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**THE POTENTIAL INTRODUCTION OF  
*Stevia rebaudiana* (Bertoni) AS AN ALTERNATIVE  
SWEETENER IN NEW ZEALAND**

A thesis presented in partial fulfilment  
of the requirements for the degree of

*Master in Business Studies*

in  
Agribusiness



Institute of Food, Nutrition and Human Health  
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**2003**

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## ABSTRACT

This thesis reviews the literature on a naturally occurring, non caloric sweetener, *Stevia rebaudiana* (Bertoni), a plant native to Paraguay, and analyses the potential for the introduction of Stevia and Stevia-based products as an alternative sweetener for selected groups of consumers in New Zealand. Stevia has been proved by a considerable amount of research to be a safe sweetener for people with diabetes, hyperglycaemia, digestive, obesity and skin problems.

In other countries of the world including Japan, China, Israel and Germany, Stevia's unique combination of sweetness and health benefits has caught the attention of consumers. However, Stevia remains largely unknown in New Zealand. In terms of the use and understanding of Stevia and its commercial application, Japan is the world's most advanced country. The situation of Stevia in Japan, where artificial sweeteners are banned, is significantly different from its situation in New Zealand. The Food Standards Authority for Australia and New Zealand states that while Stevia, as a plant, is a permitted sweetener, Stevia extracts are not permitted. This ruling allows the full use and promotion of artificial sweeteners that are banned in Japan while restricting the use of Stevia, which has no restrictions in Japan.

Two major health problems in New Zealand are diabetes and obesity (especially amongst Maori and Pacific Islanders), for which the introduction of Stevia and Stevia-based products in New Zealand as a substitute for other sweeteners has the potential to provide significant benefits.

Responses of four groups (general public, herb experts, diabetics and Maori – the latter ones being the target groups) to Stevia were studied through a series of consumer focus group meetings. Most participants showed interest in using Stevia as a replacement for their current sweeteners. However, participants suggested that additional information and research are required for its wider use. According to the results of this study, participants suggested that Stevia could be used as:

- A plant to be grown in home gardens: having a Stevia plant allows growers to have a natural sweetener;
- An alternative sweetener in the form of processed Stevia products, and
- An ingredient in ready-to-eat products.

The main findings of this research are:

- There is a potential market for Stevia in New Zealand;
- FSANZ regulations restricting the use of Stevia form an obstacle to its commercialisation in New Zealand;
- Participants of the focus groups prefer the powder form over other types of Stevia; and
- Food industries could use Stevia, assuming regulatory approval, as an ingredient in their products.

For the potential introduction of Stevia in New Zealand a Product Development Process (PDP) is described. A number of areas for business activities and research into *Stevia rebaudiana* (Bertoni) are suggested.

**Keywords:** Stevia, Stevia-based products, sweetener, natural, diabetes, obesity, Maori, artificial sweeteners, potential introduction, Product Development Process.

## ACKNOWLEDGEMENTS

I would like to express my deep gratitude to the New Zealand Official Development Assistance (NZODA) entity, administered by the Ministry of Foreign Affairs and Trade that granted us this marvellous opportunity of coming to this wonderful country, New Zealand. We have spent amazing moments in New Zealand, the studying experience in these two and a half years is of great value. But the greatest and most valuable achievement of all is our little “kiwi” daughter, Annika.

This thesis was completed with much assistance, academic supervision, guidance and encouragement from my supervisors, Prof. William Bailey from the Institute of Food, Nutrition and Human Health and Ewen Cameron from the Department of Agriculture & Horticulture Systems and Management. I am also indebted to my friend and guide, Ms. Lidia Norina, for her encouragement to undertake this research and for all her valued advice and help throughout it. A special thanks to Denise Stewart for her helpfulness and friendliness.

The financial support received from the Product Development Trust and from the College of Business Postgraduate Research Fund were much appreciated. I would like to thank Christine Ramsay for her assistance in these matters.

Thanks to all the participants who assisted enthusiastically in the focus group sessions. I greatly appreciated the valuable time they gave, sharing their opinions and ideas, to be part of this study. Many thanks to the group of people in Paraguay who kindly provided relevant and confidential information about Stevia: Mr. Juan Carlos Fischer, Mr. Alberto Sallustro, Dr. Juan Carlos Zanotti Cavazzoni, Mr. Crisóstomo Gaona, Ing. Edgar Alvarez, Dra. Graciela Cabrera, Ing. Diego González, FUPADI your help is gratefully acknowledged. Jacqui Bennett from Health and Herbs in Auckland kindly provided some information which is gratefully acknowledged.

Many thanks to a large group of lecturers who improved my academic formation (especially during the first year at Massey): Nicola Shadbolt, John Gardner, Terry Kelly, David Gray, Robyn Walker and Janet Reid.

The staff from the International Students Office offered friendly support from the beginning through to the end of our stay. Special thanks to Silvia Hooker, Sue Flynn, Dianne Reilly and former staff member Charles Chua.

Kevin, Dean, Ai Lih, David, Adam and Nigel helped with all computing-related support, and their assistance is deeply appreciated. Thanks to the Plant Growth Unit employees for taking good care of the Stevia plants.

During my stay at Massey University I met many people, some of whom became true friends and provided a highly diversified and pleasant working and leisure environment. Thanks to Viviana and Rafael, Paulina and Christian, Patty and Juan, Ignacio and Anita,

Fernanda and Kevin, Elisa and Matías, Ana Paula, Melissa E., Dora D., Entin D., Mirtha G., Alejandra A. amongst others. To my kiwi friends Kim A., Glenn T., Gareth H., thanks for all the kiwi tips. Special thanks to Eloise and Bevan for their friendship and kindness, and to all my volleyball mates, it was great meeting you! Heartfelt thanks to Daniela and Stuart, María and Héctor, and Patricia and José, your support and friendship will never be forgotten! Many thanks to my family and friends in Paraguay, for supporting and encouraging me not only throughout this period but also in many other times.

Special thanks to Dr. Rubén Hug de Belmont, who helped me with gathering information and contacting people; and to my brother Walter who helped me with good tips for computing-related problems.

To my dear parents, THANK YOU, for being the best teachers in my life, for your unconditional love, support and encouragement, and for the great example you are still giving me.

I could not have finished this thesis without the support in all areas of my life from my dear husband Carlos, who unconditionally stood by my side all the time encouraging, supporting, helping, cheering me up when I was falling, and telling me "If you can't anymore...just a little bit more". His commitment, good mood, happiness, strength, and love make me admire him every day more and more. I believe I could not have found a better husband than him, and Annika could not have a better father! Thank you to you two who made my student life so much better and nicer.

To Almighty God for all the gifts He gives me every day, and for allowing me to have had this great experience in New Zealand with my family, my deepest and most sincere Thank You!