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FEATURE STORY

THE GUIDE TO SUSTAINABLE AGRICULTURE - THE FIRST PUBLICATION BY SOILS

After the first half of 2015, it’s time for some **People Care** for us at SOILS; the perfect occasion for a check-in. So far, it has been a pretty intense year.

A quick recap: To-date we delivered a 5-week **agro-ecology workshop** and follow-up sessions for farmers in the Nabatiye caza, we completed the second edition of the **Permaculture Design Certificate (PDC)** in June, we celebrated **International Permaculture Day** and the International Year of Soils, we have conducted our introductory beekeeping workshop and are planning an advanced apprenticeship program with Bassam Khawand, and we are working on introducing our village of Saidoun (Jezzine caza) to the concept of fair trade and helping it become a **Fair Trade Town**... and more.

Our most recent challenging milestone was a first for us: Developing an illustrated manual on sustainable agriculture in Arabic. This activity was part of the FORDS* project by **Mercy Corps**, with whom we had arranged to deliver the agro-ecology workshop in Nabatiye between February and April.

We only had a few weeks, but fortunately *Rita Khawand* and *Amani Dagher* had done most of the research during the workshop phase of the project. We still needed help with editing and designing, and we were lucky enough to bring 2 more people on board: *Kassem Jouni*, an agriculture engineer, helped with the editing, and an old friend, *Racelle Ishak*, did the design – she grasped the concepts and delivered beautiful illustrations in record time.

The manual is 104 pages long (A5 size) and mainly addresses local small-scale farmers. It not only details practical applications, but also aims to give farmers an overview of different natural elements (soil, water, living organisms, climate, etc.) and the importance of their interrelations in supporting a healthy garden - hence its size. We want farmers to grasp the concepts behind sustainable gardening and come up with modifications or new applications to suit their specific conditions. This manual is also useful for permaculturators or amateurs wishing to learn more about nature and gardening.

Continued on Page 2



LET'S FOCUS

Continued from Page 1

The manual is divided into 6 chapters:

1. **Soil:** How to assess our soil and care for it using regenerative and conservation practices such as composting, conservation agriculture, mulching, etc.
2. **Water:** Causes of water scarcity, water management strategies for dry climates, and grey water treatment.
3. **Plant Production:** Types of seeds, orchard design, polyculture, crop rotation, and healthy polytunnels.
4. **Integrated Pest Management:** How to prevent problems, monitor early signs of pests and diseases, and - when necessary - intervene in order to restore balance.
5. **Garden Design:** A brief introduction to basic permaculture design.
6. **Farm Profit and Loss Statement:** A simplified way to calculate net profit per type of activity, and net profit for the whole farm.

In our research, we tried to rely as much possible on **locally published references** (mainly leaflets and booklets developed by local universities and associations). Rather than reinvent the wheel, we focused on how to synthesize all this information and present it in a useful way.

A major difficulty we faced was how to translate technical terms to Arabic using the simplest possible words and phrasing. This sometimes made our fact checking work laborious. But working in a diverse team meant that we complemented each other's skills, and all was well.

It was hard to resist spending more time on this manual. Of course, had we had more time, we would have worked on making the manual more user-friendly and would have included more illustrations and info-graphics. We would also have liked to allow for a testing phase with farmers before finalizing it.

All things considered, we are confident it serves its intended purpose very well. **No manual can replace in-depth training**, especially for something as complex as agriculture, but it's true that it helps spreading some concepts to people we wouldn't have reached otherwise. And I guess if only a few readers start to at least compost or grow a cover crop in their orchard, then the manual would have fulfilled its mission.

Still we like to consider the manual as a work in progress, which we hope to develop over time based on users' feedback and an advanced exploration of local applications. **Print copies** of the manual will be distributed to around 400 famers in South Lebanon, through agricultural and women's cooperatives, as well as agriculture offices and grassroots organizations (including SOILS). We are really looking forward to hearing back from as many famers as possible.

We hope it's the beginning of a series of future publications in **Arabic** related to permaculture and holistic, sustainable agricultural practices within the local context.

