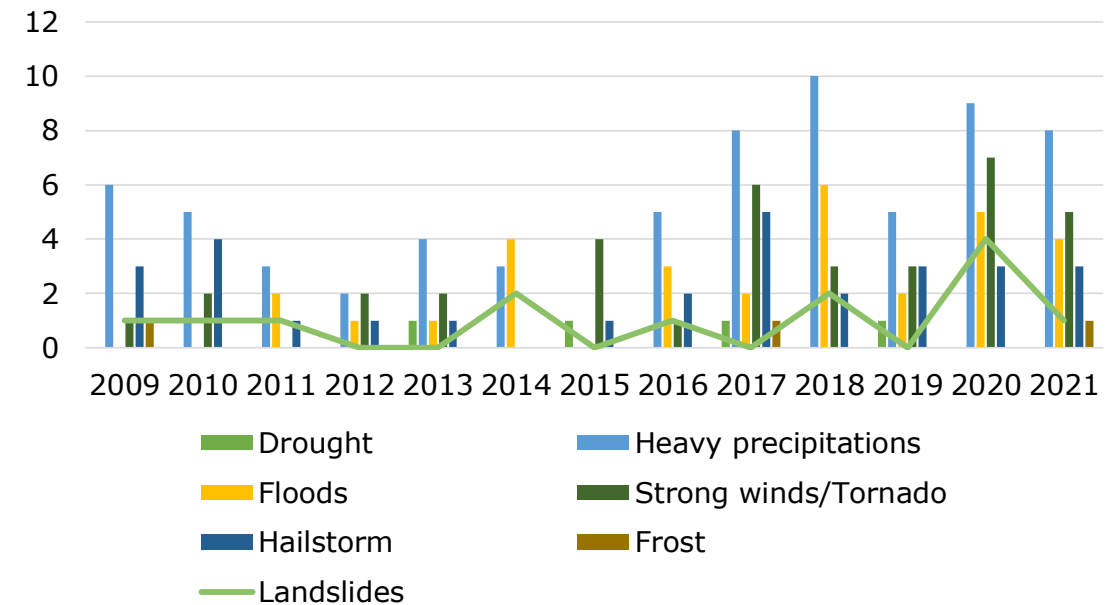
The Veneto Region: Climate change hazards

Veneto
(NUTS 2)



- **+1.3 °C** increase of the annual temperatures (1993-2017)
- a decrease of the average winter rainfall
- a decrease in the height and duration of the snowpack (ARAV, 2017)

Increased frequency of **extreme weather events** (2009-2021)



Authors' elaboration on the reports of the Regional Civil Protection Office

The Veneto Region: Exposure to climate change

36
agri-food GIs

402 mln €
economic impact of
agri-food GIs

Clusters

Little revenue PDOs

Large-scale PDO cheeses

Second-generation PDOs

Unexploited opportunities

First-generation crop PGIs

Second-generation crop PGIs
with little revenue

Agri-food GIs in the Veneto Region

Garda oil, Prosciutto Veneto Berico Euganeo, Cozza Scardovari, Asparago Bassano, Marrone San Zeno

