



Agrium®

Fort Saskatchewan

Nitrogen Operations



Thanks in part to the dedication of our employees worldwide, Agrium continues to nourish our growing world as one of the leading providers of inputs for plant growth; in turn, creating value for each of our stakeholders.



Agrium Wholesale

Agrium Wholesale produces, markets and distributes nitrogen, phosphate, potash and sulphate-based products for agricultural and industrial customers around the world. We have production and distribution facilities in North America, South America and Egypt, with additional distribution in Europe.

We have a production capacity of approximately 10 million product tonnes of the major crop nutrients: 6 million tonnes of nitrogen, 3 million tonnes of potash, and 1 million tonnes of phosphate. We also produce approximately 0.3 million tonnes of ammonium sulphate. These crop nutrients are produced at 12 major production facilities, 2 mines and a number of smaller regional upgrade facilities.

Manufacturing Excellence

Agrium Manufacturing is committed to operating at a standard of excellence, enabling us to produce quality nutrients for Agrium to help feed the world. Our mission: "Engaged employees driving safe, reliable production at a competitive cost."

In order to safely, effectively and efficiently produce quality nutrients, there are six key focus areas that drive how we operate and achieve our goals – Environment, Health, Safety and Security (EHS&S), Process Safety, Reliability, People, Projects and Cost. By excelling in these six areas, we are operating safely, reliably, and competitively, and with that, production comes naturally. We are continually looking for ways to optimize our production to ensure sales and marketing can get the right amount of nutrients where it needs to go, when it needs to get there.

Fertilizer Products

The Fort Saskatchewan Nitrogen Operations produce 465,000 gross tonnes (192,000 net) of anhydrous ammonia, 95,000 tonnes of 29% aqua ammonia and 430,000 tonnes of granular urea. These products are marketed primarily in Western Canada and in the Northwest United States.

Anhydrous Ammonia is manufactured using natural gas, water and air. The water comes from the nearby North Saskatchewan River and natural gas is purchased from local producers. Farmers inject ammonia into the soil as a nutrient supplement for most crops. It can be used for industrial purposes, such as the promotion of bacterial growth in waste treatment plants and as an efficient refrigerant.

By reacting ammonia and carbon dioxide at high pressure and temperature, urea is formed. Although urea is primarily used as a fertilizer, it can also be used as a raw material in the production of some glues and resins, as a protein supplement in animal food, and to melt ice on airport runways.

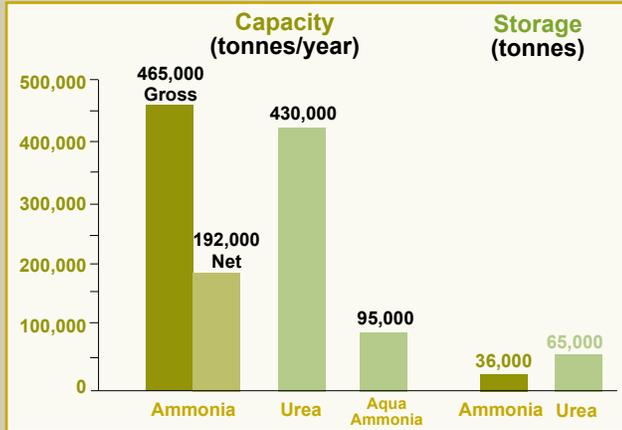
Innovation and modern technology have gone into developing the Fort Saskatchewan complex. A computer-based control system monitors and controls the manufacturing process.

Fort Saskatchewan Nitrogen Operations



Fort Saskatchewan Nitrogen Operations is located on 227 hectares of land 20 kilometres northeast of Edmonton. The actual production facilities occupy less than 1/10 of the land area. The remainder is used as a buffer zone between the site and the City of Fort Saskatchewan. Approximately 165 people work out of this facility.

Production and Storage Capacities



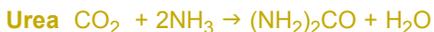
"Gross" means total ammonia production.

"Net" means the amount of product available for sale after deducting the ammonia used in the manufacture of urea and other products.

