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**BOND IS THE WORLD'S FIRST PET FOOD COMPANY THAT'S AN**  
**ALLY FOR ALL ANIMALS**



**NO ANIMALS HARMED**

Proteins harvested  
without slaughter



**SAFE**

Reduced risk of foodborne  
illness for pets and pet parents



**SUSTAINABLE**

Less resources required to  
produce primary ingredients



**NUTRITIOUS**

Animal protein formulations  
crafted by board-certified  
veterinary nutritionists

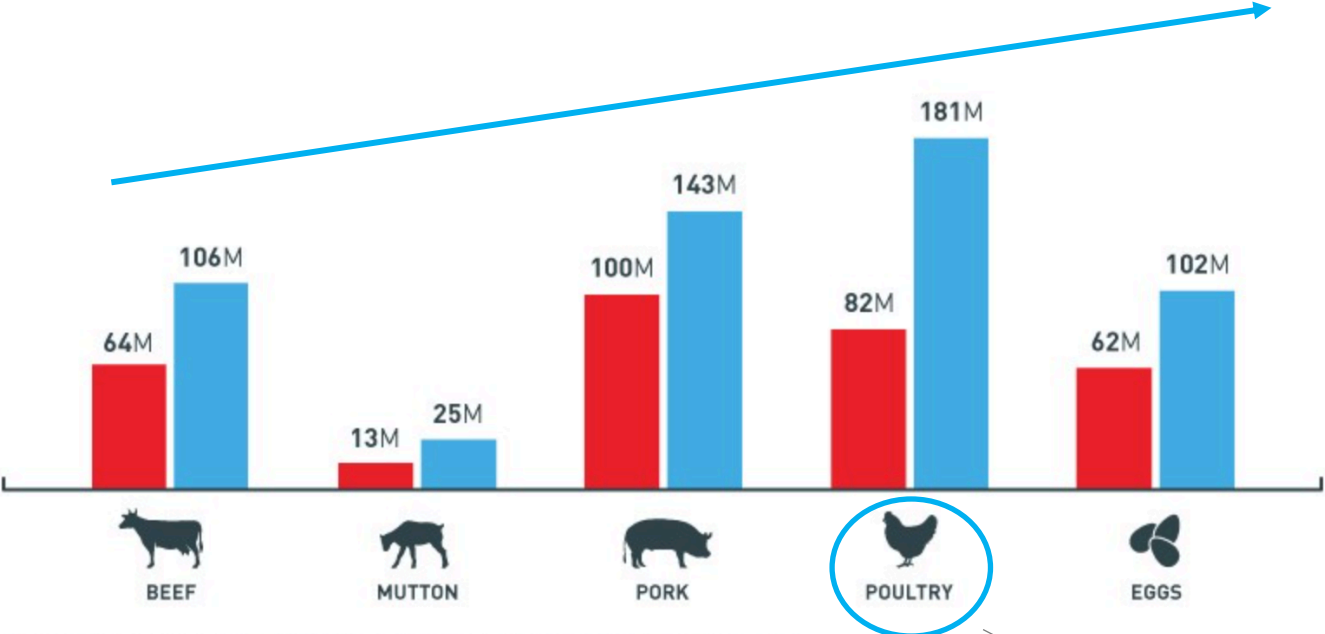


# THE PROBLEM



# GLOBAL MEAT DEMAND RISING

2005 vs. 2050  