Grana Padano, Asiago, **Monte Veronese**, Taleggio, Montasio, Provolone

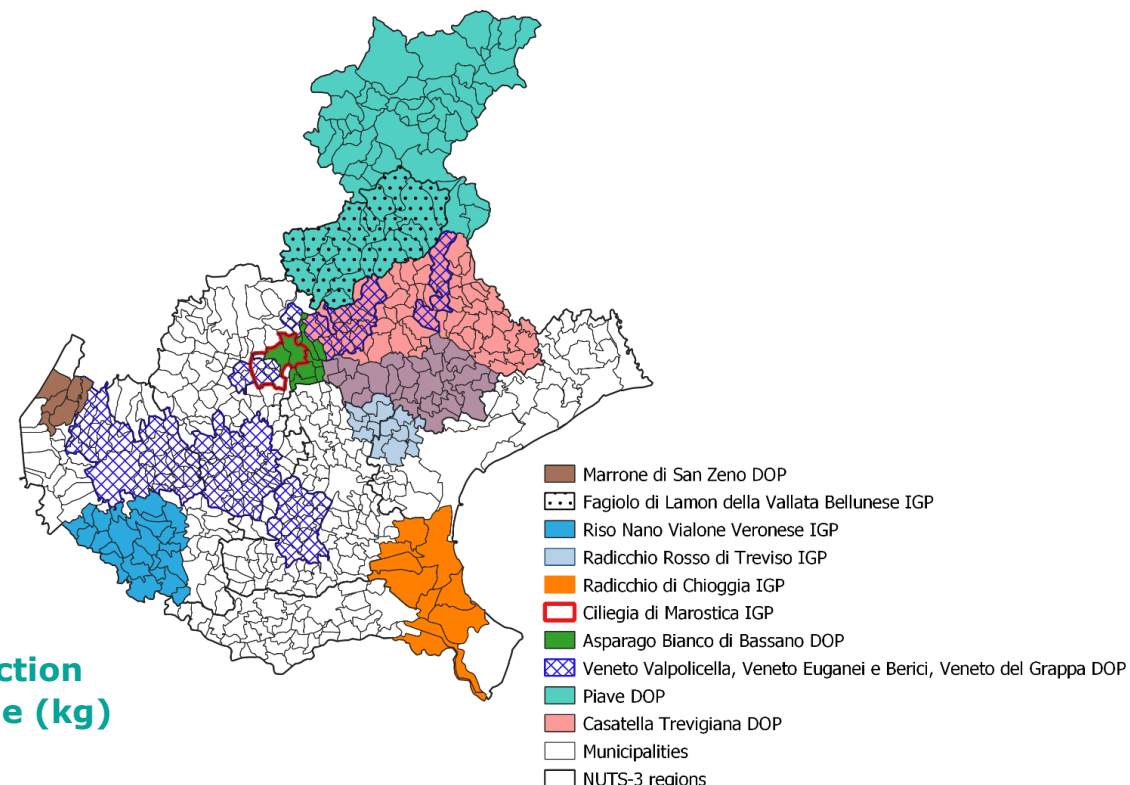
Salamini Cacciatora, Sopressa Vicentina, Aglio Bianco Polesano, **Veneto Valpolicella olive oil**, Miele Dolomiti Bellunesi, **Casatella, Piave**

Salami Cremona, Mortadella Bologna, Cotechino Modena, Zampone Modena

Radicchio Verona, **Radicchio Rosso Treviso**, **Fagiolo Lamon**, Radicchio Variegato Castelfranco, **Riso Nano Vialone Veronese**

Riso Delta del Po, Insalata Lusia, Marroni Monfenera, Marrone Combai, **Radicchio Chioggia**, Asparago Bianco Cimadolmo, **Ciliegia Marostica**, Asparago Badoere, Pesca Verona

Characteristics of the subsample GIs and their production areas



GI	Type*	Scheme	Production area (Ha)	Production Volume (kg)
Casatella Trevigiana (cheese)	AB	PDO	1427	314.3
Monte Veronese (cheese)	AB	PDO	3093	893.9
Piave (cheese)	AB	PDO	NA	1.583
Asparago B. di Bassano (asparagus)	AC	PDO	14	40.0
Olio Veneto (olive oil)	PC	PDO	371	39.0
Marrone di San Zeno (chestnut)	PC	PDO	52	12.7
Ciliegia di Marostica (cherry)	PC	PGI	58	13.0
Fagiolo di Lamon (bean)	AC	PGI	12	9.7
Radicchio di Chioggia (chicory)	AC	PGI	97	124.8
Radicchio R. di Treviso (chicory)	AC	PGI	303	894.6
Riso Nano V. Veronese (rice)	AC	PGI	524	530.8

*AB – Animal-based; AC – Annual crop-based; PC – Permanent crop-based

Authors' elaboration on Mipaaf data; Qualigeo (Qualivita) data (2019); Ismea data (2019); data from Production Specifications

