EFFECTS OF ADDITION OF BIOPREPARATION®
TO THE DIET OF POULTRY – AN INDUSTRIAL STUDY

Montreal McGill University Agriculture Research and Michael Kiriac, PhD, ND. (BioNutrition Inc.)

BACKGROUND AND EARLY RESEARCH - 1973 TO 1996. Starting in the early 70s, the agencies in the former USSR invested more than 20,000 person-years of research and development to produce Bio-Algae Concentrates (BAC) that hold extraordinary nutritional efficiencies. The blend BIOPREPARATION (BP) under evaluation, developed by Michael Kiriac [1], is composed of four microalgae specifically selected to yield nutritional completeness, balance and synergies. They are the algae Spirulina Pacifica, Spirulina Platensis, Dunaliella Salina and Haematoccocus Pluvialis, which are maintained whole, pure and free of pesticides and herbicides. The ingredients in BP are rich with thousands of naturally occurring nutrients such as: vitamins A, B complex, C, E, dietary carbohydrates, essential fatty acids (EFA), minerals, trace elements, complete proteins, and more than 4,000 types of active enzymes. BP is also an exceptional source of beta and alpha carotene, chlorophylls, phycocyanin and astaxanthin. Its proteins concentration and quality remains unmatched amongst foods. BP contains as much as 60% of complete proteins (including all essential amino acids) with 98% utilization. Each alga in BP is pushed to nutritional peaks via innovative hydroponic technologies applied during their growth. When blended together, the algae in BP reach higher bioavailability because of the completeness, balance and synergies obtained. The results previously verified in animal studies [1,2,3,4] show that the BP microalgae improves performance at the endocrine system, resulting in improved balance of all metabolic functions and shifts towards better overall wellness.

POULTRY RESEARCH IN MOLDOVA – In 1984 a large poultry farm in Moldova was selected to be the principal research center where the proof of concept was confirmed. Dr. Kiriac spent the next eleven years working with this facility, even while on other assignments and managing other projects. Housing and research facilities were established for 600 workers and 200 researchers. The research center hosted up to 1½ million egg-laying chickens in several buildings surrounding the main research facility, each holding 75,000 chickens. Over the years, this project was able to achieve astounding animal health, including the eradication of the Marek disease, saving 100% of the diseased animals. About 50% of the newly-healed animals where returned to the production cycle, able to lay eggs again. All this was achieved with the use of their regular feed, the addition of BP, and without the help of antibiotics, growth hormones or other artificial means. This farms gained superior productivity as demonstrated by:

- 20% overall productivity increase
- Larger, leaner animals
- Larger eggs with stronger shells
- Increased birth survival
- Less disease, including eradication of the Marek disease
- 24 versus 17 months of egg laying
- 50 more eggs per year per chicken
- Absence of infections due to pathogenic bacteria's, such as salmonella
- Better tasting meat and eggs
- High concentration of curative nutrients in the eggs even when eaten raw

DISCUSSION. In general, there are great advantages in using animals when testing the effects of nutritional and dietary changes in regards to factors of health or productivity. In animal's research, it is easier to ensure that all participants are eating an exact same diet and are following the same lifestyle. In this way, there is not the placebo effect to contend with. The results obtained provide strong evidence that BP supports an increase in cellular nutrition in chickens and leads to a better egg and meat quality, as well as to an increase in productivity. Moreover, the observed general increase of the poultry' overall health provides evidence that BAC brings about a positive impact on the poultry' central nervous system and an improved endocrine balance (homeostasis). The final observation is that the obtained data for the poultry supports the results obtained previously in other animal studies [1,2,3,4] that adding BAC to the diet brings about a better health to the hypothalamic-pituitary-adrenal axis, the regulator of all metabolisms.

THE MCGILL STUDY AND RESULTS. The purpose of this industrial study was to reproduce for the North American audience the results obtained with BioPreparation® in Moldova during the period from 1985 to 1996. This small scale study was conducted during 1999 and 2000 in cooperation with Montreal's McGill University's Agricultural Branch. Starting with 12,000 test animals, the population progressively increased to 18,000, 23,000 and finally 33,000 heads.

