Tercer Congreso Mexicano del Bambu

Pandas Diet and Species of Bamboo at the San Diego Zoo

Dany Ramos Cisneros
1323 Opal Way
Mentone Beach, California 92359
San Diego Zoo Bambues especialista
San Diego Zoo Collectiones Especialista de Plantas y Bambues
San Diego Zoo Horticulturista y Investigador de Bambues y Plantas
Investigador Independiente y negocios; Tabashir Bamboo y Bamboo IQ
dramos@sandiegozoo.org
mahalo299@msn.com
USA 619.818.8277 cellular

Abstract: The outline in general for the lecture will include but not be limited to the development of Bamboo Browse (comida) for the pandas at the San Diego Zoo and the species evolution for diet.
The current Bamboo species for SDZ Pandas
Challenges of growing Bamboo @SDZ y SDZ Safari Park
Bambues species in SDZ collections and harvesting techniques
Aspects of innovation on the position that climate and conditions in Southern California incur many innovational implementations. Standing Culm Density (SCD) at the SDZ is very difficult, given the amount/area of stand culms. This factor also varies which is metro quadrados which is at a premium, considering the extreme variety of plant palette. Innovations are both being implemented with updated research and knowledge of the Bambues' phenology and climate change conditions.
Nutrient extraction methods (NIR) will be a direction to best monitor field personnel in the determination of best management practices. Improvement of irrigation/fertigation methods are being brought forth. One aspect is the H2O quality (domestic) and well or aquifer extractions. Innovations in these aspects of Bamboo Browse are beginning to be inserted at the SDZ y SDZSP.
Sustainability in stand culms for panda browse is of utmost importance as SDZ is totally committed to the ecological balance of plants/Bambues that may prevent the depletion of natural resources. Soil factors, moisture-holding capacities, textures, temperatures, terrain, etc., are the challenges that are faced in Southern California. All these influence the factors of soil properties that also influence Bamboo productivity. With the consideration of depleted soils, low humidity, decreased H2O supplies, many cultural practices are being implemented to increase productivity and reduce natural resources. Composting and correct calculations are soil enhancements which will improve existing soil properties by improving water-holding capacity, reduction of surface H2O run-off, maintaining and/or improving soil organic matter and increased cation exchange,

and thus improving the nutritional values in plants. Given the implementation of these types of cultural practices will potentially improve canopy photosynthesis, reduce soil temperatures thus by factor; reduce H2O loss due to the acceleration of the reduction of resources. Implementation of improved soil properties, nutrient management and fertilizer efficiency will gain sustained soil conditions favorable; presently and long-term. These sustainable practices will improve the quality of harvested plants for the consumption of food for Pandas.

Business aspects are superfluous to the research aspects to grow a sustainable culm-stand. Agronomic standards, university research in industry and business opportunities to progress the awareness of the Bambues and its uses are immeasurably positive. Agriculture, Forestry and Agronomy improvements by such research and the many aspects of improvement by such research and the many aspects of implementation tools are economically integrated that would benefit our climate and quality of life. Industry models as well of which are in practice are immeasurable, once again. Exponential business, innovation, industry and sustainability are all one and this force is of spectacular capacities.

Conclusions: Productivity of desirable culm-stands only is in the conversation with all these aspects; then one will be able to promote these practices as sustainable. If the supply of Bambues and products thereof are to raise productivity, technical and scientific efforts that enable one to manage the Bambues' growing environment and the present and future understanding of morphology and anatomy will need to have the continued impetus and momentum then management will be most effective.

Bambues is one of the most beneficial group species, the distribution range is tremendous. Human reliance is vast, edible shots, culms for building, architectural structures, arts, crafts, industrial innovations, bamboo migrates into a multibillion dollar industry globally, carbon sequestration, etc. Bambues demand is gaining on supply. The future of Bambues is the realization to increase resources and product by the means of intelligent management.

Acknowledgements: Special thanks to my BOTA Familia—Eduardo Ruiz Sanchez, Gib Cooper, Sue Turtle, Lynn G. Clark, Ximena Londono, Tere Mejia, Rogelio, Peg Stern, INECOL.
San Diego Zoo Global: Very special thanks to Christy Powell and Adam Graves. Also thanks to Tony Silva, Seth Menser, Jon Updike.