

WOMEN IN THE INDUSTRY

DIDEM TÜMÜK, RESEARCH AND DEVELOPMENT MANAGER, TOROS AGRI

WHY DID YOU CHOOSE TO WORK IN THE FERTILIZER INDUSTRY?

My profession is chemical engineering. As a chemical engineer, I wanted to improve my engineering skills by efficiently managing variables. The fertilizer production sector is a living industry where the dynamics can change quickly, and which requires care and skill. It is also a sector in which I can continuously improve both myself and the process I am working on, and where learning will never end. It is very exciting to be part of this living system.

HOW DID YOU START YOUR CAREER IN THE INDUSTRY?

I started working in the chemical industry in 2005 as a production engineer. After 5 years' experience I started my career in the fertilizer industry by taking roles in different areas of Toros Agri including HSE, production and R&D. The advantage of working in different sections of a company was that I was able to get a very broad perspective. Working on different processes gave me the opportunity to look at operations from a broader perspective, to develop solution-oriented suggestions that could provide multiple benefits by taking into account the interaction between processes, and to continuously improve myself.

WHAT DO YOU FIND THE MOST REWARDING ABOUT YOUR JOB?

There are many things but the most important one is that working in R&D I get a chance to improve the company, the business and myself. Besides that, being part of the chain that produces food and getting creative about how we can do things differently to make that chain more efficient and accessible is the biggest satisfaction of all as it makes me feel that I am contributing to solving one of the biggest challenges ahead: food security. What we do helps to feed the world at a time when access to a healthy and adequate food supply is becoming more challenging every day.

WHAT CHALLENGES HAVE YOU HAD TO OVERCOME?

During my more than 15-year career, I have not only been an engineer and an executive but also a mother and a wife. In short, I have tried to accomplish every role. The fertilizer industry is one of the most male dominated sectors in industrial manufacturing. It therefore sometimes takes extra effort and energy to take a leading role and get to an executive position in the manufacturing environment. Yet again, this comes with a reward as well since it forces you to always think outside the box and always be creative just to stay ahead.

WHAT ACHIEVEMENT ARE YOU MOST PROUD OF?

I was responsible for the production site including facilities, acid production, ammonium nitrate production and related areas for more than 5 years. I worked as a production manager which is a difficult and challenging position not only in the industry but also in Turkey. During my career as a production manager I played key roles in different investment and operational projects. I worked as a project coordinator in the waste gas treatment



**MORE INVESTMENTS MUST
BE MADE AVAILABLE TO
ACCELERATE THE GREEN AND
DIGITAL TRANSFORMATION
OF FARMING.**

system in a prilling tower which has a flow rate of more than 1 million m3, Turkey's first, and one of the world's most significant, investments in this area. I also lead a PGM cleaning and recovery project where an important amount of PGM was regained and which was presented at the ANNA 2015 Conference in Canada.

I have been leading the R&D department for 3 years. R&D is a new innovation-oriented process that is different to my previous production experiences. I have been gaining a new perspective and new experiences, but the most important thing is that it is a way to benefit human beings. Humans need agriculture for all aspects of their lives. In the R&D department I have a target to develop new products which support sustainable and effective agriculture. I can proudly say that we are a decisive and harmonious team that is accomplishing great and important projects.

WHAT IS THE MOST IMPORTANT LESSON YOU'VE LEARNED IN YOUR CAREER TO DATE?

To succeed it's important to develop relationship, communication, networking and planning skills.

DO YOU THINK YOUR JOB AND THE INDUSTRY WILL CHANGE IN THE FUTURE?

Due to the increase in population, fertilizers play an important role in the food value chain by increasing efficiency. The fertilizer industry will continue to develop and change in a way that will contribute to humanity in parallel with our changing needs, expectations and conditions. This living system will continue to support life and support agriculture.

WHICH FEMALE LEADERS DO YOU ADMIRE AND WHY?

As a Toros Agri member, I am proud of Esin Mete who plays a significant role in the fertilizer industry. She led the industry not only in Turkey but also globally with different significant projects. Toros Agri commenced zinc enriched fertilizer production for the first time in the world. The success in enriching micronutrient deficient soils with zinc, which is highly beneficial for human health and agricultural fertility, has been internationally acknowledged. Zinc fertilizer production has since been planned in many countries all over the world.

Additionally, she has put great emphasis on educating women farmers in Turkey and under her leadership Toros Agri started

to support the Seasonal Agricultural Workers' Health Development Programme run by Harran University and the United Nations Population Fund (UNFPA) Turkey. She encouraged women engineers to work in production sites which gave me a chance to change my career to nitric acid production chief engineer. Besides her duties at Toros Agri, Esin Mete also took up significant positions at international organizations and agencies that steer the industry's development. As well as acting as the President of Turkish Fertilizer Producers Association between 2002 and 2005, she also chaired IFA between 2013 and 2015.

WHERE DO YOU SEE THE BIGGEST CHANGES AS A RESULT OF THE COVID-19 CRISIS?

The COVID-19 pandemic has highlighted the importance of accessing an adequate supply of healthy food. It has also made us aware of the relationships between our health, ecosystems, supply chains and consumption habits. It has made us realize that we need to do more to keep ourselves and the planet healthy. The importance of key workers such as agricultural and food producers and suppliers is now better understood by the public. Seasonal and informal workers have become particularly important. We need to regulate the social protection, working and housing conditions of workers, as well as protect their health and safety.

HOW DO YOU SEE AGRICULTURE AND FOOD SYSTEMS CHANGING IN THE FUTURE?

Climate change and biodiversity loss cause imminent and persistent threats to food security and livelihoods. The transition to a sustainable food system can provide economic gains as well as environmental, health and social benefits, and can become a way out of the crisis. Investments will be needed to encourage innovation and create sustainable food systems. More investments must be made available to accelerate the green and digital transformation of farming.

Besides this, new steps will be taken globally regarding how water and food resources should be managed. This approach will determine the relations between countries in the near future. Similarly, changes in people's lifestyles will lead to changes in consumption habits. As a result, the importance of R&D will increase. We need to work harder and aim at innovations that will benefit both humanity and the environment.