

Short Communication

DIFESATTIVA: A FARMERS' ASSOCIATION

**TO FOSTER NETWORKING
AND SUPPORT FOR
DAMAGE PREVENTION**



Luisa Vielmi*, Valeria Salvatori

IEA - Istituto di Ecologia Applicata, Via Bartolomeo Eustachio 10, 00161 Rome, Italy

MEDWOLF - Best practice actions for wolf conservation in Mediterranean-type areas - www.medwolf.eu

1. Background

The wolf (*Canis lupus*) population in the Italian Apennines has been increasing noticeably in recent decades and wolf presence is now being recorded in submontane and lowland areas (Galaverni et al., 2015). In the central region of Tuscany, the landscape is mainly dominated by agricultural productivity and wolf presence has been reported with increased frequency during the last decade, often associated with claims for damage to livestock production.

According to the latest National Agricultural Census, 43.5% of the Province of Grosseto is used for agricultural practices and 14.7% for pastures (Pasqual, 2012). The area has a human population of about 225,000 inhabitants, but they are mainly concentrated in coastal areas. In rural areas, there are many more livestock than humans. The national census documents over 2,100 production holdings. Sheep raising represents an important activity with 86% of livestock heads being of sheep, and only 11% of cattle, with 2% horses and 1% goats. Considering only

sheep breeding, there are 1,142 active farms in the Province with a total of over 199,000 head of sheep: 89.29% are primarily dedicated to milk production, and 10.71% to meat production (BDN, 2016). Sheep production in Grosseto is mainly managed through



Fig. 1. A flock of Sarda sheep. Photo: Luisa Vielmi.

*Corresponding author: difesattiva8@gmail.com



Fig. 2. Milk is referred to as “white gold” by local livestock producers. Photos: Luisa Vielmi.



Fig. 3. DifesAttiva counts four local holding cheese factories among its members. Photo: Luisa Vielmi.

semi-extensive grazing in areas not far from the property holdings (Fig. 1).

The south of Grosseto is characterized by high quality dairy production. Since 2010 the frequency of attacks on livestock, mainly dairy sheep of the Sarda breed, has caused concern (Fig. 2).

High quality dairy products are certified according to quality standards. No shepherding is used in the area, and farmers receive incentives for producing D.O.P. sheep cheese (Pecorino Toscano DOP), with milk from sheep that are free-ranging for at least 60% of the grazing time. Such production represents an important share of the local economy. Milk is either used by communal cheese factories or local single holding cheese factories, ensuring a high diversity of products (Fig. 3).

The area is also interesting for its rich agricultural tourism economy, often associated with wine and olive oil production. As a result of the return of predators, many livestock producers have had to modify their husbandry methods in order to prevent further losses, as they were not used to guard their animals. In some cases this increases their workload, for example if they are not used to looking after livestock guarding dogs (LGDs).

2. The MEDWOLF project

In 2012, the Province of Grosseto together with agricultural and environmental associations started to collaborate within the LIFE MEDWOLF project, with the aim of mitigating the impact of wolves on livestock production. Concrete actions included the donation of prevention measures to farmers, namely LGDs of the Maremano Abruzzese breed. In the beginning few farmers showed interest in receiving LGDs as they had neither knowledge nor experience of having such dogs, which they perceived as a burden and cost they did not want to bear. In order to overcome the initial reluctance, a process of awareness raising and information provision was initiated (Fig. 4). Alliances with the few farmers who already had LGDs were made and those farmers were asked to provide information to others. Additionally, two training workshops were organized in June 2014 and March 2016, each with the participation of around 30 livestock owners. After three years, during which

Fig. 4. Awareness raising activities developed within the LIFE MEDWOLF project in DifesAttiva farm. Photo: Matteo Franchi.



constant contact was maintained between farmers and technicians, and during which the technicians monitored the dogs, interest in using LGDs increased significantly (Fig. 5).

The LIFE MEDWOLF project included the objective of providing 20 LGDs to selected farmers in the Province of Grosseto. Despite the initial reluctance, the project's objective was achieved, with 20 LGDs delivered to 10 farms. Selection of recipients was based on a set of criteria, including: i) previous history of attacks; ii) flock size over 50 heads; and iii) grazing areas in regions where most attacks were registered in the previous three years. Once these criteria were passed, the farmer's willingness to start a long-term engagement with the LGD was assessed during a direct visit to the farm.

With increasing confidence in the project, the number of farmers willing to have LGDs also in-

creased and the experience they gained was made available to all the others. They were thus linked to each other through an information network to which they could contribute (Fig. 6).

3. The farmers' network

With the stimulus of LIFE MEDWOLF, the existing network was formalised in 2016 through the establishment of the DifesAttiva association (www.difesattiva.info). DifesAttiva is a formal institution, with corporate bodies and roles. A full-time technician runs activities, answers calls and requests for information and makes sure the information flows in the correct direction. Although the participation of the President and Vice-President is on a voluntary basis, the technician that runs the practical activities is



Fig. 5. Livestock guarding dogs in a mountain area of Roccalbegna, Grosseto. Photo: Luisa Vielmi.