Data and Methods

14 semi-structured
interviews with key-
informants

June 2021 –
December 2021

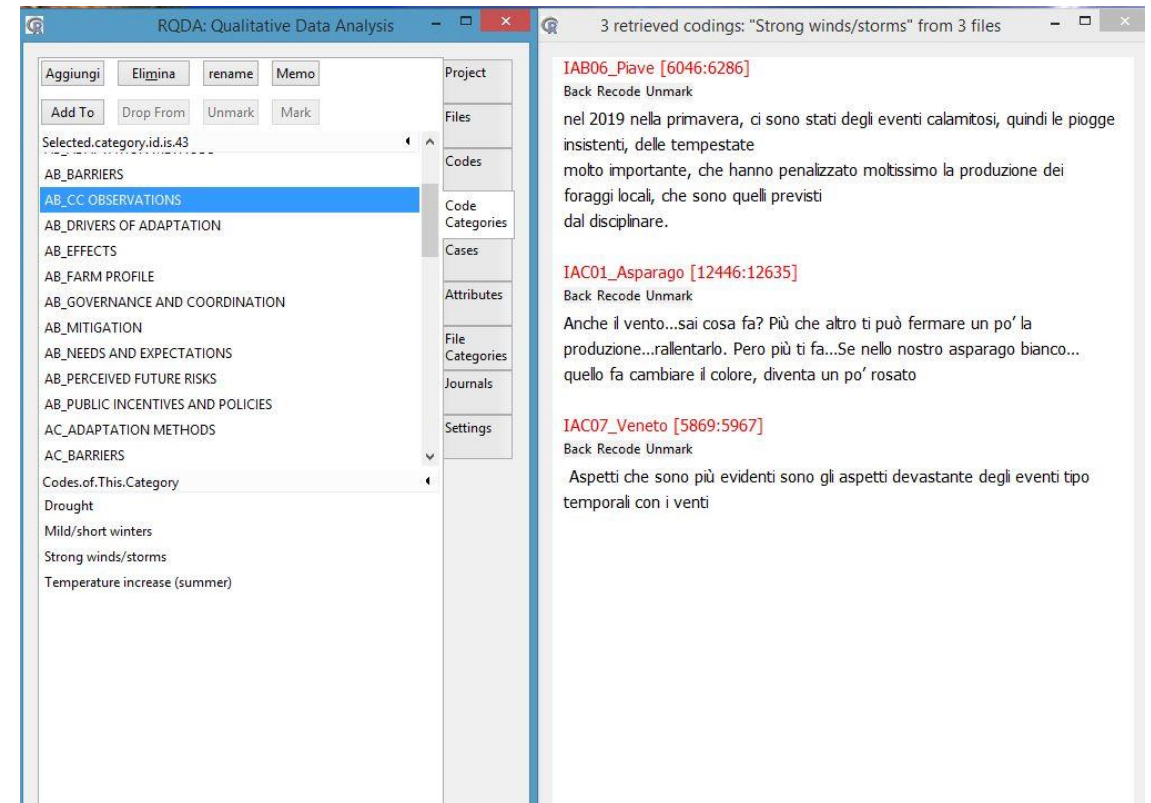


Online survey

77 producers of agri-
food GIs

December 2021 –
April 2022

Interview transcripts were coded via a hybrid approach of **deductive and inductive coding** using **RQDA** R Extension (see Huang, 2016).

