



Water Saving Report

THE ORCHARD OF CHAMS

Orchadist: Chams

Study: Water Saving

Location: Alpens (855 m.)
(Pre-pyrenees catalonia)

Start date: 28.05.2022
End date: 11.09.2202

Objective of the study :

Our objective is to check the origin of organic matter from human and animal hair in the plantation:

- Water savings
- Increased growth
- Increased fruit growth
- Absence of snails

Material and Method

- Human and animal hair (dogs)
- Land Plot
- Cuttings of squash, zucchini, tomatoes, peppers, eggplants, etc.

We have done the experiment on an area of land that has been used for years without fertilizers. The soil was prepared for planting the cuttings according to the usual technique. The planting of the cuttings was carried out, covering half of them with hair. Pumpkin, zucchini, tomatoes, peppers, eggplants, which are the usual crops in this Pyrenean area, were planted. We control the measurement, irrigation control and production of each plant..



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Alpens, March 31, 2022



Alpens, May 28, 2022 First planting day



Sweet peppers

Hot peppers
and eggplant

Tomatoes



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GROWTH CHART :

Hot peppers

First measure (25.06.22) - Peppers (Without Agropèl) 0,52 ----- (With Agropèl) 0,59

Recent measurement (11.09.22) - Peppers (Without Agropèl) 1,04 --- (With Agropèl) 0,63

Tomatoes

First measure (25.06.22) - Tomato plant (Without Agropèl) 0,75 ----- (With Agropèl)

0,85 Medida reciente (11.09.22) - Tomato plant (Without Agropèl) 1,25 --- (With Agropèl) 1,26

In a first phase, starting from the first cuttings of the same size, it was observed that the plants covered with hair grew faster and more lush.

Peppers plants 25 June 2022





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In the second phase, growth stabilizes, although optimal differences persist in favor of plants with hair.

Peppers plants 10 July 2022





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Tomato plants 25 June 2022

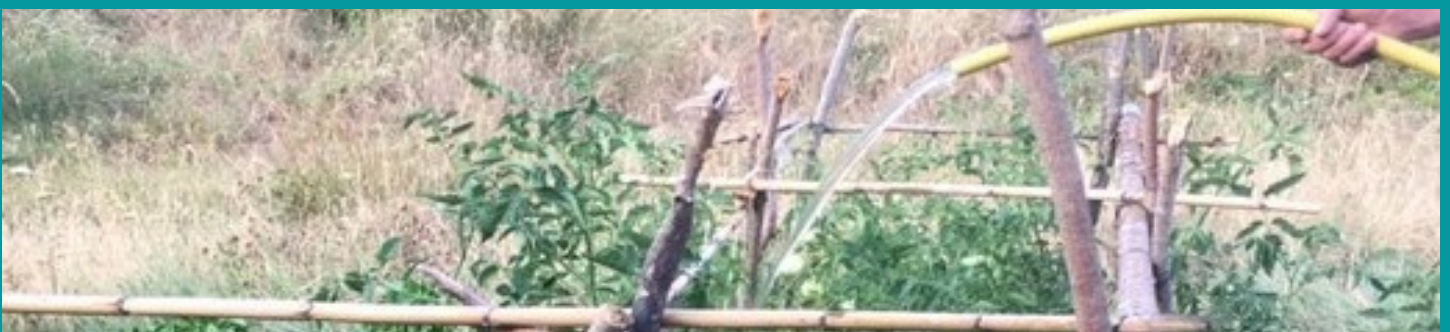


IRRIGATION

The first 15 days after planting, the plants were watered twice a week. From the third week only had to be watered once a week (despite the heat wave that has affected this area in June and July).

In mid-August, after the first rain, no more watering has been done until today.

The need for water has been assessed by the color change of the plants.





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BLOOM

Since June 24, and because it was so hot, the plants began to bloom the second week after planting. We have observed that the ones with the hairs installed bloomed earlier. They also seem to have extended the flowering process to date (September). They usually finish the process by the end of August.