Fig. 6. DifesAttiva LGDs at work in the field. Photo: Luisa Vielmi.

Fig. 7. Images sent by livestock breeders of their LGDs.
Photos: Francesca Barzagli, Giacomo Tedeschi, Paola Famoso, Matteo Malaguti.

paid by the LIFE MEDWOLF project and from 2018 will receive a salary from the association's activities. Joining the association requires a subscription fee (10 euro per farmer to be used for puppies' veterinary care from 2018), but members must also accept and adopt the association's philosophy of commitment and sharing experience and technical guidance for correct management of LGDs. The latter is provided through direct visits by the association's technician and in some cases exchange visits among farmers.

To our knowledge, this is the first time in Europe that livestock breeders have joined directly in an association aiming at sharing information and experience as well as concrete damage prevention tools. Such a network permits the exchange of good practice and makes raising LGDs easier and more feasible if suggestions are provided directly by experienced farmers. Farmers have taken the initiative and created a chat group on WhatsApp[®] for sharing comments and images. Social events are regularly organised, such as participation at fairs, informal meetings and dinners.

3.1. Goals

The motto of the association is "Protezione È e DÁ qualità", which loosely translates as "Protection assures quality", stressing the positive role of the adoption of damage prevention measures. We suggest that protected stock is less stressed and owners are also less stressed, thus improving their quality of life.

The association has a statute and a general aim: to promote best practices for damage prevention as a means to enhance quality of life and products in predator ranges. Specifically, its goals are to:



1. Promote and facilitate the adoption of damage prevention measures and provide support for their correct use;
2. Provide guidelines for best practice in raising LGDs;
3. Promote the exchange of information and experience among farmers facing predation events;
4. Promote high quality standards of management approaches at associated farms through awareness raising, tourism and information activities.

3.2. Organization

Farmers usually trust information from their fellow farmers more than that from outside "experts" who do not live in the same conditions as they do. This is the main strength of DifesAttiva. The association's president, Mrs. Francesca Barzagli, is a livestock owner from Grosseto who decided to run the family business after concluding her studies in nearby Rimini (Fig. 8). She and 20 other farmers have joined the association and actively contribute to activities aimed at improving conditions of farmers operating in wolf areas. The farms that joined the association are mainly sheep milk production with sheep flock size ranging from 250 to 700. The number of LGDs present at the farms ranges from two to eight. Some farms are also open to the public for educational activities (Didactic Farms), cheese making and selling (in-house cheese factory) and agro-tourism activities. This increases the visibility of DifesAttiva, providing

Fig. 8. DifesAttiva president, Francesca Barzagli, and one of her LGDs. Photo: Francesca Barzagli.



Fig. 9. LGD checks in the stable and on the field.
Photos: Luisa Vielmi, Veronica Mazzucato.



information to visitors directly from the farmers and through providing leaflets. All of them have chosen to adopt damage prevention measures, mainly (but not only) LGDs, and to share their experience, mostly through social media.

4. Actions developed

4.1. Promoting best practices and networking

Following delivery of a LGD, the DifesAttiva technician usually visits the beneficiary daily for the first five days in order to monitor the initial reaction of the dog when left with livestock. In the following days contacts by telephone are made daily to ask wheth-

er any problem has arisen. After the first two weeks, monitoring visits are made every three months and include direct observation of dog behaviour. LGDs are observed while they are in the pasture with flocks and in stables. If the livestock owner has any doubts or problems concerning the dog's behaviour, he/she is directed to the farmer who owns the dog's parents in order to gather information about their behaviour. The association technician provides suggestions on how to correct the behaviour and they work together to achieve the best results. DifesAttiva asks all farmers who receive LGDs to take photographs and film of the dogs while working in order to document their process of integration and education (Fig. 9).

The association fosters the provision of suggestions and solutions to problems that some farmers may have encountered to those who are new to the use of damage prevention measures. Communication is conducted through Facebook[®], WhatsApp[®] or by telephone. Word of mouth is still one of the most effective ways of spreading information in rural areas, where people go to local cafes to relax and chat. Short TV spots have been produced, media articles have been published and public events organised. Meetings



Fig. 10. Delivery of LGDs to livestock breeders.
Photos: Luisa Vielmi, Veronica Mazzucato.



have been held with other farmers outside the association in order to discuss issues such as expenses for dog maintenance and suggestions to be put forward to the regional administration, as well as management of the most common problems encountered.

4.2. Donating pups

A total of 34 pups were produced from the LIFE MEDWOLF LGDs and they were given free of charge to other farmers in Grosseto or nearby. When receiving a dog, the beneficiary is required to sign an

agreement that includes monitoring of the dogs by DifesAttiva staff and respecting guidelines for the correct management of the dog (Fig. 10). DifesAttiva staff also assist farmers in managing breeding dogs, encouraging neutering in some cases and helping to find recipients for pups. Associated farmers must manage breeding in a way that ensures dog health, genetic variability and minimisation of occasions when a dog in heat represents a distraction for other LGDs.

