

SPAIN AGRICULTURAL VALIDATION PROGRAMME

Validation of Dawnsens® Flash-Spun technology
for agricultural applications in Spain



Field application, citrus. Image: Dawnsens®



AGRICULTURAL
PROGRAMME



VALIDATION
PROTOCOL



FIELD
MEASUREMENT



MEDITERRANEAN
CROPS

From innovation to the field. [A more sustainable future.](#)

FROM TECHNOLOGY TO THE FIELD

FLASH-SPUN HDPE

LIGHTWEIGHT
STRONG
VERSATILE

A validation programme to evaluate the potential of Dawnsens® Flash-Spun technology under real agricultural conditions in Spain.

Dawnsens has developed agricultural applications of Flash-Spun materials. KRONO proposes to evaluate those with the greatest potential interest for Spanish agricultural conditions through a structured process of local validation.



Agricultural application. Image: Dawnsens®



TECHNOLOGY

Dawnsens® Flash-Spun materials



APPLICATION

Solutions for real crops



FIELD VALIDATION

Trials, measurement and analysis



LOCAL EVIDENCE

Technical results for real decisions

FLASH-SPUN MATERIAL FOR AGRICULTURE

A nonwoven structure of continuous HDPE fibres that enables the development of materials with properties of interest for different agricultural applications.

Dawnsens® Flash-Spun materials are manufactured from continuous HDPE fibres through a flash-spinning process, creating a nonwoven structure with a unique combination of lightness, strength and functionality.

This technology offers a versatile platform for developing agricultural solutions adapted to the needs of different crops and environmental conditions, which will be evaluated within the framework of this programme in Spain.

FLASH-SPUN HDPE

LIGHTWEIGHT
STRONG
VERSATILE



Illustrative image



LIGHTWEIGHT

Low density,
easy to handle
and install



STRONG

High tear and
weather
resistance



BREATHABLE

Allows air and
water vapour to pass



REFLECTIVE*

Contributes to solar
radiation management

*Reflectance depends on the material reference and configuration. Specific values are only presented where applicable technical documentation exists.

APPLICATIONS TO BE CONSIDERED IN THE PROGRAMME



Image: Dawnsens®

AGRICULTURAL MULCH

Applications for soil management
to be evaluated in the field.



Image: Dawnsens®

FRUIT PROTECTION BAGS

Applications for crop protection to
be evaluated in the field.



Image: Dawnsens®

SHADE COVERS AND INDIVIDUAL FRUIT SUNSHADES

Applications for radiation and
microclimate management to be
evaluated in the field.



Image: Dawnsens®

PROTECTIVE COVERS

Solutions for different crops and
environmental conditions to be
evaluated in the field.

Photographs supplied by Dawnsens®. Application examples; location and material reference to be confirmed. These images do not constitute results from the Spain Agricultural Validation Programme.

HOW WE WILL VALIDATE IN 7 STEPS

A structured, rigorous and collaborative process to generate local technical evidence on the potential of Dawnsens® Flash-Spun applications under real agricultural conditions in Spain.

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Illustrative image



Collaboration with research centres, specialists and local growers.

A practical and scientific approach to generate valuable solutions for Spanish agriculture.



Objective results for informed decisions.



Image: Dawnsens®



Image: Dawnsens®

WHAT WE WANT TO MEASURE IN THE PROGRAMME

Together with our collaborators, we will evaluate the performance of Dawnsens® Flash-Spun applications under real agricultural conditions in Spain, through six key areas of validation.

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Illustrative image

1

REFLECTANCE AND CROP RESPONSE



How does the reflectivity of the material influence crop response?

- Material reflectivity (D702 / D502-U).
- Potential effect on fruit colouration.
- Variable to be measured: % of fruit in commercial grade Extra/Class I (treatment vs. control).



2

THERMAL REGULATION



How does the material affect soil temperature under Mediterranean conditions?

- Effect of mulch on soil temperature.
- Variable to be measured: soil temperature at 5 cm and 25 cm (treatment vs. control).
- No target values are set at this stage.



