AgrícolA
AbrigA



Biodegradable agricultural textiles made from sheep wool

FIELD VALIDATION PROGRAM FOR
HIGH-VALUE CROPS







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The challenge: reducing agricultural plastics while improving performance

Intensive crops use synthetic covers, films, blankets, nets and fleeces to control weeds, retain soil moisture, protect plants and improve crop establishment.

These materials serve important agronomic functions, but often generate waste that is difficult to recover, recycle or manage at the end of their useful life, especially when contaminated with soil, roots or organic matter.

AgrícolA addresses this critical issue through temporary agricultural applications where a natural, biodegradable and renewable material can deliver technical, environmental and commercial value.

The aim is not to replace every agricultural material, but to validate specific uses in which wool can provide a genuine advantage.

Challenges AgrícolA seeks to address

- Reducing agricultural plastic waste.
- Controlling or reducing weeds.
- Conserving soil moisture.
- Moderating temperature fluctuations.
- Protecting sensitive crops.
- Improving crop establishment.
- Creating value from sheep wool with low textile value.

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What is AgrícolA?

AbrigA

TEXTIL TEXSAMAR

BIOPRODUCTO ARGENTINO
ARGENTINE BIOPRODUCT

SBD Sello Buen Diseño argentino

AgrícolA® is an **AbrigA® business unit** dedicated to developing agricultural applications using technical sheep wool mats and fleeces.

AbrigA has experience in designing and industrializing **technical wool textiles** for sustainable construction, supported by material testing, application in buildings and recognition through the **Argentine Bioproduct Seal** and the **Argentine Good Design Seal**.

AgrícolA® brings this expertise into agriculture, focusing on agronomic validation by crop, region and use conditions.

A **triple-impact venture** aligned with the circular economy, using renewable, regionally sourced sheep wool.

From sustainable construction to agriculture: a new technical application for sheep wool.

AbrigA track record

- Argentine development based on sheep wool.
- Experience with industrialized technical textiles.
- Technical testing of construction materials.
- Recipient of the Argentine Bioproduct Seal and Argentine Good Design Seal.
- Wool mats installed in over 350 building projects.
- Focus on circular economy, materials innovation and the valorization of regional fibers.
- Developed and manufactured with Textil Texsamar, ISO 9001 certified, with over 30 years in the textile industry.

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Why sheep wool for agricultural applications?

Sheep wool is a **natural, renewable and biodegradable** fiber whose physical properties make it particularly interesting for temporary agricultural applications.
Its fibrous structure can **trap air, absorb and release moisture, moderate temperature changes** and provide physical coverage over soil or crops. These characteristics offer opportunities to develop agricultural mats and fleeces for mulching, protection and establishment.
AgrícolA uses sheep wool with low textile value, transforming it into technical materials for higher-value applications. This approach connects agriculture, the circular economy, regional natural-fiber valorization and the reduction of plastic waste.

Relevant properties of wool

Natural and renewable fiber
Wool comes from a renewable source and can support more circular production practices.

Biodegradability
Under suitable conditions, wool can break down through biological processes, unlike many synthetic agricultural textiles.

Organic matter and nutrient contribution
As it degrades, wool may gradually become incorporated into the soil, adding organic matter and nutrients. This effect requires validation by crop, soil, climate, fabric weight and trial duration.

Hygroscopic capacity
The fiber can absorb and release moisture, making it relevant to soil microclimates and crop establishment.

Thermal buffering
Wool traps air and may help moderate temperature fluctuations under specific conditions of use.

Physical coverage
As a mat or fleece, it can act as a surface barrier against weeds, direct solar radiation, wind or moisture loss.

Valorization of low-textile-value wool
An underused regional raw material can become a technical input for higher-value crops.



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Agricultural applications under validation

AgrícolA is developing a range of agricultural applications based on wool mats and fleeces. Each use requires specific validation according to crop, climate, irrigation system, crop-cycle length and installation method.
Priority is currently given to applications where biodegradability, waste reduction and crop protection can generate the greatest value.

		Target crops	Expected function
Biodegradable mulch		Vineyards, strawberries, berries, nurseries and intensive horticulture.	Weed control or reduction, moisture conservation and moderation of soil temperature.
Thermal protection fleece		Young fruit trees, citrus, berries, nurseries and cold-sensitive crops.	Temporary protection against cold, temperature fluctuations and environmental stress.
Germination substrate		Seeds, seedlings, turf rolls, nurseries and plant restoration.	Moisture retention, early protection and improved establishment microclimate.
Protected crop covers		Greenhouses, seedling facilities, nurseries and intensive horticulture.	Partial shading, thermal buffering and seedling protection.





What do we aim to validate?

AgrícolA® invites growers, technical specialists and institutions to participate in controlled or demonstration trials to assess how wool mats and fleeces perform under real growing conditions.

The trials are designed not to replace growers' experience, but to generate technical information on applications, use limitations, installation criteria and opportunities for material improvement.

Evaluation variables

Agronomic performance

- Weed control or reduction.
- Germination, survival and establishment.
- Vegetative growth.
- Crop yield or quality, where applicable.

Soil conditions and microclimate

- Soil moisture.
- Soil temperature.
- Temperature beneath a cover or fleece.
- Interaction with irrigation, rainfall, wind and solar radiation.

Material behavior

- Durability throughout the use cycle.
- Ease of installation.
- Compatibility with crop-management operations.
- Physical integrity of the mat or fleece.
- Biodegradation and changes under field conditions.

Comparison with alternatives

- Plastic mulch.
- Synthetic frost-protection fleece.
- Straw, wood chips, cardboard or other organic covers.
- Mechanical or manual weed management.
- Systems currently used by each grower.

Validation is organized by crop, climatic region, production system and agronomic objective.

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Call for growers, technical specialists and institutions

AgrícolA® is seeking growers, wineries, nurseries, institutions and technical teams interested in participating in field trials to validate new sheep wool agricultural applications.
Our aim is to collaborate with those who know each crop, region and production system, generating useful information for the development of future biodegradable agricultural products.

Participants sought

- Organic, biodynamic or low-intervention vineyards.
- Strawberry, raspberry, blueberry and other berry growers.
- Nurseries and seedling producers.
- Citrus and other cold-sensitive fruit growers.
- Intensive horticultural producers.
- Protected cultivation operations.
- Technical, academic and research institutions.
- High-value crops with an environmental or export focus.

Possible participation formats

- Small-scale exploratory trials.
- Comparative plots.
- Demonstration trials.
- Validation with technical monitoring.
- Development of crop-specific technical sheets.

AgrícolA proposes to validate a new generation of biodegradable agricultural textiles made from sheep wool and designed for high-value crops.

Call to action
Would you like to participate in AgrícolA field trials?
Contact us to discuss the crop, location, trial objective and implementation conditions.

Contact

www.abriga.com.ar
+54 9 11 5708 2371
Proyectoabriga@gmail.com



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