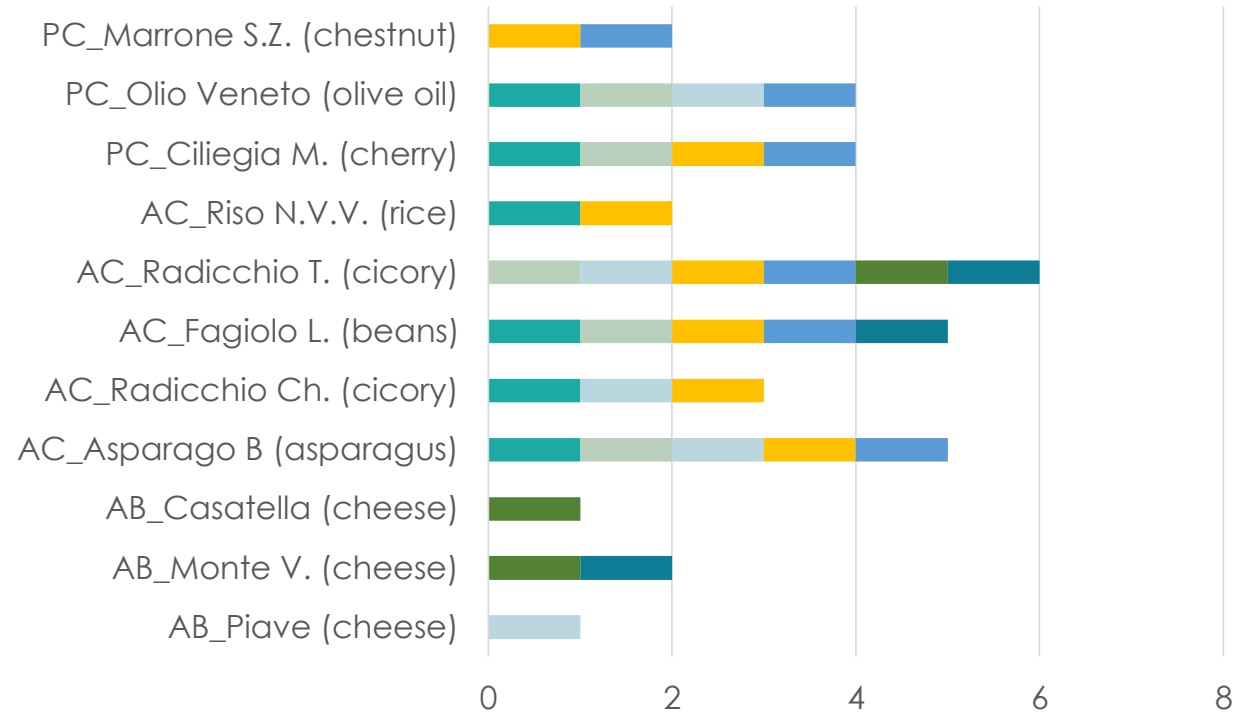


A sample screenshot of a code and the interface of RQDA package

Results: Climate change observations reported by the key informants

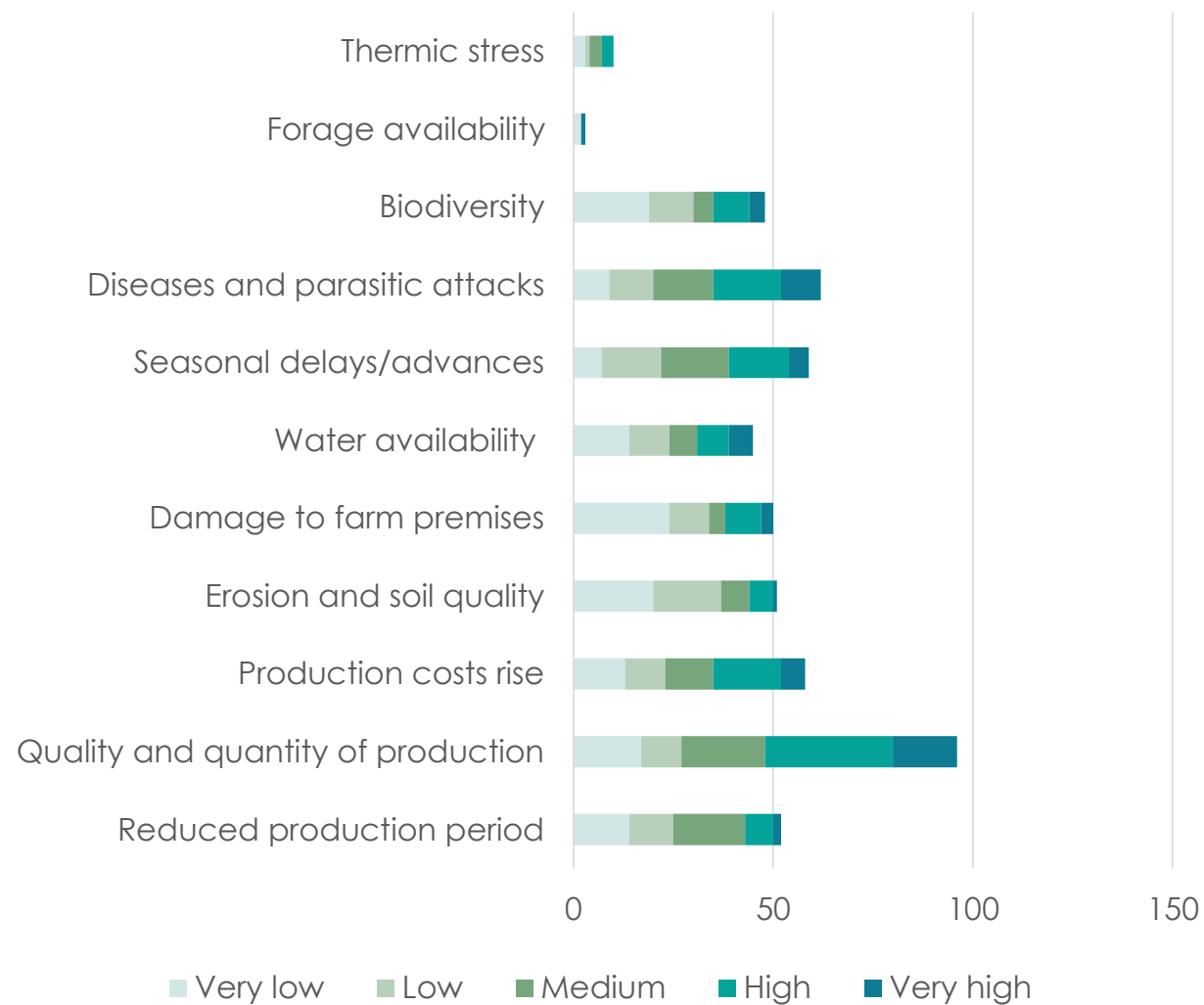
“Temperatures are unpredictable, as they go outside the seasonal standards. First an excess of heat, then cold, then the return of heat. ” [IAC03]