Some qualitative results are represented in the following graphics:

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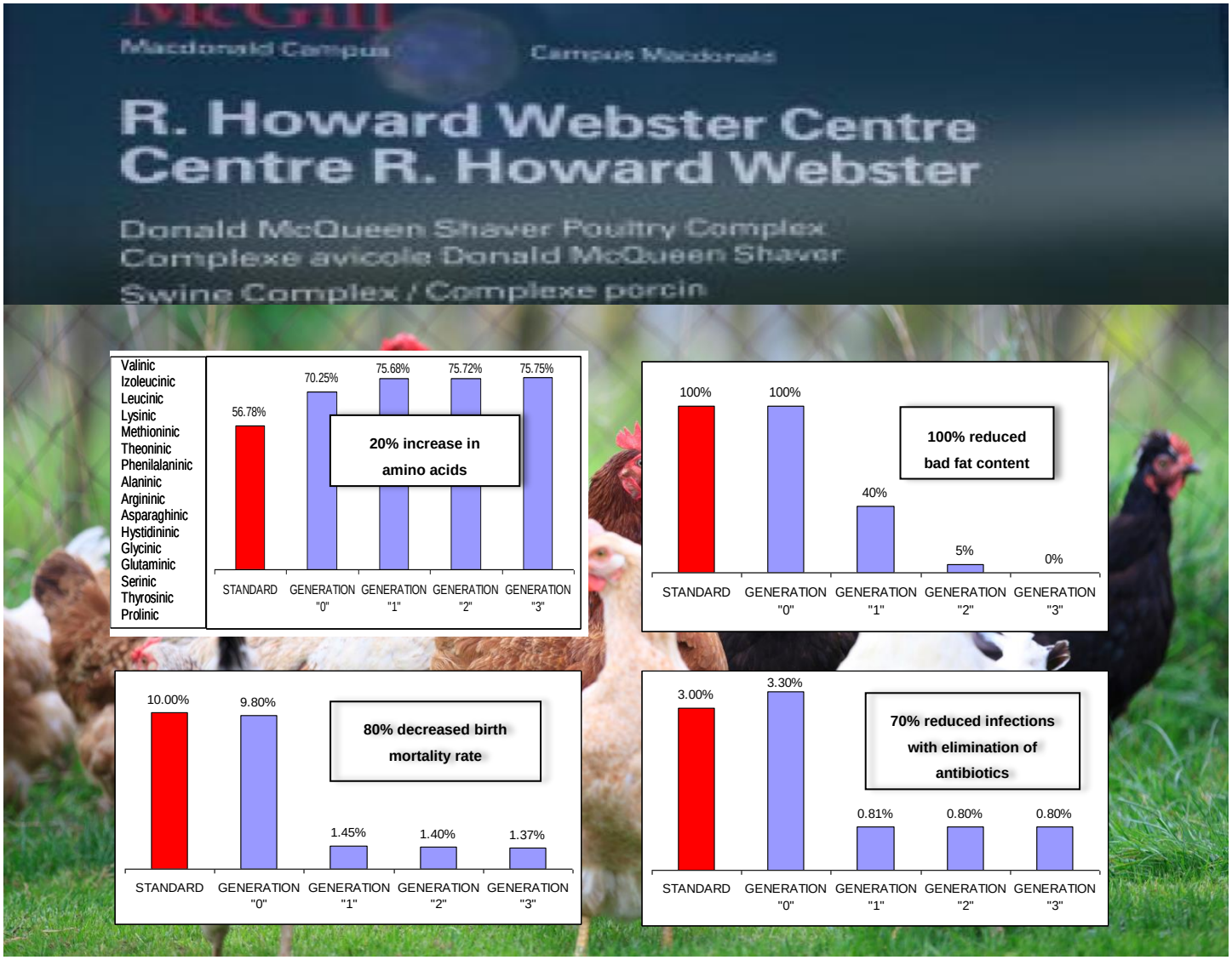

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