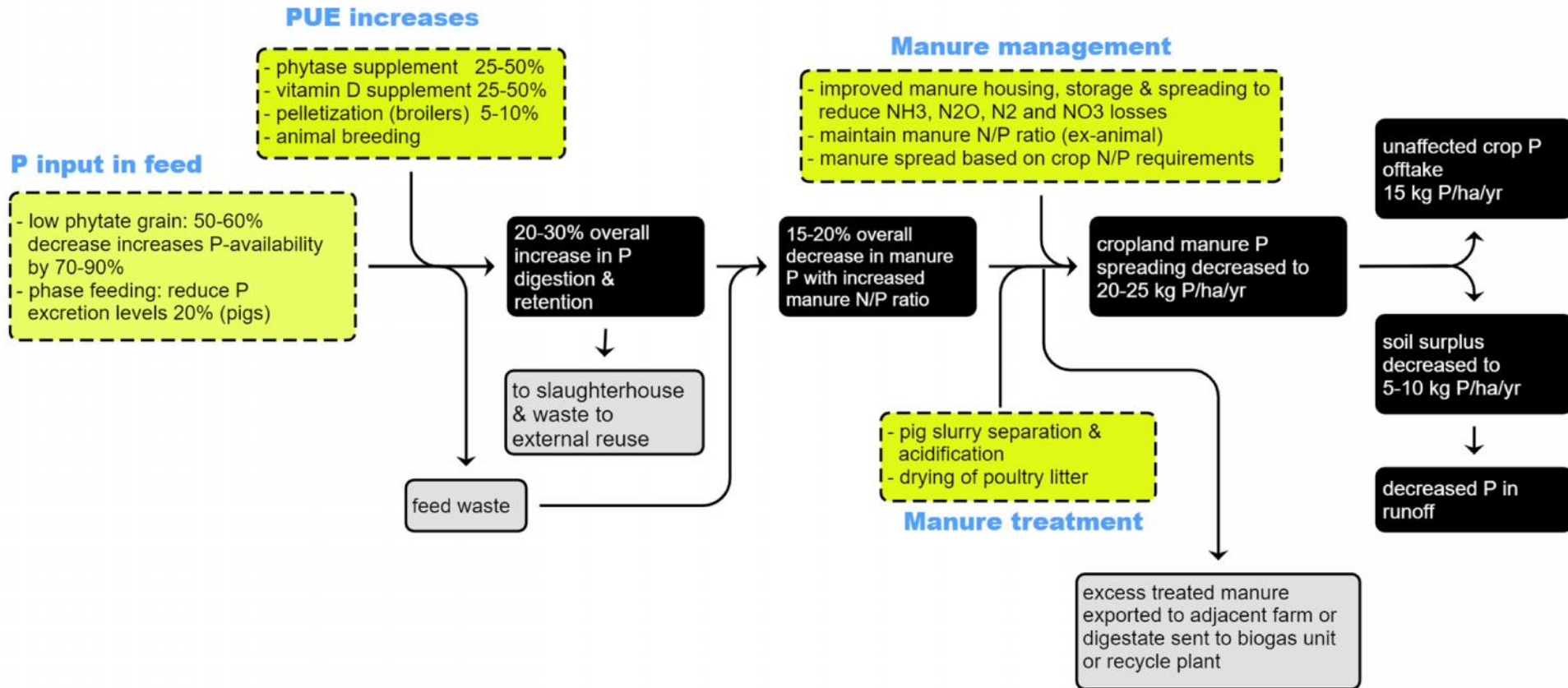




**Pegasus "system" to manage P in pig & poultry farms**  
 - optimizing P in feed  
 - improving animal digestion & retention of P  
 - reduction of manure P and soil surplus P



