



# A Changing Climate

Inside this issue:

*Winter Water Rationing* 1

*The New Wind Turbine* 1

*The First European Training* 2

*The Value of a Cow* 2

*Nursery Cold Frame* 2

*Composting 'In Situ'* 3

*The Value of Biodiversity* 3

*Candlemas* 3

*Our Roving Ram* 4

## *Winter Water Rationing*

For the first time since we have been here, irrigation water was rationed throughout the winter. For the second time since we have been here, we have needed to water during the winter.

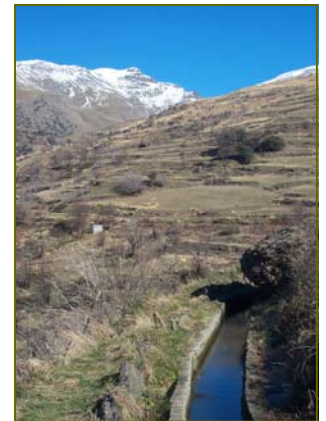
The 108mm of rainfall during the autumn was by no means the lowest.

However, the unseasonally high winter temperatures soon melted the snow, which represented the next growing season's

irrigation water.

Add to this the priority given to the water bottling company, Danone, resulting in 2 million litres of water being pumped from the mountain every day, and the sum total is water shortages.

This highlights the need to plan for a changing environment, and to ensure that the soil holds the rain where it falls.



*The irrigation channel that services Semilla Besada*

## *The New Wind Turbine*



Semilla Besada uses solar panels to provide for all its energy needs - that is, until it's a cloudy day. We have been using a generator, but

as sustainability is our focus, we applied for permission to install a wind turbine.

As with all our policy and strategic decisions, we used the Holistic Management® framework to ensure sustainability and provide the monitoring criteria to keep us on track.

Since its installation on the 21st January, we have only used the generator twice. This already represents a 60% reduction in our use of fossil fuel for generating energy.

After considerable research, we chose to install a Bornay 600w turbine because it was manufactured in Spain, used renewable energy to power its factory and

had a good reputation. We opted for 12 Sunlight lead acid batteries which store 600 amp hours at 24 volts and have a longer life-span than other batteries.

One of the challenges we faced was the turbulent nature of wind currents in mountains - not optimal conditions for a turbine. However, the Bornay has performed beyond expectations.

This represented a total capital investment of €6,000. Last year we spent €586 on generator fuel, which means that the turbine will have paid for itself in terms of savings, within 10 years. However, this does not include the environmental 'saving' of not burning a non-renewable fuel.

### Special points of interest:

- Wind Turbine
- Value of a Cow
- Composting 'In Situ'
- New Lambs

## The First European Training



A white board provides the opportunity to explain land planning in diagrammatic terms

For the first time in Europe, we offered a residential training programme in Holistic Management® at Semilla Besada.

Interestingly, English was not the mother language of any of the participants. This emphasised the im-

portance of using diagrams, pictures and practice to support what was said: not to mention having a few good dictionaries at hand!

Here are some comments from participants: “I never been sitting for so long in my life, but everything was so interesting and passionate”. “I missed a global organisation of my life and I couldn’t do the link with all the parts of my life and activities. Now it’s very bright!”

The next Holistic Management seminar runs from the 15th-22nd August.



## The Value of a Cow

Paco, our neighbour, is primarily a goat farmer. However, he also has a soft spot for cows, and has a small herd of 12, which are raised for meat.

In one of his conversations with David, he said that when his sister was married, twenty years ago, his father sold a cow. This cow paid for his sister’s wedding and bought the happy couple a house!

Today, a cow will fetch €450 for meat. However, since the closure of small, local abattoirs, the

cow has to be transported to Granada, an hour and a half away. The cost of transportation is €250, leaving a €200 return for an animal which has been raised for two years!

If Paco was certified organic, he would have to transport his cows to Seville, three hours away.



Paco’s cows grazing on the mountainside

This cow paid for his sister’s wedding and bought the happy couple a house!

## Nursery Cold Frame

As local nurseries concentrate on aesthetics rather than utility, it has become even more important to be able to propagate our own plants.

We have always used the nursery to germinate perennial shrub and tree seed, but this year we dedicated an area to the production of cuttings. The base was filled with cow manure to provide

some bottom heat through the composting process.

Shrubs, such as Myrtle (Myrtus communis) take a long time to grow from seed - anything up to two years. A one-year old plant can retail at anything up to €9 each, which makes it an expensive proposition to buy in plants.



## Composting 'In Situ'

Creating successful compost in a brittle landscape requires different management. The most successful method is to work it aerobically. A particular example of this is in the chicken house.

Leaf litter, dead plants, chestnut husks and forbs are spread to an approximate 30cm depth on the floor of the chicken house. This is watered and turned daily until there is evidence that decomposition is underway. Thereafter, watering and turning are done

periodically when decomposition slows down.