**The manual has been published within the FORDS project, implemented by Mercy Corps and SHEILD and funded by the European Union.*

Shared by the Editorial Team

DOWNLOAD THE MANUAL FOR FREE

The manual is available to download online on our website for free:
<http://www.soils-permaculture-lebanon.com/publications.html>



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UPCOMING EVENTS

"ALA BROCANTE DES ARTISTES" VINTAGE MARKET



JULY 4-5, 2015
10:00 a.m - 6:00 p.m.
Villa Mexico, near the new Spinneys in Ashrafieh
Vintage furniture and objects sale to raise funds for the arcenciel NGO

<https://www.facebook.com/events/478968235611588/?permalink=488088861366192/>

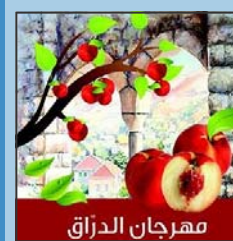
"PLANTCESTRAL ALLIES FOR SELF-HEALING" HERBAL HEALING WORKSHOP



JULY 6, 2015
6:00 - 9:00 p.m.
Dammeh Cooperative, Albert Khayyat Street, near Caribou Café in Ashrafieh
The healing power of herbs, making herbal preparations

<https://www.facebook.com/events/486286071530289/>

"PEACH FESTIVAL"



JULY 10-11-12, 2015
JULY 17-18-19, 2015
5:00 p.m. - 11:30 p.m.
Bickfaya
Exhibitions, activities and entertainment, food and drinks

<https://www.facebook.com/events/784288911687929/>

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LET'S SHARE OUR NEWS

THE GREEN BOX - WHO SAID YOU CAN'T GROW PLANTS IN SMALL APARTMENTS?

Even if they live in small and cramped apartments, people can still feel connected to nature and enjoy the company of plants at home. Discover the Green Box, a new indoor container-planting concept by 4 Landscape Architecture students at the American University of Beirut: Yasmina El Khouri and Tina El Chaer (both graduates of the 2015 Permaculture Design Certificate course in Lebanon), and Nathalie Estephan and Aya Itani.

The problematic we are addressing in the **Green Box** is the missing link between urban life and greenery. We have noticed that many of those who live in cities have a weak connection to nature, especially in Beirut where green public spaces are being depleted from our urban fabric, and slowly from our consciousness. For this reason, our project aims to bring the outside inside. It is a planter designed specifically for apartment life, targeting those who desire the presence of interior plants but not the hassle of maintenance.

How it works: an interactive, multifunctional planter

The Green Box is composed of a simple **hydroponic** system that requires 2 compartments to do the job: the outer compartment holds a water and nutrient solution, and the smaller, inner one holds plants and clay pellets, which is the main planting medium. Water reaches the pellets through perforations on the bottom surface of the smaller container, reaching the planted area on 3 different levels: a wet zone (root zone), a moist zone, and a dry zone.

The planter also **interacts** with the user by signaling when it is in need of water. It turns a small light on and sends a notification to your phone. This is where it becomes easy to maintain; you don't need to be an expert to make your hydroponic system work: It tells you what to do.

The Green Box is designed in a way to blend into every room in the house. Each box is customized to fit **specific functions**; for instance, the planter design we developed for the study room also serves as a chalkboard surface to write down notes, to-do lists, and ideas. In the kitchen, the planter doubles as a spice rack that holds several small jars along its edges. The living room version can also be used as a key holder to keep all keys in one place.

Plants are adapted to their medium and setting

Not only is the function of the box customized, but the **plant species** in it are also adapted to their context. For the kitchen, we picked dark opal basil, which can be used in cooking. For the living and study rooms, we chose Peperomia and Echeveria for their aesthetic value and low maintenance needs. All three species are indoor plants, tolerate shade, and are sturdy enough for the hydroponic system. The plants are kept alive and thriving through a specific nutrient solution prepared for each plant, to be added to the water.

The Green Box, then, consists of a system that combines an alternative apartment-friendly planting technique, an engaging plant response, and a customized functional element. Using clay pellets as a growing medium serves as a lightweight, simple, and dirt-free hydroponic system that redefines container-planting as we know it. This multifunctional approach facilitates plant-care for apartment-dwellers, without the hassle of worrying about maintenance, which would be a click away. It could be an original way to green your apartment.

How it all started

The idea came to us from a soils course we had taken in university. We had an in-class competition that required us to grow in soilless mediums, and myself and Tina chose to work on a system using clay pellets and a nutrient solution. We won the competition with 5 healthy basil plants and a small bowl of fresh peppers. Upon hearing of this year's theme for the **Nature Conservation Center's** annual **International Biodiversity Day at AUB (IBDAA)** competition (Art & Science for the Love of Nature), we got together with Nathalie and Aya, and decided to build on our previous experience with clay pellets and design a planter that could accommodate such a system. The product turned out to be a success, earning us first place in the Art and Humanities category, with the ongoing support of our inspiring professor, architect **Wisam Melhem**. We are definitely looking into alternative designs and materials to turn it into a commercially available product and introducing hydroponics in people's everyday lives.