AC – annual crops GIs
AB – animal-based GIs
PC – permanent crops GIs



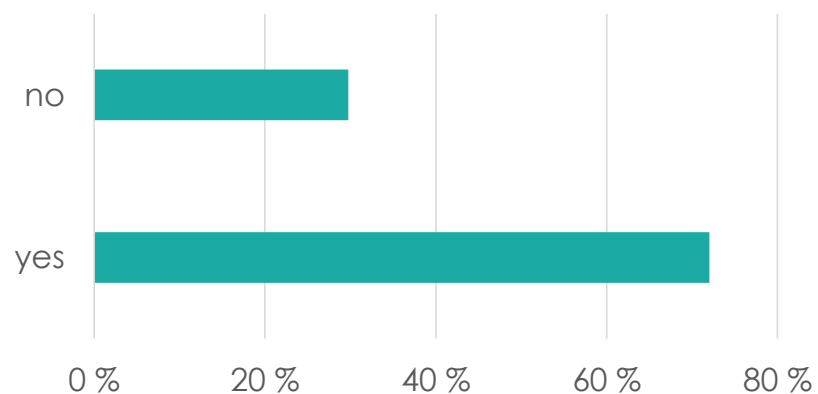
- Irregularity of spring temperatures
- Irregularity of precipitations
- Intensity of rains and their concentration
- Longer duration of rainfalls
- Increase of insects, plant and animal diseases
- Mid-seasons are becoming shorter
- Winters are becoming shorter and warmer

Results: Climate change effects (Online survey)