Production Processes



Natural gas is converted along with steam and air into a mixture of hydrogen, carbon dioxide, and nitrogen. The carbon dioxide is removed from the gas mixture and sent to the urea plant. The hydrogen and nitrogen mixture is passed over a catalyst at high temperature and pressure to produce ammonia. It is separated as a liquid at -33°C and stored in a tank at atmospheric pressure.



The carbon dioxide, from the ammonia plant, is reacted with ammonia at high pressure to produce urea solution, which is concentrated to a urea melt and then granulated to produce solid urea granules.



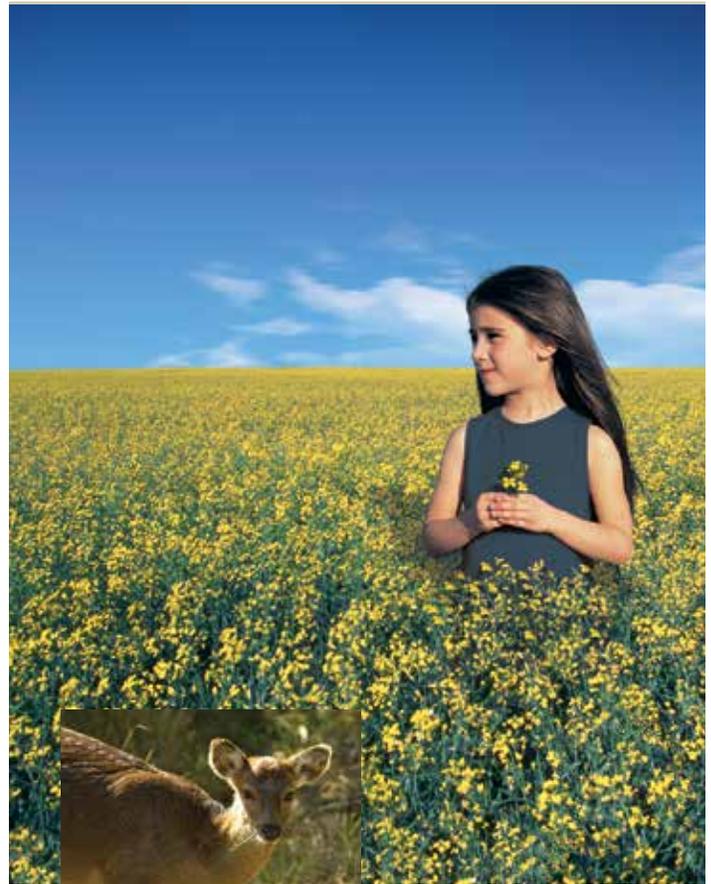
Aqua ammonia is also referred to as aqueous ammonia, aqua ammonia solution and ammonium hydroxide (NH_4OH). Anhydrous ammonia is mixed with water to produce ammonium hydroxide (aqua ammonia) and heat. The heat from this exothermic reaction is removed before it is shipped. The site can produce aqua solutions up to 31% ammonia.

Storage and Distribution

At a low temperature, anhydrous ammonia is a liquid, which is stored and transported in specialized vessels. The Fort Saskatchewan facility has a 36,000 tonne anhydrous ammonia storage tank and load-out facilities for pressurized trucks and rail tank cars.

There is also a urea storage building with a capacity of 65,000 tonnes.

Both railcars and trucks are used for shipping product. The amount of product shipped from the site over the period of a year would fill 8,000 railcars or 15,000 trucks.



Environmental Stewardship

Agrium's Fort Saskatchewan facility continually strives to improve their environmental performance by optimizing their existing equipment, eliminating or reusing waste streams, and seeking out new technology which will further reduce emission levels.

All site precipitation and process effluent is collected and transferred to the Regional Wastewater Treatment Plant making the Fort Saskatchewan operation a "zero discharge facility".

