**Can seaweed replace Antibiotics in the farming industry?**

**A case study on raising Broilers**

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Animal protein consumption is rising globally at an unprecedented rate. Animal production practices are associated with regular use of antimicrobials for disease prevention and growth promotion. 63 000 tons of antibiotics are currently introduced in animal food per year and this figure is inclined to increase by 67% in 2030, reaching over 105 000 tons/yr [1]. This widespread use of antimicrobials in livestock contributes to potential selection pressure on bacteria and hence the emergence of resistant strains in animals and in humans [2]. The development of antibiotic resistance is one of the top five public health concerns according to the WHO. A major challenge in the animal farming industry will be to reduce the use of pharmaceuticals while maintaining growth performances in order to support the growing demand for meat. Interest for exploring natural bioactive products, able to improve animal health or act against infections, has increased. Seaweed expose an abundant and divers range of metabolites suggested as prime material for the pharmaceutical Industry [3]. This poster will present a case study of using seaweed as food additive in an industrial poultry farm with the aim to reduce the use of antibiotics.

The experiment was undertaken on a total of 411 459 broilers receiving seaweed based products (11 batches) against a control population of 634 453 broilers (14 batches). Two different genetics of broilers were tested (JA957 and JA987) under high population density, 32 birds per square meter. Slaughtering was undertaken after 32 days. Results show that broilers which received seaweed based products experienced a drastic decrease of antibiotic use (-92%) while maintaining and/or improving growth performances such as the weight at slaughter and the Food Conversion Ratio (FCR). Moreover, the condemnation rate at slaughter and economic mortality was reduced by 25 and 68% respectively for JA 987.

In conclusion, seaweed based products introduced in the animal feed reduced the use of antibiotics without losing on animal growth performances. Such results indicate a global improvement of animal health despite intense farming practices which is inclined to progress worldwide within the coming years.

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