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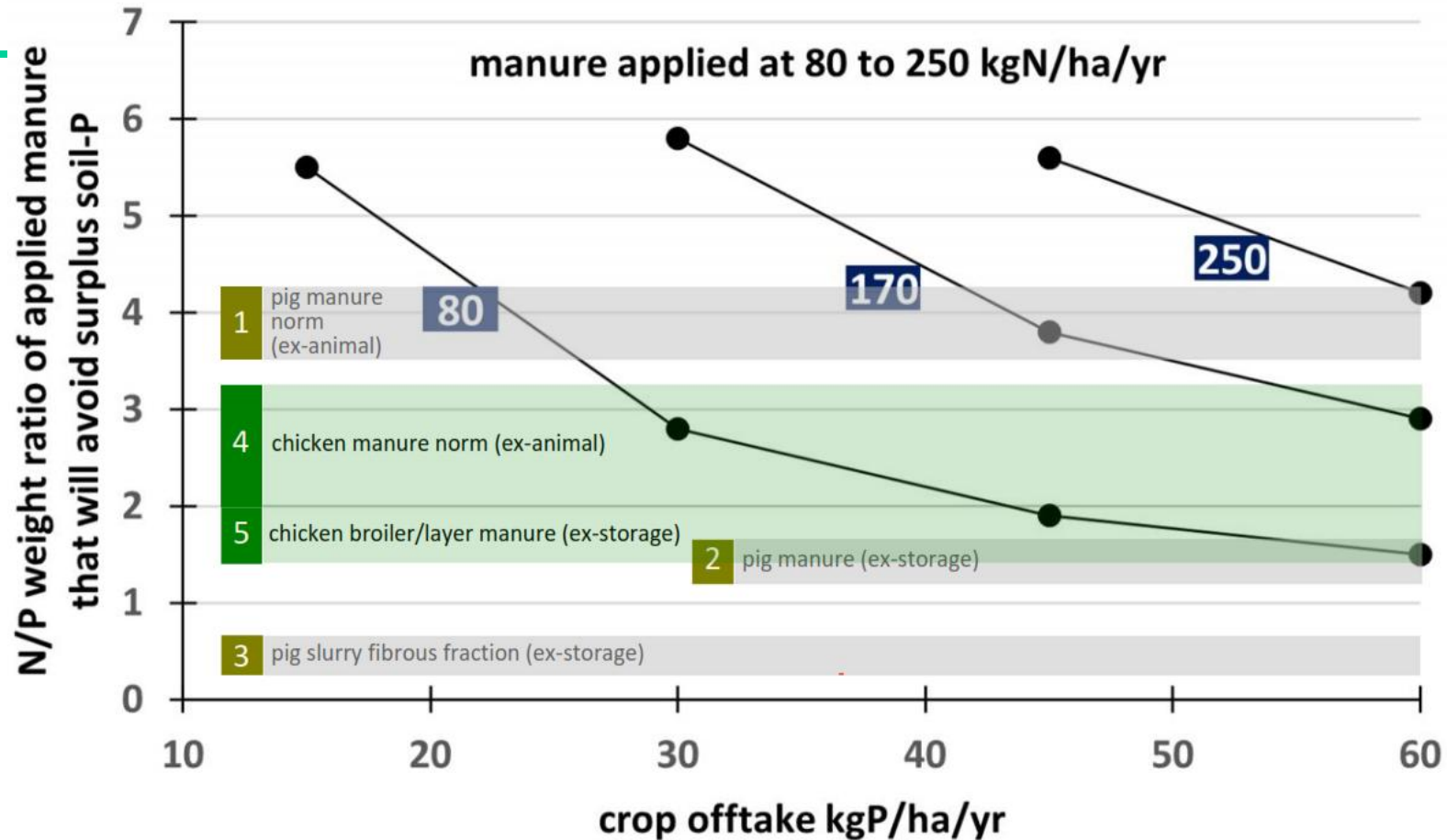
# PEGASUS SYSTEM TO MANAGE P IN PIG & POULTRY FARMS

Arno Rosemarin, Stockholm Environment Institute

ESPP PERM 4 June 2, 2021



# Required N/P ratios of applied manure to avoid surplus soil-P



Rosemarin et al 2021

If manure is being applied at 170 kgN/ha/yr and crop P offtake is 30-45 kg P/ha/yr, the manure needs to have an N/P ratio of at least 4:1. Spreading at 250 will result in surpluses. Area below each isoline represents a P surplus.

## Reduction of N losses from manure critical to reducing P surpluses

- Degraded manure (ie ex-storage and ex-spreading) has lost up to 50% of its N content
- The manure then has relatively low N/P ratios eg 3:1 and less
- Spreading at 170 kgN/ha/yr results in at least 60 kgP/ha/yr causing P surpluses
- To reduce the N losses requires improved housing, storage spreading methods and treatment (acidification and separation) and export
- To meet HELCOM-Baltic Sea recommended 25 kgP/ha/yr means having to spread over much larger areas and this will not deliver enough N to grow crops thus requiring N fertilizer additions
- EU Nitrates Directive and Farm to Fork Strategy fail to address the N/P question