(Our horticulturist feared that their fruits might not ripen properly due to their precipitation, but we found that this was not the case).





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FRUIT

This year, environmental factors have not been in our favor. Having been a particularly rare year, extreme temperatures, very hot, little rain, but very intense and short-lived, even hailstorms.

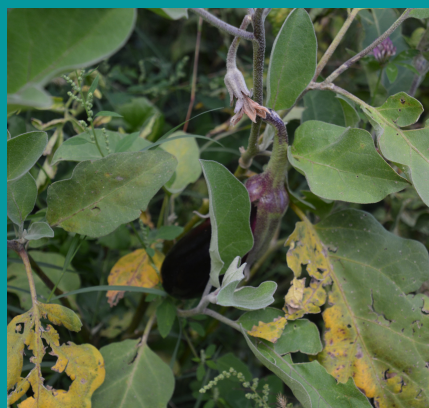
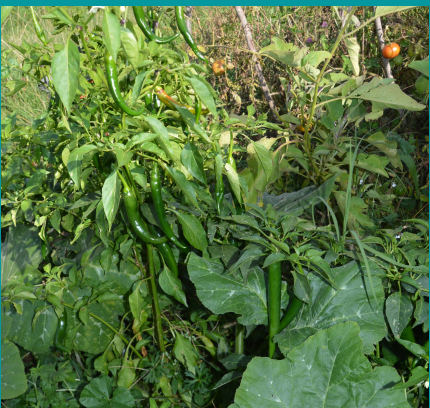
This summer 2022 has been very bad overall for tomato growth.

Many horticulturists in the area have been left untested. 😞

From 8 tomato plants, in a month and a half, he has collected 20 kg and the tomato plants are still flowering 😊

We have harvested 30% more than the usual crop.

The tomatoes have been exceptionally good, tender, soft and sweet.





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INSECTS AND GASTROPOD MOLLUSKS

This year there has been a special absence of insects compared to other years. Since mid-August, after the rain, there has been an increase in activity of other types of insects than usual, such as ants, earwigs, small but beneficial bugs of the soil, thus attracting sparrows. The sparrows have not harmed the plants, they have only come to hunt small insects, to refresh themselves.

The snails usually invade the space in the third week of June and there are usually a lot of them. This year there have hardly been any snails, and the few we have found, it seems that because of the rain, they have not bred. Even so, we have seen some during the day sleeping on top of the hair blanket and we have also found some offspring on some leaves of the plant, although so far, they have not damaged the fruits.





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WILD HERBS

The wild weeds this year have delayed their appearance, they have grown taller than other years, this year they have come out in mid-August. Chams considers wild weeds to be part of his crop because they protect it, cool it, trap bugs and provide oxygen to the soil, so he only removes those that are in close proximity to the plant.

Chams advises that all those weeds (without spikes, etc....) that do not damage the fruit should live with the crop.



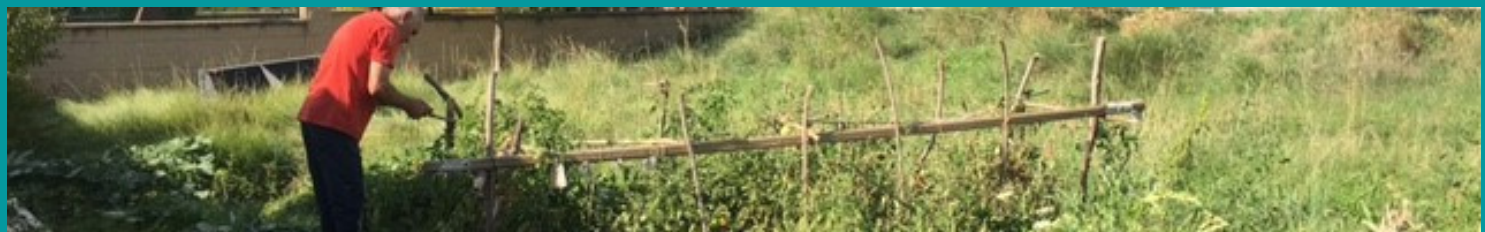
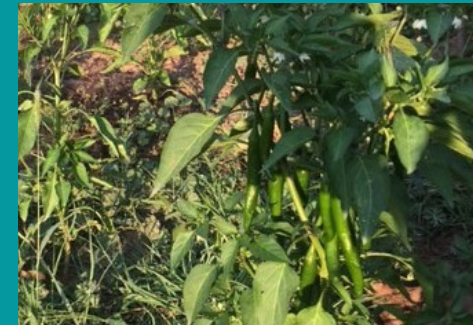
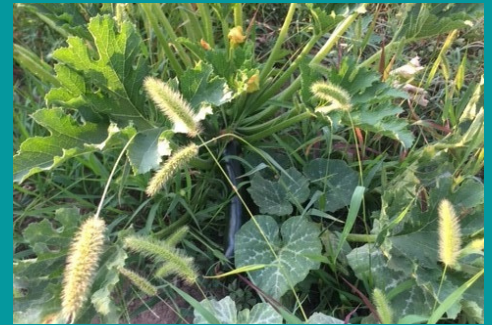