3

WEED CONTROL



How does the material influence the emergence and growth of weeds?

- Effect of mulch on weed density.
- Variable to be measured: weed density/m² under coverage ≥60% (treatment vs. control).
- Evaluation under real growing conditions.



4

FRUIT PROTECTION (D503 / D701)



How does the material contribute to fruit protection and preservation?

- Effect on humidity and microclimate around the fruit.
- Incidence of damage (sun, insects, rain).
- Behaviour under rainy conditions.
- Variable to be measured: commercial fruit quality (treatment vs. control).



5

STRENGTH AND FIELD PERFORMANCE



How does the material perform under real conditions of use?

- Mechanical strength (tensile, tear, puncture) pending independent validation.
- Durability against UV radiation, weathering and field handling.
- Integrity after the crop cycle.
- Ease of installation and handling.



6

NEW APPLICATIONS (SCOPE EXTENSION)



What is the feasibility of new applications under Spanish conditions?

- Tomato (protected cultivation).
- Greenhouse (shading/cooling).
- Post-harvest (preservation packaging).
- Nursery (seedling bag).
- Breathable sterile bag (plant health protection).
- Floriculture (flower seedlings).
- Objective: determine technical and agronomic feasibility.



Rigorous measurement, technical collaboration and a focus on real conditions to generate local evidence that enables informed decisions.



From potential to evidence.

COLLABORATION MODEL

A joint effort between business, knowledge and the field to generate local evidence and develop valuable solutions for agriculture in Spain.

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KRONO GLOBAL

Programme coordination and development

- Selection of priority applications and crops
- Coordination with technical partners
- Materials management and logistical support
- Analysis of results and development of commercial opportunities



Illustrative image

DAWSENS

Technology and product

- Supply of Flash-Spun materials
- Product technical information and documentation
- Technical advice on material characteristics, installation and use
- Technical development of new applications



Image: Dawnsens®

VALIDATION PROGRAMME

Technology, knowledge and the field to generate evidence under real conditions in Spain.

INSTITUTION / SPECIALIST

Technical rigour and independence

- Methodological design and validation protocol
- Definition of variables and measurement criteria
- Data monitoring and analysis
- Independent interpretation of results
- Contribution of local knowledge and specific growing conditions
- Dissemination of learning in technical and academic settings



Image: Dawnsens®

GROWER / FARM

Field application and practical experience

- Implementation of trials under real conditions
- Crop management and good agricultural practices
- Collaboration in data collection
- Assessment of operational and economic feasibility
- Feedback for adaptation and scaling



Image: Dawnsens®



LONG-TERM COLLABORATION

To promote more efficient and sustainable agriculture.



APPLIED KNOWLEDGE

From the laboratory to the field.



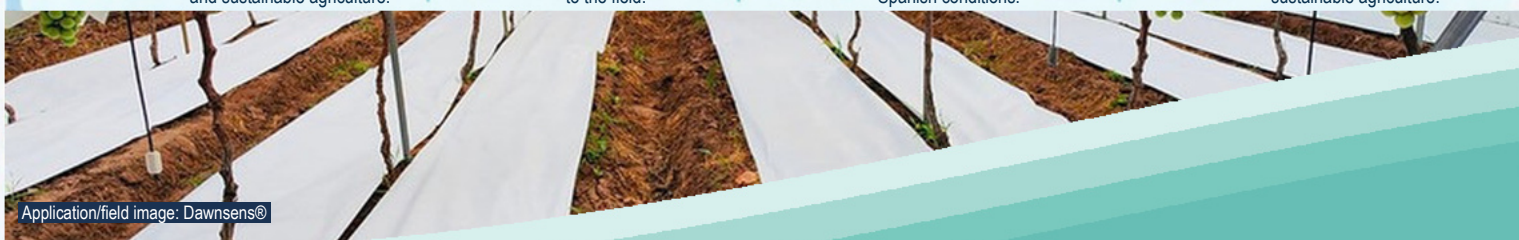
SOLUTIONS WITH REAL IMPACT

Adapted to Spanish conditions.