*(in tonnes)*



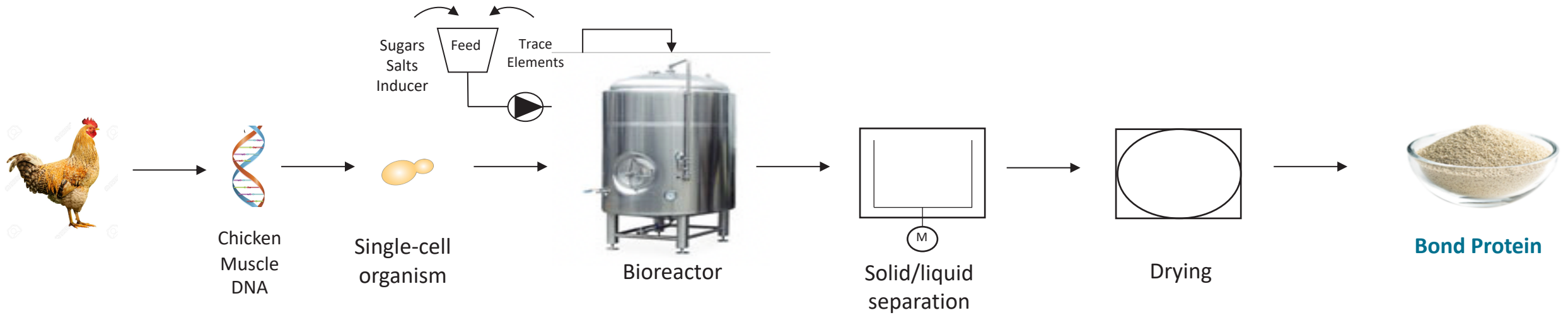
Source: Food and Agriculture Organization of the United Nations, ESA Working Paper No. 12-03, p. 131



Chicken is the #1 protein source in 80% of pet food recipes, +2% YOY



# PRODUCTION OF BOND ANIMAL PROTEIN



# ENERGY UTILIZATION IN THE PRODUCTION PROCESS

UNIT OPERATION	UTILITY
STERILIZATION	STEAM
FERMENTATION (HEATING/COOLING/AGITATION)	ELECTRICITY
SEPARATION	ELECTRICITY
DRYING	ELECTRICITY
PUMPS	ELECTRICITY
FACILITY MAINTENANCE	ELECTRICITY

