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## The Clean Side of Manufacturing

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# The Clean Side of Manufacturing

Tia Ritz, 2018 Cohort

When I set foot on the ammonia manufacturing plant in Lima, Ohio for a co-op this January, I thought for sure that I had infiltrated enemy lines. There was smoke billowing out of smoke stacks and an orangey-red flame pivoting in the distance—I assumed both were due to under-regulated pollution. I was convinced River Stewards and this plant, which made fertilizer, were opponents in the ongoing argument about what's best for the environment and its people.



After weeks of learning about the industry and my role as a water management co-op, I argue that we are not opponents, but rather coworkers with different strategies to obtain the same goal. A scientist named Fritz Haber figured out to synthetically make ammonia in 1914. Very soon after its invention the technology was applied to making fertilizer and was perfect for treating crops like wheat, corn, and rice. World population was already booming, but Haber's technology made population rates soar. If it hadn't been for Haber's invention, millions of people would have died of hunger. Now our world depends on the production of ammonia and without it, millions of people would starve to death. That really brought home the importance of places like Mission of Mary Farms, who produce an abundance of healthy food for people in our area. We are blessed to have so much food readily available even though Dayton is known

as a “food desert”. As a river steward, I hope to see that those who use fertilized farms as their food source switch from that to places like Mission of Mary farms and compost bedding. The smoke and fire mentioned earlier are heavily regulated to the point where their products are almost completely steam and oxygen. Carbon dioxide is stripped out, cleaned, and sent to a soda manufacturing company a couple miles down the road. Other byproducts are likewise separated and sent to places that can turn them into meaningful products. The water that runs the plant is also conserved. It runs in a continuous loop and is constantly cleaned and cared for as too conserve usage and save the company money.

My experiences in the manufacturing industry have been enlightening and hopeful. The Lima plant is a nationwide leader in conserving natural resources and redirecting pollution for useful products. I hope I continue to learn as much as I can so I can fulfil my responsibility as a steward for the earth by spreading their sustainable manufacturing mentality.