

Let's talk about Gaza

An Interview with a Female Inventor and Entrepreneur

October 2016

While studying civil engineering at the Islamic University of Gaza, Majd Esmail Al-Masharawy and her friend Rawan Abdullatif were aiming higher than solely gaining their degrees: They wanted to leave their footprints by inventing something new. Bessan Shehada, project coordinator of the Rosa Luxemburg Stiftung Regional Office Palestine (RLS) in the Gaza Strip talked to the 22-year-old Majd about her and Rawan's invention called the Green Cake, moments of success and failure, and their daily struggles as a female entrepreneurs living in a male-dominated environment and under siege.

Majd, can you tell me more about the Green Cake?

The Green Cake is a lightweight, low in price and ecofriendly building brick. It is mostly made from ash and cement, as a replacement for aggregate or sand. It is patentable as using ash is something new in this industry. We also added some additives to improve its strength and absorption capability. As I said, the Green Cake is very light, weighing only half of a traditional brick: While a traditional brick weighs 12 to 13 kilograms, a Green Cake only makes it up to six to seven kilograms. This positively affects the total cost of construction. Using the Green Cake instead of conventional building bricks reduces the total cost by 15 to 20 %.



How did you come up with this idea and how did you develop it further?

When I was in my fourth year of college, my friend Rawan and I thought about coming up with something new. We did not want to just graduate from college like the other students. We were dreaming about leaving our footprints. While we were taking training courses during summer 2014, we noticed that there was a big problem in the construction field in the Gaza Strip. Construction bricks made in Gaza are very poor in quality and very high in cost so we started thinking about developing something new with a better quality and lower cost.

So what was the exact process?

We started conducting research in June 2014. After about six months, we made first small prototypes. As we were students at a big university at that time, we had the chance to use the laboratory in order to

examine these prototypes. We made the first real prototype and it was simply unbelievable. Next, we applied for 'Mobaderoon' (Arabic for 'entrepreneurs'), an incubation program, and we were chosen in January 2016 as participants. This means that we could spend one year just preparing the idea, researching, prototyping, and looking for new ideas until we reached the final Green Cake idea.

Are you receiving any kind of support now?

Yes, now we have supporters. In the beginning we didn't receive any support though, which lessened our confidence a lot. We failed many times, and sometimes we were thinking about stopping, but we continued and finally succeeded.

What obstacles did you face?

The biggest one was society itself. Here in Gaza, people think that women should stay at home. Women cannot go here and there freely. For example in the field when we are visiting factories, they always tell us: What are you doing here? This is only for men. When we first went to "Al-Fakhoora", a place where they make pottery, they were shocked to see women going in. They asked whether we wanted to buy pots, but we said no. We just wanted to take the rubbish of pots, as we needed the ash. It was really strange and became a big problem for us.

How did you overcome this problem?

By dedication, determination and a strong belief in our ideas and ourselves. We do believe that women and men are equal. Simply, that is the way of how to get over it.

How many times did you fail while experimenting?

The first prototypes we did in August 2015 completely failed. We made them in Habeeb factory, a private company. After we failed, we were too ashamed to go back there to make more prototypes so we had to change the location. When we were at the laboratory testing the brick, someone was recording a video. When we did the pressure test, the brick broke. It was really a big failure for the first step. Now after we succeeded, I think about it differently. It actually does not mean anything negative because every step has its own obstacles.

What are your next steps?

We plan to start a production line now. Yesterday, someone called me to order 1500 bricks for the construction of his flat. In order to respond to this request, we have to set up a production line by for example renting a factory for one week or so. However, in this way I will not be able to produce revenue. I will have to pay for the raw material and the factory so the money we receive would only cover our costs. Now we are aiming at finding an investor. We have a sum of 5,000 dollars but we need someone to pay the rest. We need to find someone to rely on and trust because we do not want someone who will invest in the project and then tries to kick us out.

Did you have obstacles to travel to participate in competitions?

We were facing big problems in April 2016, when we were nominated as semifinalists for a competition at the Massachusetts Institute of Technology in the United States. The competition is only for



participants from Arab countries. Our team was the only one from Gaza, and we were also the only team to have an idea considering Palestine. We were supposed to travel to Jordan for the boot camp but we could not because the Israeli authorities did not issue our permissions. We were also supposed to travel to Saudi Arabia for the final event but we could not because we lacked the permission. Our visas were simply rejected. Actually, I am supposed to be in the West Bank now, but I did not get a travel permit either.

If you find an investor, will you start importing ash?

Yes, but this is a future plan. If we find an investor during the first year, the available amount is enough. After that, we can start importing from the West Bank in order to satisfy a higher demand.

Are you facing any financial problems?

Yes, we need a bigger budget. All the obstacles would be solved, if we had an investor who helps us installing the factory and starting the production line. We have used Green Cake bricks to construct a 16 by 25 meters wall for a customer. We are observing it now to see its durability, especially during winter. When people ask us about our invention, we invite them to observe this wall in order to get an idea about it. To me, building this wall with Green Cake bricks was just a dream come true. When we built it, I kept visiting it every day.