FEEDSTOCK ENERGY REQUIREMENT IS DEPENDENT ON TYPE OF FEEDSTOCK AND HOW IT'S TRANSPORTED

TYPE OF ENERGY (RENEWABLE VS FOSSIL FUELS) DEPENDENT ON WHAT IS AVAILABLE IN THE VICINITY OF THE PLANT



# ENERGY/WATER/GHGE REDUCTION

PROCESS INTEGRATION

UTILITY WATER RECYCLED

PROCESS STREAM WATER FILTERED AND RECYCLED

HEAT INTEGRATION

HEAT EXCHANGERS BUILT INTO THE PROCESS

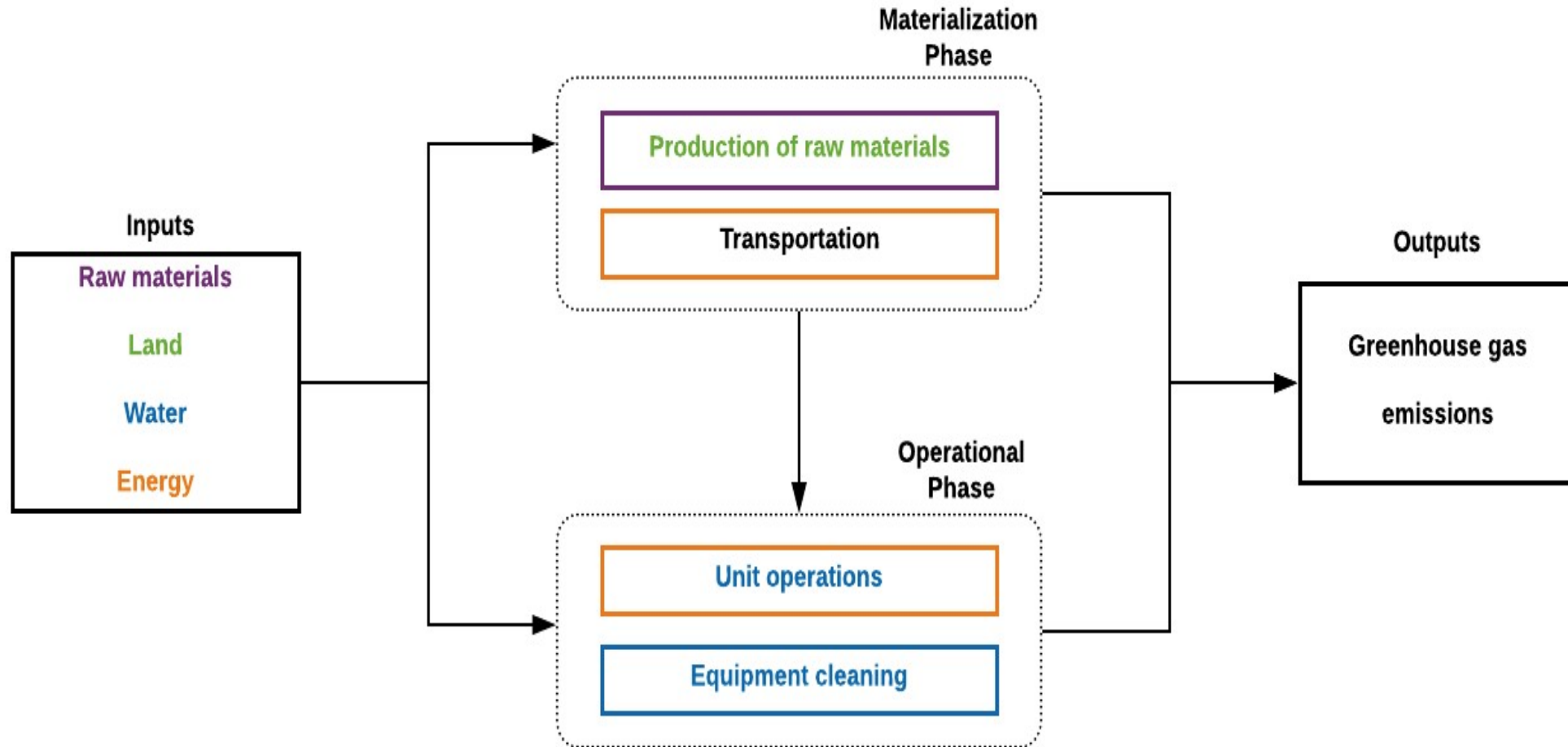
FEEDSTOCK CHOICE

USE BY-PRODUCTS FROM OTHER PROCESSES (E.G. GLYCEROL,  
MOLASSES)

