

2008 TAIWAN INTERNATIONAL SCIENCE FAIR

CATEGORY : Environmental Science

**PROJECT : SEAWEED ON THE NAMIBIA COAST
EXTRACTION OF AGAR & USE OF KELP
AS FERTILIZER**

AWARDS : Environmental Science Second Award

SCHOOL : Namib High School

FINALISTS : Ivandro Carlos Peterson

COUNTRY : Namibia

APPENDIX 2

ABSTRACT OF EXHIBIT TAIWAN INTERNATIONAL SCIENCE FAIR

CATEGORY: ENVIRONMENTAL SCIENCE

TITLE: SEAWEED ON THE NAMIBIA COAST

EXTRACTION OF AGAR & USE OF KELP AS FERTILIZER

NAME: IVANDRO CARLOS PETERSON

COUNTRY: NAMIBIA

Contents of Abstract:

In Swakopmund we have a problem with seaweed deposits on our beaches. Tons of seaweed are thrown away yearly. The reason I did this project was to see if the seaweed on the Namibian coast can be used instead of just being thrown away.

Seaweed is a rich source of natural minerals and vitamins such as calcium, potassium iodine and also Vitamin A, B1 and K. The seaweed on our coastline cannot be eaten as the salt content is too high. Seaweed is a marine algae that works like a sponge absorbing nutrients and minerals from the water.

I extracted agar (a jelly) from red seaweed called (*Gracilaria Verrucosa*). I dried the agar and seaweed, and I also grew mushroom spawns and bacteria on the agar plates. Secondly, I researched the possibility of using kelp (*Laminaria Pallida*), as fertilizer and livestock supplements.

The unemployment rate in Namibia is very high. With adequate financial resources and proper marketing, seaweed can be used to increase the economy. We can market the agar to pharmaceutical and cosmetic companies, and also supply it to the university for students in Biology to grow bacteria and other micro organisms. The fertilizer can be used to boost agriculture in Namibia. It is cheap and the farmers will be able to plant vegetables with better nutritional value.

All this was done to promote of biggest natural resource to create more work and to find a way for the less fortunate to create a better life for themselves.

* Two copies of the "Abstract of Exhibit" should be sent to the National Taiwan Science Education Center or email to yuonne@mail.ntsec.gov.tw before Dec 31, 2007.

評語

本研究是利用化學處理法來將海草(seaweed)轉化為有用之膠體(agar)，並發現可以成功的作為有機肥，頗具實用價值。