The chickens are part of this process by providing the necessary microbiology through their droppings and by regularly turning the plant litter as they scratch in search of food.

Chickens originated from jungle fowl, and their genetic memory still encourages them to forage in anything that resembles a moist forest floor.

The real bonus of composting 'in situ' is several wheelbarrows of fertility for the vegetable gardens twice a year, and no unpleasant odour in the chicken house. And no chicken mites!

*Information on our poultry breeds and management is available in our subscription library.*



## The Value of Biodiversity



Last year, due to high winter temperatures, and a cold and windy spring, the almond trees set no fruit. The result was no nut harvest.

The Almond (*Prunus dulcis*) is a marginal fruit tree at this height - 1300m - but in clement years, it performs well.

We have saved almonds from previous years, but now only have a year in hand.

The weather pattern this year has so far been the same, and we are

waiting to see if there will again be a cold Spring.

These natural events highlight the necessity of land design that includes biodiversity as a feature. They also highlight the need to save both seed and harvest to act as a buffer during poor years.

*Land planning and design are both a feature of the Permaculture and Holistic Management seminars offered at Semilla Besada.*

**The Almond is a marginal fruit tree at this height**

## Candlemas



Candlemas takes place on the 2nd February and is the traditional day for making candles. The Christian Church chose this day as it was the Celtic festival of Imbolc. It came at the beginning of the lambing season and was presided over by the Celtic goddess of youth and fertility, Bride. Candles are still blessed in church in many places for use in the coming year.

We follow the tradition of making candles at Candlemas, for our yearly use.

During the previous year, we collect, melt and clean the wax from our beehives. This is then melted in a deep metal pot and cotton wicking is dipped in the melted wax, then lifted to cool. The process continues until the candle is complete.



## Semilla Besada Companions *shaping the future*

Aspen , David and Samuel Edge  
Apto. de Correos 19  
18420 Lanjarón  
Granada  
Spain

Phone: (0034) 958 347 053  
Fax: (0034) 958 347 117  
E-mail: [semillabesada@holisticdecisions.com](mailto:semillabesada@holisticdecisions.com)  
[www.holisticdecisions.com](http://www.holisticdecisions.com)

### NEWS FLASH

#### LOCAL EVENTS

March	6	Eco-Film Night - Global Gardener
	22	Workshop - Dryland Composting
April	3	Eco-Film Night - Power of Community
	16	Workshop - Wool Spinning
	19	Workshop - Irrigation
May	17-18	Seminar - The Natural Mediterranean Garden
	15	Eco-Film Night - Farming with Nature

more details on [www.holisticdecisions.com/sb\\_events](http://www.holisticdecisions.com/sb_events)

*Semilla Besada is a 16 hectare research conservation farm set in the foothills of the Sierra Nevada mountains in southern Spain.*

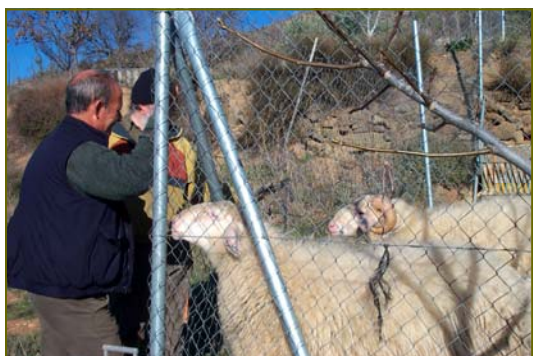


*The focus of the farm is the improvement of this ecosystem's capacity to cycle water and nutrients, support complex and stable biodiversity and provide year-round cover for bare soil. Attendant to this is the development of sustainable land and livelihood practices for small-scale farmers.*

*Every decision we make is :*

- *Tested for environmental, social and economic sustainability.*
- *Carefully monitored to ensure that we can take remedial action as soon as we detect a deviation from long-term sustainability.*

## Our Roving Ram



*Paco and David sizing up the ram.*

The ram of the German milking breed of sheep bought last year, came into his own at the end of the year, with unforeseen consequences for amateur shepherds such as

ourselves.

He challenged David every time he came into the sheep yard. Weighing about 60kgs, he was capable of seriously damaging a human. He had already proved what a hard head he had, by charging the wire fence enclosure

so frequently that it was completely bowed.

We discovered the hard way, that the familiarity created from working with sheep at close quarters, can result in unmanageable livestock.

Paco, however, was able to demonstrate the kind of handling that quickly indicated who was boss!

The ram is now on loan to Paco, and local interest is developing for his services as a sire.

*Information on our continuing development of a milking breed suitable for this environment will be part of the Semilla Besada library.*



*The milking sheep when they first arrived a year ago.*