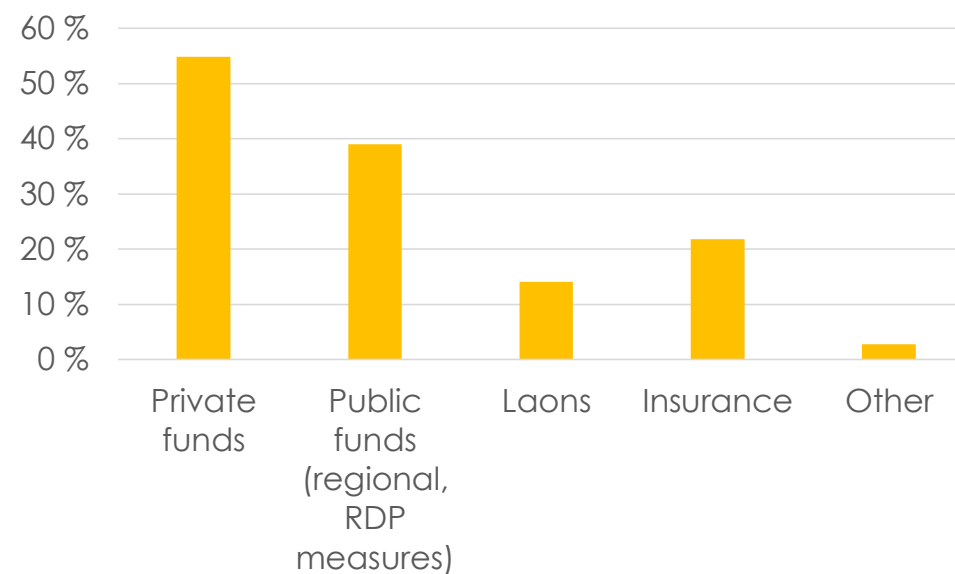


Results: Responses to climate change

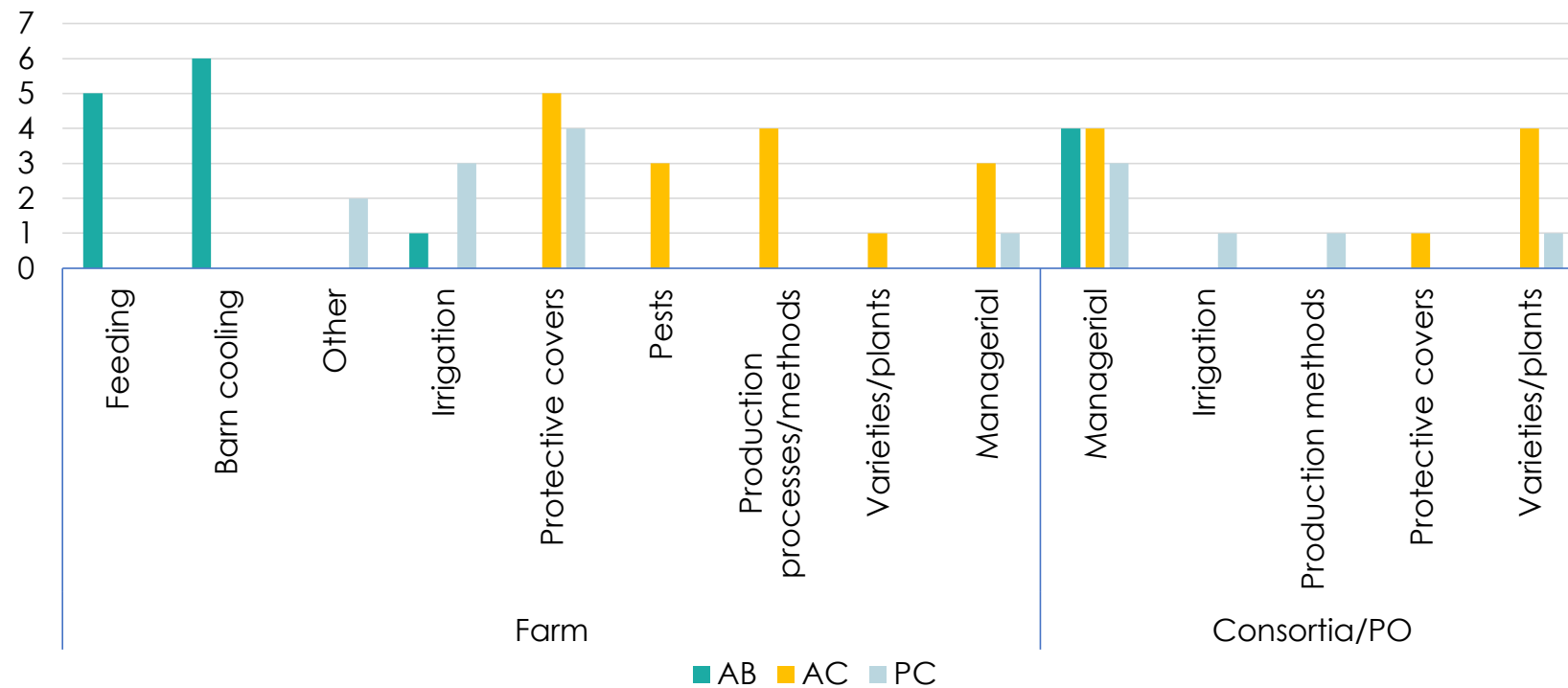
Responses to climate change effects



Financial resources



Results: Adaptation to climate change (interviews)



AC –annual crops GIs, AB –animal-based GIs, PC – permanent crops GIs.

Protective covers

"This new anti-hail cover has allowed us to stay on the market one week longer than the vast majority of cherry growers in the PGI area, and also to reduce phytosanitary treatments by 50%".