THANKS TO CHEMICAL ENGINEERING STUDENTS AT UNIVERSITY OF COLORADO



# LIFE CYCLE ASSESSMENT

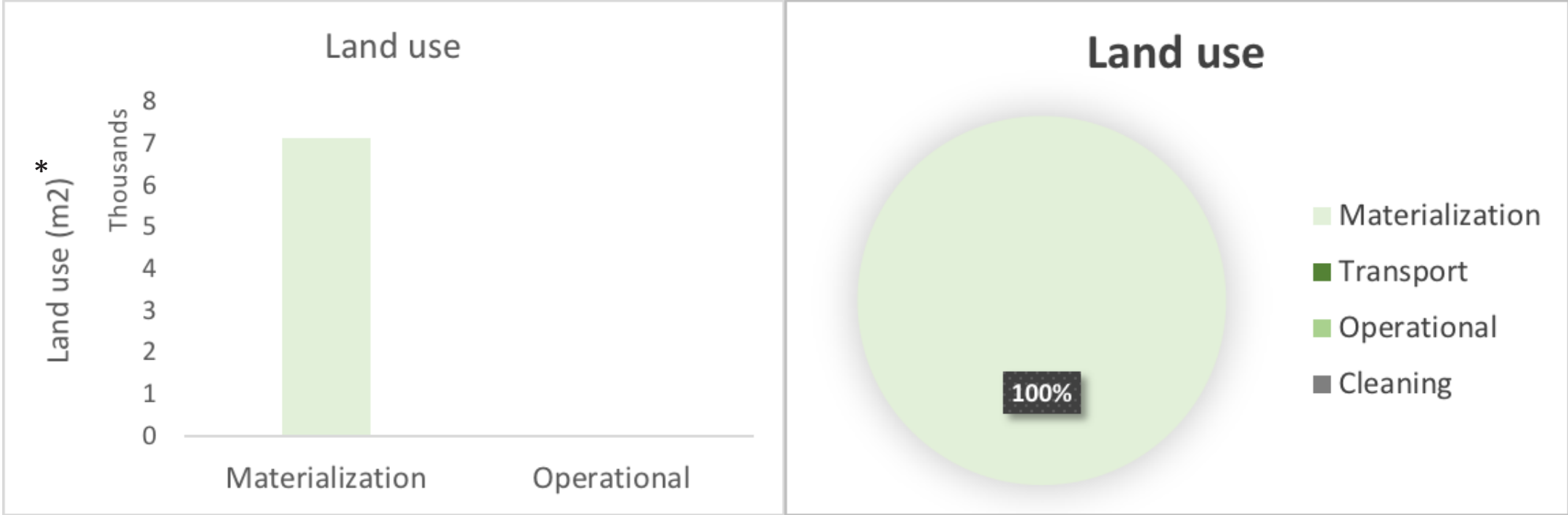