A SHARED VISION

Productive and sustainable agriculture.



Application/field image: Dawnsens®

FROM EVIDENCE TO DECISION

A rigorous and transparent process to evaluate each application under real conditions in Spain, using technical, agronomic and operational criteria.



INDIVIDUAL APPLICATION BY LINE

Images: see individual credits

Each of the 9 applications is evaluated independently.

#	APPLICATION	PRODUCT	CROP / CONTEXT	VALIDATION PROCESS (TRIAL → DATA → ANALYSIS → EVIDENCE)	DECISION (individual per line)
1	Reflective soil mulch	D702 / D502-U	Vineyards, citrus, export fruit crops	> > > >	
2	Fruit protection bag (individual protection)	D503	Vineyards, citrus, export fruit crops	> > > >	
3	Individual fruit sunshade	D701	Export fruit crops	> > > >	
4	Soil cover in protected cultivation	D702 (horticultural use)	Tomato	> > > >	
5	Shading / cooling / insulation curtain	Technical data sheet to be confirmed	Greenhouse	> > > >	
6	Post-harvest preservation packaging	Technical data sheet to be confirmed	Post-harvest / transport, fruit and vegetables	> > > >	
7	Nursery bag	D503 (different use)	Seedbed / seedling	> > > >	
8	Breathable sterile bag	Technical data sheet to be confirmed	Plant health protection	> > > >	
9	Floriculture application	Technical data sheet to be confirmed	Flower seedlings	> > > >	



Evidence-based decisions, for responsible and sustainable development.



A validated application is a further step towards more efficient agriculture.

INVITATION TO PARTICIPATE

Let us collaborate to generate local evidence and develop innovative solutions for more efficient, productive and sustainable agriculture in Spain.

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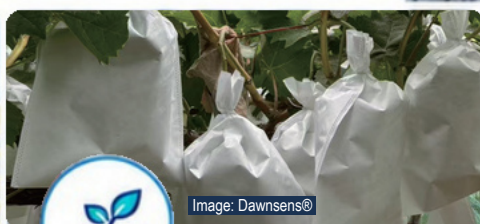
Illustrative image



INSTITUTIONS AND RESEARCH CENTRES

- Develop applied knowledge
- Evaluate innovative technologies
- Generate independent evidence
- Contribute to more sustainable agriculture

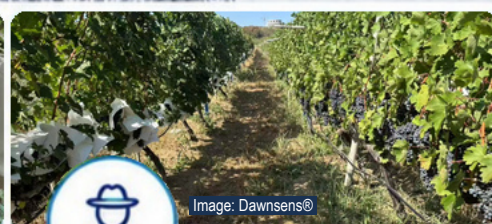
Research today
for the field of tomorrow.



SPECIALISTS AND TECHNICAL ADVISERS

- Apply their experience in trial design and monitoring
- Analyse results with technical rigour
- Identify opportunities for improvement
- Transfer knowledge to the sector

Your experience is key
to generating reliable evidence.



GROWERS AND FARMS

- Evaluate solutions under real field conditions
- Improve the efficiency and profitability of their crops
- Access innovative technologies
- Share their practical experience

Innovation in the field
for a more competitive future.

HOW CAN YOU PARTICIPATE?

We invite you to take the first step. Together, we can explore the options for collaboration.



EXPLORE
A COLLABORATION



SELECT
AN APPLICATION



DEFINE A POSSIBLE
PILOT TRIAL



Expected execution window:
first half of 2027
(to be confirmed)



INITIAL FOCUS
Mediterranean crops
in Spain



OUTCOME
Local evidence
for real decisions

Together for more efficient
and sustainable agriculture.

Application/field image: Dawnsens®

LET'S TALK

KRONO GLOBAL MARKETING S.L.

Calle Cofrentes 11, 46010 Valencia, Spain

juan.ramon@kronoglobal.com

Dawnsens®

Technology partner

Innovative materials for a more sustainable world.