

# **QUICK WASH**

Phosphorus Extraction and Recovery

### Quick Wash™

A proprietary system, developed by the USDA, that extracts and recovers phosphorus from agricultural waste streams.





#### Sustainable nutrient recovery

As the world nears peak phosphate production in the next 20 years, we need to explore new and sustainable sources of phosphorus to meet accelerating demand, while creating solutions that help curtail phosphate pollution in groundwater and waterways.

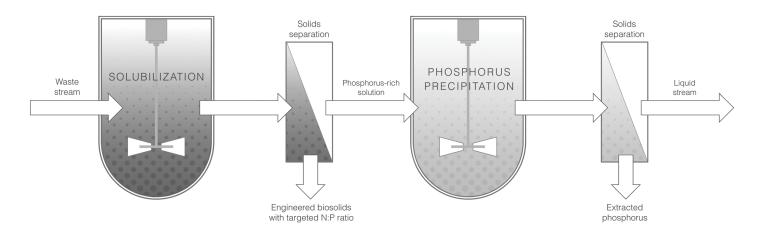
Quick Wash™ provides animal agriculture facilities with an efficient means of extracting phosphorus from their respective waste streams – and then selling the recovered phosphorus on the open market. In turn, the resulting low or no-phosphorus biosolids can be safely land applied, eliminating the costly expenses associated with off-site transportation or landfilling of manure solids.

With Quick Wash, Renewable Nutrients is turning animal waste into a sustainable resource.

## Benefits of Quick Wash in agriculture

- Extracts and recovers more than 95% of phosphorus
- Effective on multiple waste streams, including swine, poultry, and cow manure
- Reduces land application and transportation costs
- Reduces storage costs
- Potential for increased revenue
- Represents a new sustainable source of phosphorus

#### The Quick Wash process



STAGE 1: Treat the centrate/filtrate to solubilize any phosphorus that is not already in solution. The separated manure solids, which contain little to no phosphorus, are suitable for land application.

STAGE 2: Precipitate the phosphorus from the centrate/filtrate, allowing for the recovery of a valuable calcium phosphate product.

STAGE 3: Return the final effluent – which is nearly 100% free of phosphorus – to the waste water treatment plant headworks.



888.436.5497 | Info@RenewableNutrients.com www.RenewableNutrients.com