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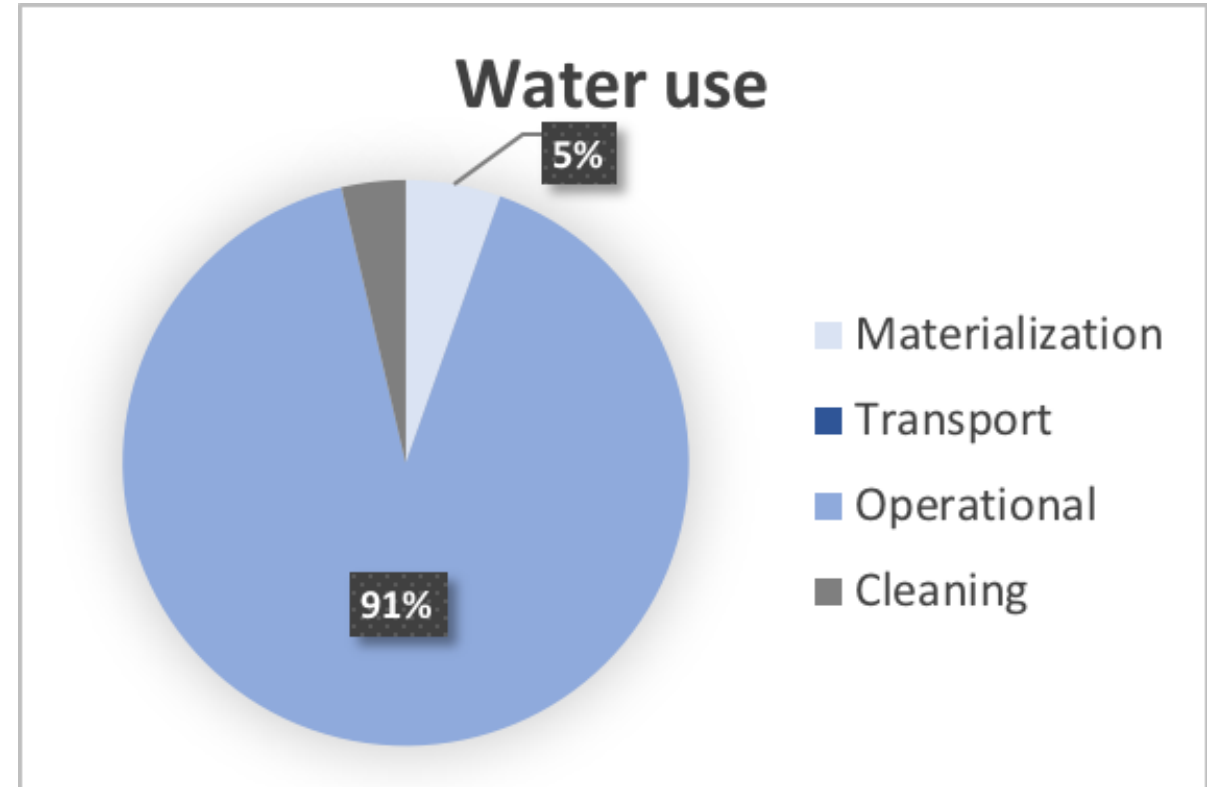
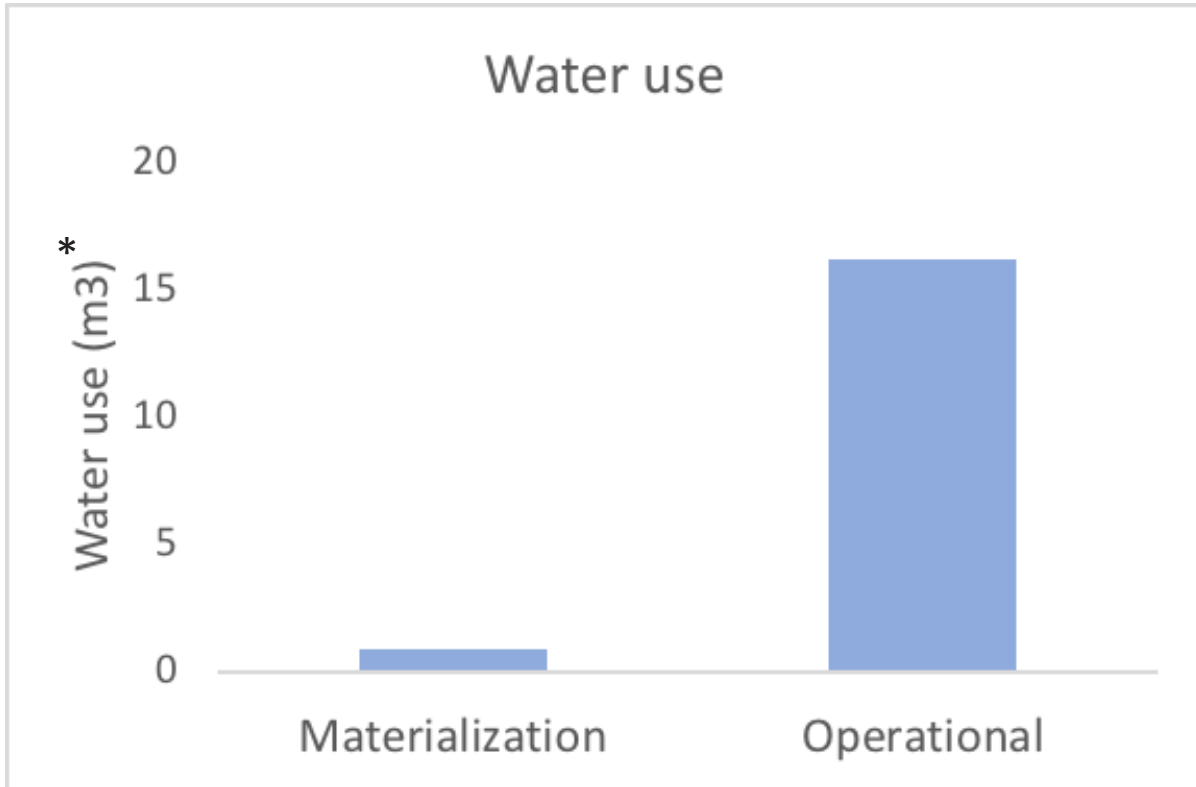
# LAND USE