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THE HARVEST IN GENERAL

Flowering began in mid-June and has continued until today, September 11. The first fruits came on July 15 and not a single fruit has been spoiled, all of them having ripened.





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CONCLUSIONS

There was no significant difference in plant growth in relation to height, but there was a significant difference in leafiness and the amount of fruit harvested.

It has required 50% less irrigation than usual and bugs have not been a problem for plant growth despite not using insecticides.

The mulch has remained compact and stable to the present day and wild weeds and bugs have not been a problem for plant development.

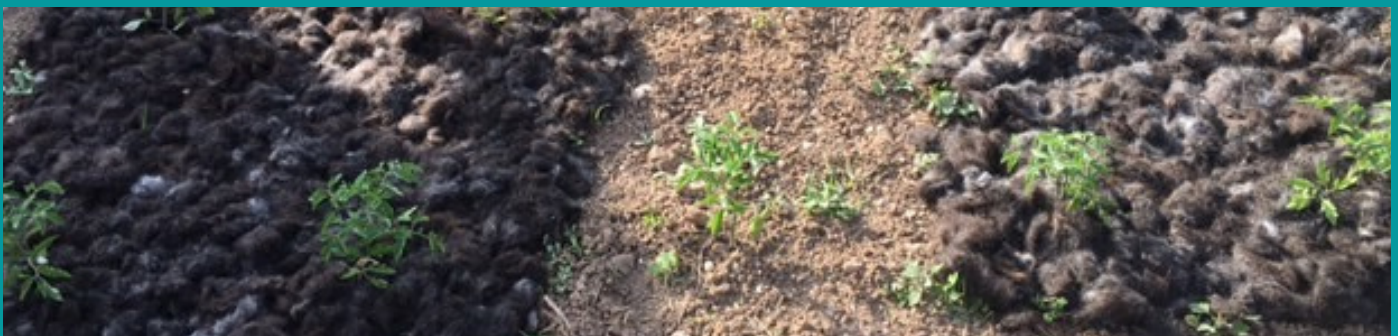
Agropèl is a fantastic alternative for saving water and for horticulturists to stop having to put plastic on the soil to hold the humidity of the soil. We know that there are farmers who also use straw to avoid polluting, but we believe that hair, apart from saving 50% of water, is also very good because it increases the activity of beneficial bugs in the soil, providing them with nitrogen and enriching it, giving a very effective result.

This is an observational study and the results obtained open a promising path for more extensive and detailed work in the future. Compared to the year 2021 with a lot of rain, little harvest and no hair installation, this year 2022 has turned out to be a much more satisfactory harvest.

Chams wants to repeat this experience again TO CHECK the differences in the DIFFERENT YEARS.

- Only in this way, without toxic chemicals, you can have a very ripe, very tasty, healthy and ecological harvest like this one.

This study was carried out prospectively and has certain limitations, so it should be expanded in the future.





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