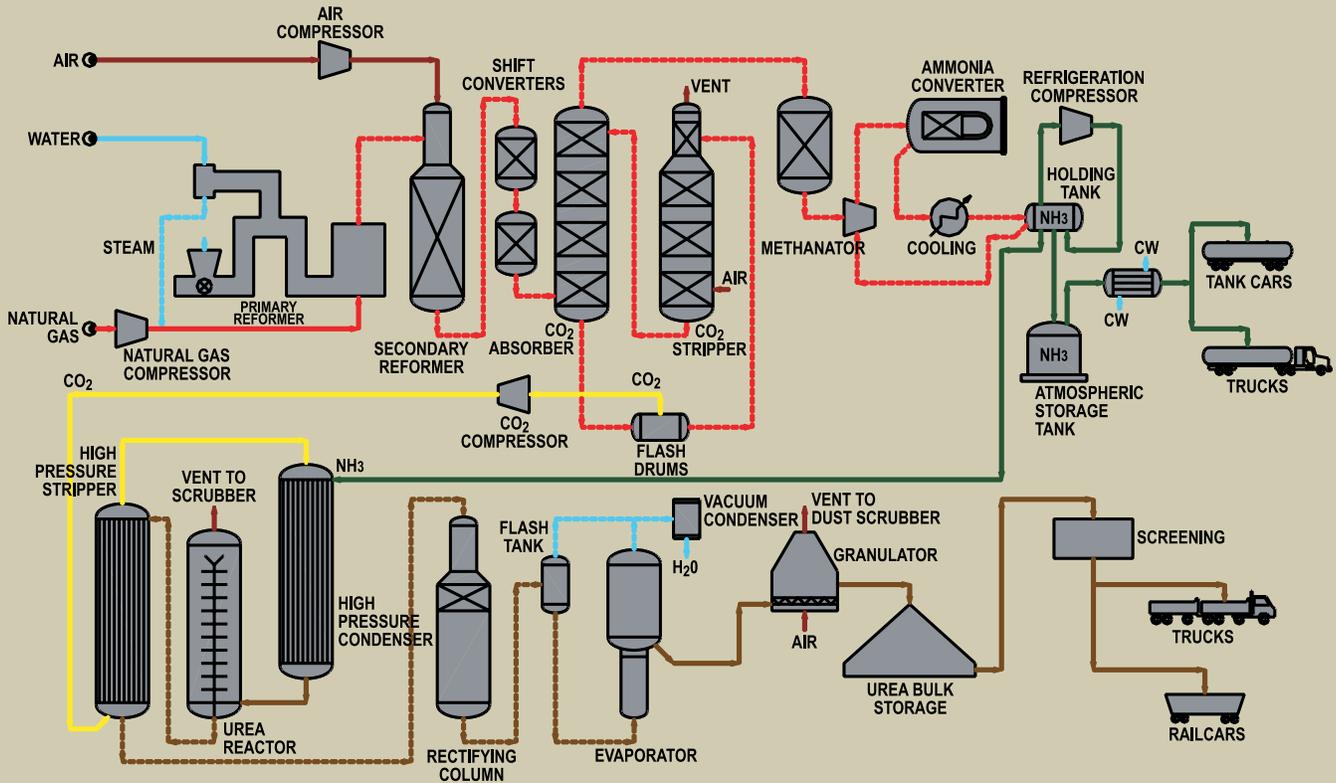
As part of Fort Saskatchewan's commitment to open and honest communications with the community, the site has a community outreach program and holds regular meetings with a Community Advisory Panel to address topical issues.

Safety

Safety isn't just a priority at Agrium, it is a core value. We care about the personal health and safety of our employees and our customers and our impact on the environment. Our commitment to Environment, Health, Safety and Security is in everything that we do and is a fundamental driver in helping us achieve our mission to help *Feed the World*.



Our Production Process



Impact on Local Economy

The Fort Saskatchewan Nitrogen Operations employs approximately 165 people in various jobs and pays approximately \$23.2 million in annual payroll. About half of the employees live in the neighboring communities of Redwater, Gibbons, Bruderheim and Fort Saskatchewan; the other half live in the areas of Edmonton, St. Albert and Sherwood Park. The site pays \$2.1 million in municipal tax annually. Over the last several years, the workers from Redwater and Fort Saskatchewan contribution to the United Way combined with Agrium's dollar-for-dollar match has consistently been over half a million dollars per year.



Fort Saskatchewan
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