

# **AMX** AGITATORS IN AGRICULTURE

## introduction

Although this industry is large and requires different solutions, many processes that form part of these solutions require the use of agitators and peristaltic pumps. By understanding the requirements of the apparatus' application, and by having the process knowledge, AFX can provide you with the best solution to achieve the desired outcome.



## liquid fertiliser

The manufacturing of a liquid fertiliser involves the mixing of granular/dry fertiliser into water to create the liquid fertiliser solution. This process demands that the agitator ensures complete mixing throughout the tank. Ideally, after mixing, there would be no granules or dry product still present if 100% or less saturation is achieved. Otherwise, a sediment is observed on the bottom of the tank or mixing vessel. Should the solution be oversaturated, the agitator will keep the remaining solids in suspension throughout the solution.

Some dry fertilisers require a high-shear dispersion process to break up and prevent the powder from clumping while ensuring that the powders are evenly distributed throughout the water. Certain applications may have a residence time which limits and specifies the allowable blending/mixing time, while some applications, made up from rapidly dissolving products, are simple and merely need circulation in the mixing tank/vessel. Agitators may also be used to keep the solution from standing still and having the solids settle at the bottom of the tank.

Sizing of the AMX agitators, for any of these applications, is largely dependent on what the agitator is required to do, process data and the mixing tank/vessel size. Our agitators are designed to meet your process requirements and are sized according to your application needs. Agitator types vary from being designed to suit 210-litre drums, IBC bulk containers, Jojo or similar material, and construction type tanks, to manufactured and fabricated stainless steel tanks for liquid fertiliser production plants.



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## waste earthen pit

Also known as waste storage ponds or basins, these pits are often placed on the farms/plots in such a way as to collect the waste and contaminated runoffs. These tank duties vary throughout the different types of farming, but all have a general purpose. These tanks are rectangular or square in shape, are excavated deep into the land, and are concrete lined, preventing seepage.

Agitators are required to keep the collected waste sludge in suspension to facilitate pumping, and in some cases, the agitator is designed with a shear blade running just below the fluid surface to entrain the caked waste material comprising of grass, animal faecal matter, fats and offal from animals or other processes happening on-site. The AMX agitator is designed for the suspension of solids and is sized to suit the pit's shape. Using hydrofoil impellers which have a low power number and high pumping number, the agitator will deliver maximum pumping and flow with the minimum required power. AMX agitators are energy efficient and cost-effective solutions for your processing requirements.