Shared by Yasmina El Khouri



LET'S SHARE OUR NEWS

BETTER (WHEAT-FREE) BREAD MEANS BETTER BUSINESS AND COMMUNITY

Many of us are familiar with Bread Basket Square's wheat-free cookies, maamouls and Taqabars that have become a staple in every health store and food outlet. For those who haven't had the chance to taste these treats or haven't heard about them yet, Soumaya Merhi, the young entrepreneur behind this Tripoli-based bakery (and often the person behind the oven), tells the inspiring story of how this brand came to be.

I like to think of **Bread Basket Square** as more than a bakery. I want it to be a resource platform for grain knowledge and innovation. This explains why when we started our bakery two years ago, we decided to coin name its name with "**bread basket**", a term which designates a region that produces cereals for an entire country.

Of course, all our bread, cookies and *maamoul* are handmade, and we don't use any animal products, white hybridized wheat, or genetically modified organisms (GMOs). We also work with small-scale farmers with the aim to revive ancient grains like spelt. My aim is to create and provide the Lebanese market with a clean, locally produced, affordable, healthy product that is accessible across the country.

I want the bakery to be a hub of grain innovation, where we dabble with old/new recipes, experiment, and continuously come up with new products. For instance, we give all our baked goods a twist, such as turning *maamoul* (a traditional oriental feast pastry) into an every-day vegan cookie. Then of course, there's our "square" trademark. Everything we do in the bakery is square: from our traditional Lebanese pita bread to our cookies and *maamoul*. Seeing as how the market is saturated and competition is tough, this sparked a point of differentiation for us in the market.

I have seen over the years how happy people are to find healthy cookies and bakery products that taste good on the local market. Among our bestsellers are the dark chocolate cookies, *maamoul* with dates, and **Taqabars** energy bars. I love entering a place and seeing my products on the kitchen tables without them knowing the story behind the bakery; it makes me happy.

PROUD TO BE AN ENTREPRENEUR-

The bakery remains the central part of my being and I truly believe Bread Basket Square products are jam-packed with my love, passion and ideals. I maintain that a sustainable business model remains one of the most effective vehicles to social change where nutrition, health, environment, social and cultural values meet economic reality. For my part, I was raised in Tripoli and Koura, so when we thought of starting a bakery, choosing a location in the region came naturally to me. As a woman managing a bakery in Tripoli and employing 6 men, I also turned out to be inadvertently challenging stereotypes and preconceived notions of gender roles.

Starting and running a business in Lebanon can be difficult for anyone, anywhere, and I've developed a true sense of recognition for young entrepreneurs in this country. I love interacting with knowledgeable people who can challenge me and allow me to further sharpen my perspective. I've always flourished in service-oriented platforms where thoughts and ideas are shared freely, which is why the food health industry has given me a great sense of satisfaction. Our line of cookies and bread is already available in 80 different points of sale across Lebanon, including Souk el Tayeb. We will be partnering up with a small scale distributor in the coming months in order to increase our brand's coverage so that I can concentrate more on product diversity. By the end of summer, we'll be launching a new organic, gluten-free line. Our future plans definitely include expansion and distribution. We've started to export with bigger clients.

Starting the first weekend of July, I will open a popup athletic café called "**Coffee Cycle**" near the **Bike Generation** store in Faqra - Emile Lahoud roundabout. We will be serving sandwiches, fresh juices, and brunches that showcase local ingredients instead of commercially available imported goods like quinoa and smoked salmon.

Stay tuned to our Facebook page for updates: <https://www.facebook.com/BreadBasketSquare/timeline>

Shared by Soumaya Merhi - info@breadbasketsquare.com



Photos by George Haddad (Top) and Elena Dorfman (Bottom)



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LET'S SHARE OUR NEWS

A LIZARD'S TALE: THE LITTLE KNOWN AND MISUNDERSTOOD LEGLESS LIZARD

Meet the **European legless lizard** (scientific name: *Pseudopus apodus*).

This reddish-brown reptile is often mistaken for a snake. However, it is in fact a lizard. Unlike snakes, it has two rows of small teeth instead of fangs, as well as soft ears and barely visible legs on both sides of its body. This phthisis or atrophy of the limbs is the result of biological evolution and earned it the nickname "legless lizard".