4.3. Raising awareness

Besides promoting the use of damage prevention measures among farmers, DifesAttiva also works towards increasing the awareness of those who are not directly involved in the wolf-livestock dynamics. In this direction, DifesAttiva takes part in markets and festivals, educational activities with schoolchildren and technical seminars directed, for example, at farmers or environmental guides in order to inform them how to behave in the presence of a LGD.

Farmers are taken to schools to talk to pupils and students are taken to farms to experience the difficulties in managing productive activities with the risk

of losing part of the productive capital. A demonstration on how to make cheese is offered.

4.4. Promoting farm products

Products from associated farms (e.g. “Al lupo” sheep cheese; see Fig. 3 – bottom right) are promoted, particularly at festivals and markets, but also in other information actions. During awareness raising activities some of the products from DifesAttiva farms are offered to visitors. The promotion of such high quality products, together with accurate communication and information about the presence of the wolf and how prevention measures work, stimulates the visitor to appreciate the work done by the farmer and to recognise the added value of the products, often resulting in increased sales. Such events are thus important for farmers to make themselves known and acquire new clients so that their added workload due to protecting flocks is at least partially counterbalanced (Fig. 11).

4.5. Developing tourism

A collaboration with the local sport and tourism association Terramare (www.terramareitalia.it) has provided occasions to develop tourism activities in the associated farms, whereby groups of tourists have visited farms and learned about the difficulties they face and the solutions implemented in living with wolves. We have run 18 promotional initiatives, each with a minimum number of 10 participants.

There is also a collaboration with the regional Association of Environmental Guides. This is an extremely important activity aimed at sensitising those who use the landscape for tourism and hiking about the role of LGDs and appropriate behaviour in their presence. To this end, a warning sign

was produced that includes indications on what to do during an encounter with a LGD (Fig. 6).

New thematic excursions called “Wolf on the farm” are currently running. They are led by an experienced local tourist guide who takes a group of hikers on a trail to look for signs of wolf presence and



Fig. 11. Promotion of products from DifesAttiva farms with cheeses from a communal cheese factory in the area. Photo: Paola Fazzi.



Fig. 12. “Wolf on the farm” excursion. Photos: Paola Fazzi.

provides information about wolf ecology and behaviour. The guide also takes them to a DifesAttiva farm for their lunch, where they can taste a range of different products from the associated farms. A total of eight such tours have so far taken place and the targeted farms offer full availability for sharing their knowledge and experience. Information is given on the measures they take to protect their flocks from wolf attacks, their management approaches and social attitude. Products are also available for sale (Fig. 12).

5. Expanding the range

Activities are not limited to the province of Grosseto: partnerships are being signed with two National Parks, Foreste Casentinesi NP and Appennino Tosco Emiliano NP, where programmes for using LGDs are being implemented. The initial results of such partnerships are the transfer of LGDs to areas outside Grosseto. A total of 19 LGDs were provided to farmers in or nearby the territories of the Appennino tosco emiliano NP. The agreement will include a common strategy for management of dogs and continued communication for providing inputs through experience. A new programme for using volunteers to guard animals during summer camps is currently being evaluated in collaboration with the Pasturs project (pasturs.org).

6. The way forward

DifesAttiva will continue to work with farmers in central Italy to achieve the association's main aims. The livestock production industry is currently facing many difficulties due to other factors independent of wolf presence (e.g. climate change, market prices of milk and meat, etc.), and DifesAttiva is committed to safeguard the best practices for undertaking such an important activity, which has a fundamental role in preserving natural habitats. The main challenges faced so far are related to cultural resistance to accept the responsibility of taking action to protect against predator attacks because, as in many other areas, there is a strong belief that predators have been "reintroduced" and the state should be responsible for the management of their impact on livestock production. We have adopted an approach of transparent communication and persuaded farmers that this responsibility should be shared among all parties.

Further information

Website: www.difesattiva.info

Facebook: [difesattiva](https://www.facebook.com/difesattiva)

Acknowledgements

The LIFE MEDWOLF project is co-financed by the European Commission through the LIFE programme (Grant Agreement Number LIFE11NAT/IT/069). We wish to thank the farmers who joined DifesAttiva contributing for free to the development of promotional activities.

References

- BDN (2016) BDN Anagrafe Zootechnica istituita dal Ministero della Salute presso il CSN dell'Istituto "G. Caporale" di Teramo. Data updated on 31/12/2016.
- Galaverni M, R Caniglia, E Fabbri, E Randi (2015) One, no one, or one hundred thousand: how many wolves are there currently in Italy? *Mammal Research* 61, 13.
- Pasqual S (2012) La Toscana al 6° Censimento Generale dell'Agricoltura. Risultati definitivi. Regione Toscana Direzione Generale Organizzazione Settore Sistemi Informativi e Servizi. Ufficio Regionale di Statistica.