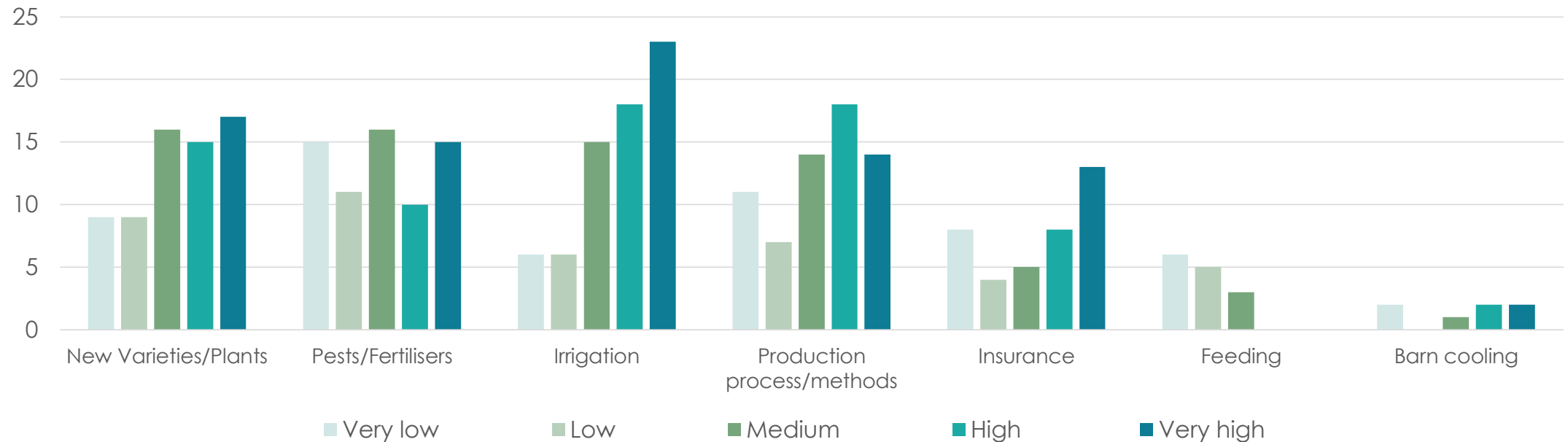
Crop covers against rain



Crop covers against hailstorms

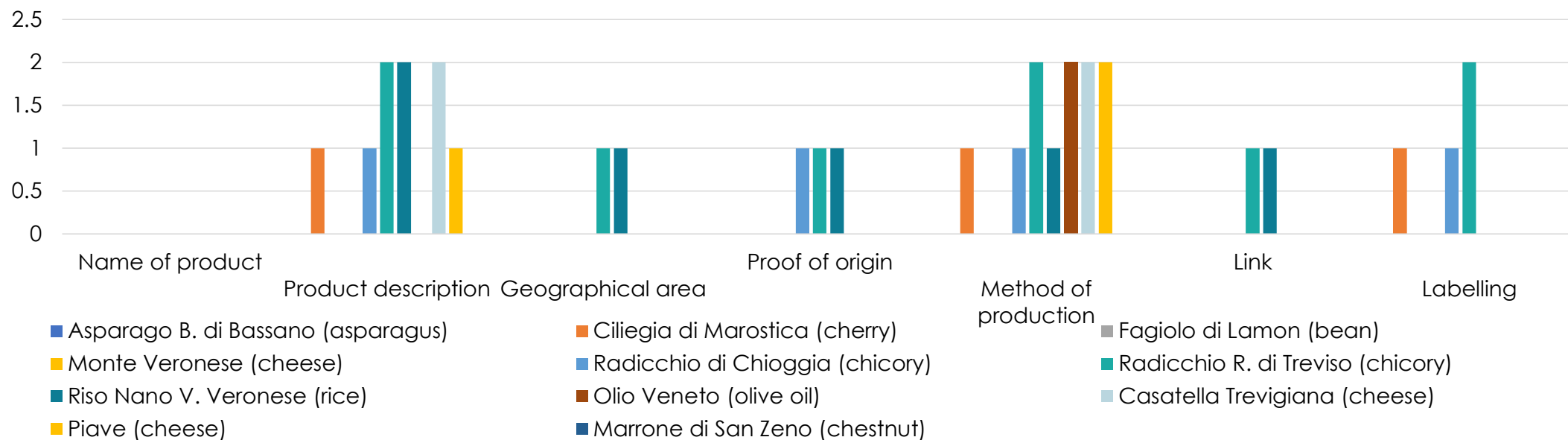
Photo by courtesy of Azienda agricola Colceresa (Ciliegia di Marostica, IGP)

Results: Effectiveness of adaptation measures on farm level (online survey)