This lizard is a **harmless, non-poisonous reptile** that feeds on insects and small rodents. It has two pouches along its sides, which it can fill with air to look bigger than it is and scare off attackers. It is a beneficial part of its ecosystem.

Yet, because of its barely discernible legs, large head and relatively long size (it can grow to lengths of up to 135 cm), many people - especially in Lebanon - believe it is a snake - and a dangerous one. They resort to killing it and invent tall tales about its viciousness. Sadly, this lizard is now a threatened species in the country as a result of irresponsible behaviors.

The legless lizard is found in open coastal areas and mountainous areas (up to an altitude of 800 m) covered with short grasses that facilitate its movement.

Shared by Fouad Itani



European legless lizard
Photo by Rami Khashab

An Arabic version of this article was published on June 16, 2015, in Sayd Magazine's website: <http://www.sayd-magazine.com/?p=2436>

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MAKING BEIRUT GREENER ONE ALLEY AT A TIME WITH GUERRILLA GARDENING

On **Friday, June 26, 2015**, I happened to have a vacation from my day job so I was lucky to be able to join my friends *Ghassan Salman* and *Tarek Rabah* for a quick and exciting **guerrilla gardening** action on **Clemenceau street in Hamra - Beirut**.

A fellow activist, *Raneem Baasiri*, had chosen our target; a small pedestrian alley behind the Clemenceau Medical Center, leading to the America and Gibran Khalil Gibran streets. A long concrete basin once served as a flower garden for the two buildings on this alley, but this time wasn't even a memory for the few remaining residents. They had always known the basin as brimming with cigarette butts, dog poop, rubble and various trash - even severed chicken heads at times - instead of the flowers it was intended for. All passersby had been complaining about the stench and the seemingly irremediable degradation of this spot.

This is the sight that greeted us in the morning when we arrived. Obviously, the first step was to clean up the basin from all the trash that covered it. Once this was done, we set out to decompact and aerate the "freed" soil. To our surprise, we found some life in there: an earthworm, a couple of earwigs and even a small Mediterranean gecko which we inadvertently disturbed. Our second surprise was that we smelled rich humus in some of the soil we dug out.

Then came the fun part: planting! Ghassan had brought with him a good selection of plants adapted to poor soils and little sunlight: a **frangipani tree**, **aloe veras**, **basil** and **Tabasco peppers**, as well as some ground cover plants. As a bonus, he had rescued a potted **bougainvillea** and **pittosporum** that had been left on the street near a dumpster. *Nada Farran* joined us for this part of the work and helped us give a new home to these plants. We also gave each plant a new lease on life with a dose of compost for a good start.

Not one policeman or anyone else bothered us during the 3 hours it took to complete our guerrilla action. Passersby congratulated us sincerely on this initiative, and the residents were delighted; they brought water for the plants and asked how else they could lend a hand. The best part of the day was the sight of 3 little kids (Hiam, Ahmad and another boy whose name I unfortunately forgot) who were the first official visitors of this hopeful garden.

With such positive energy, we can join up with similar initiatives from **Guerrilla Farming Beirut** (<https://www.facebook.com/pages/Guerrilla-Farming-Beirut/85632649774476>) and **Artscape Beirut** (<https://www.facebook.com/artscap Beirut?fref=ts>) and really green Beirut.

Shared by Alexis Baghdadi



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PHOTO OF THE MONTH

You sent us your submissions and you voted for your favorites. Here it is, the PHOTO OF THE MONTH:
To send us your photos, email us on contact.soilslebanon@gmail.com



Returning to the beehive, Saidoun, Jezzine caza - South Lebanon
Photo by Wael Yammine

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GET IN TOUCH, GET INVOLVED


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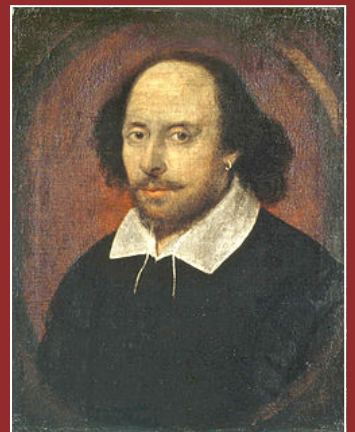
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A THOUGHT TO SHARE ...

**“One touch of nature
makes the whole world
kin.”**



–William Shakespeare (1564-1616)
Troilus And Cressida

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