\*Values are estimates (have not been validated)



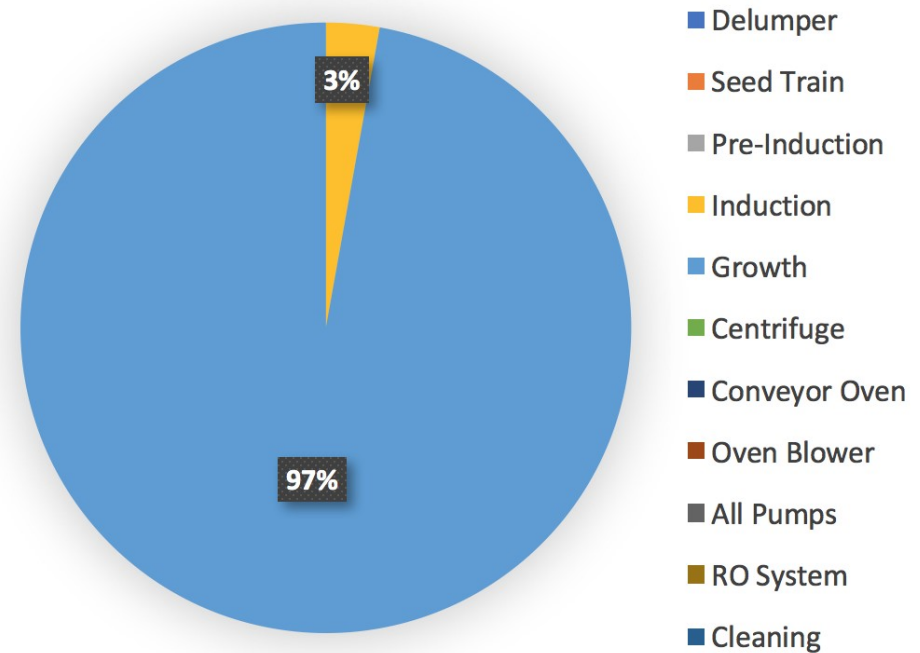
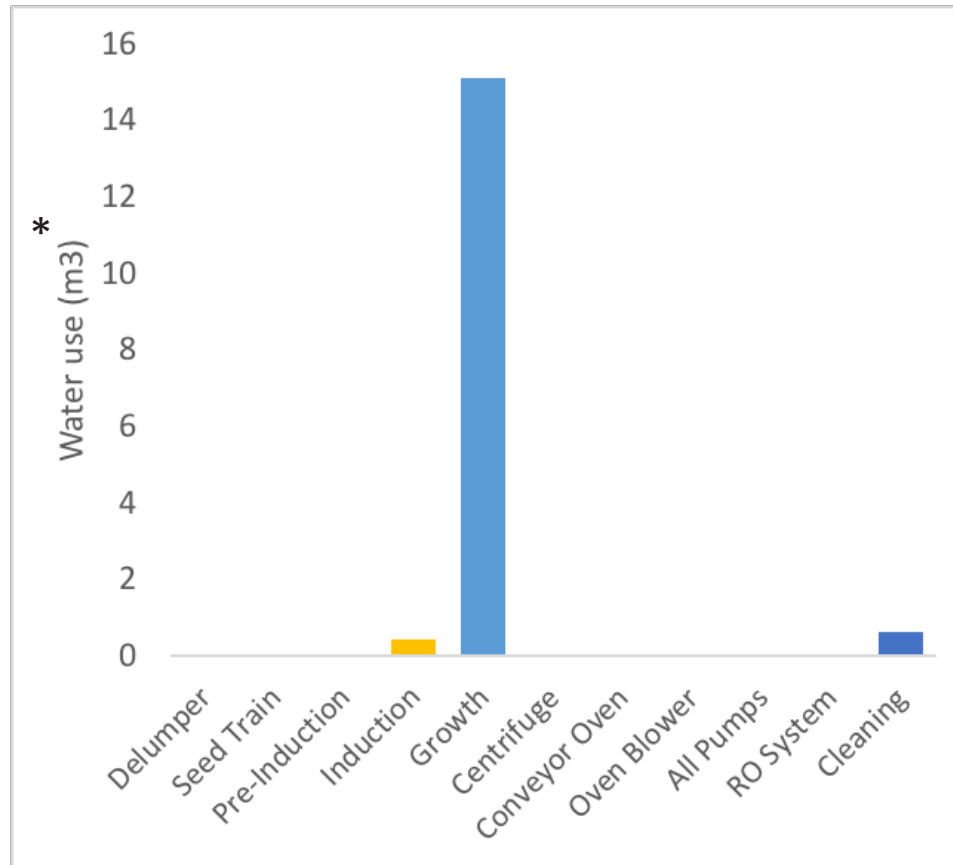
# WATER USE



\*Values are estimates (have not been validated)



# PROCESS WATER USE



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# LCA OUTCOME SUMMARY

- **OVERALL IMPROVEMENTS IN LAND USE, WATER USE, ENERGY AND GREENHOUSE GAS EMISSIONS  
COMPARED TO SOME OF THE COMMON TYPES OF ANIMAL AGRICULTURAL PRODUCTS**
- **ESPECIALLY GREAT REDUCTIONS IN LAND AND WATER USE**

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**THANK YOU.**