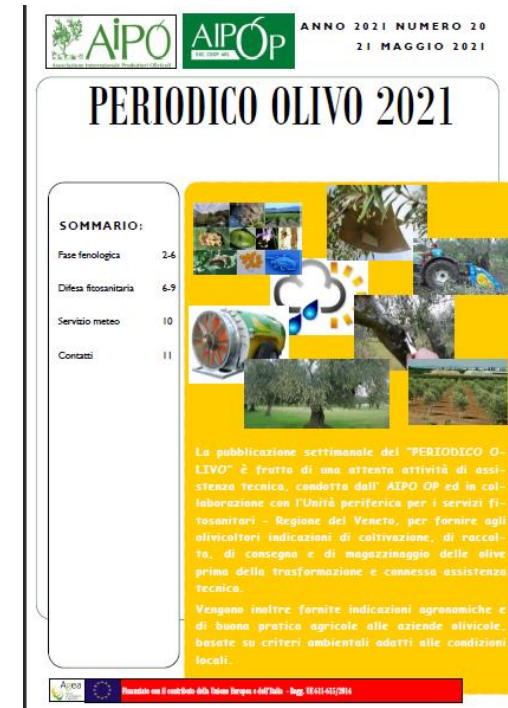
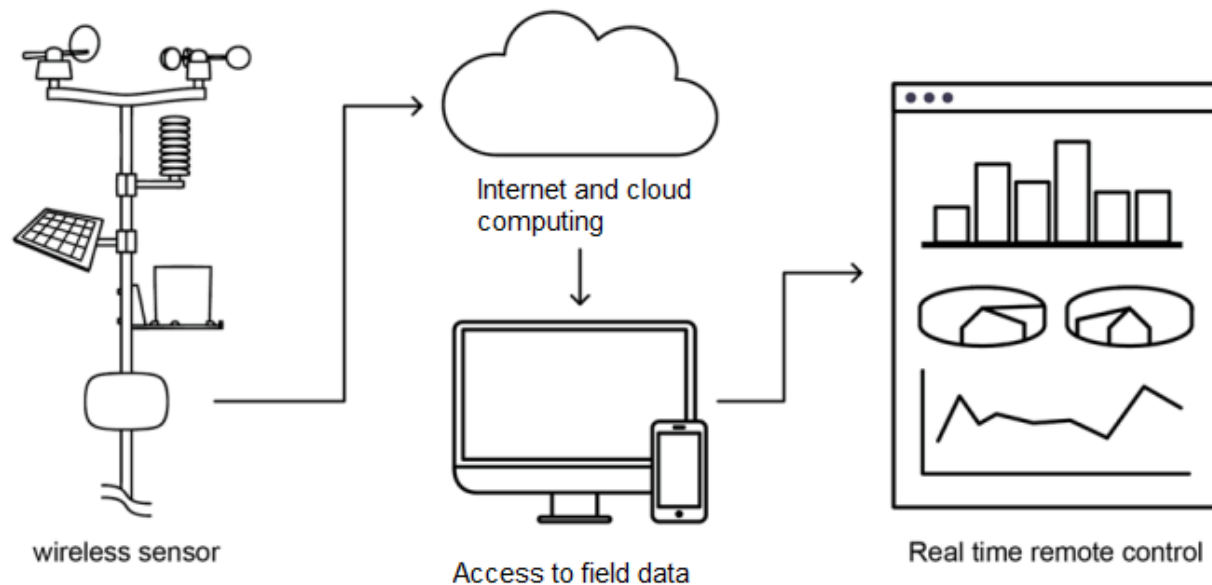


Amendment of product specifications

EU No: PGI-IT-1514-AM02 – 5.6.2020: “The transplanting deadline needed to be changed to address issues caused by the **changing climate**: a significant increase in summer temperatures and the lengthening of summers. **Shifting the transplanting date slightly helps *tardivo*-type radicchio plants to overcome transplant shock more effectively**”.



Monitoring and advisory support for farmers



Weekly advisory support
(video, printed materials)

Concluding remarks

- The levels of concern regarding climate change effects and observations vary in relation to the **type of GI**, **crop system**, and **altitude of the production areas**.
- **Crop-based GIs** reported a larger amount and diversity of responses to climate change than **animal-based GIs**.
- A decisive role of **Consortia and POs** in the coordination of the common strategies related to climate change can be outlined.
- Next ---> Structured survey with a **larger sample** of GI agents

Thank you for attention!

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