

IODIZED SALT FOR SUSTAINING IDD ELIMINATION IN NIGERIA

M. N. ASUQUO (MRS)

Head of Quality Control
Union Dicon Salt Plc, Plot 8, Block A, Ilesamaja
Industrial Estate, Itire
P. O. Box 3208, Surulere, Lagos, Nigeria

Case Study of the Joint Ministry of Health, Edo State/Union Dicon Salt Plc
Iodine Deficiency Disorder Control Project in Edo State of Nigeria

Introduction

The Iodine Deficiency Disorder Control Programme (IDDCP) was carried out in six Local Government Areas of Edo State namely: Akoko Edo, Etsako East, Etsako West, Owan East, Owan West and Oredo.

The programme entailed series of activities designed to create enhanced mass awareness of the causative factors, effects and complications of IDD. This was necessary because of the erroneous belief in these areas that goitre is a curse, or the result of an offence committed against certain gods or supernatural power. Some people even claim that it is human meat stuck in the throat of a witch or wizard. This was nothing but sheer ignorance on the part of some people as far as the cause of goitre is concerned.

Distribution of iodized salt free of charge was carried out to every identified victim of Iodine deficiency who reported to any of the health clinics in the affected Local Government Areas. The level of Iodine in Table Salt was also monitored.

The report of the successes of Salt Iodization in Nigeria cannot be complete without mention of the country's salt manufacturers/producers especially Union Dicon Salt Plc, Lagos, Nigeria.

Union Dicon Salt Plc (formerly Dicon Salt Limited) handles 60% of the salt trade in Nigeria and is the pioneer producer of Iodized Salt in the country. The management of the company, recognising the implications and benefits of Iodized Salt to the populace, pioneered the production and sale of Iodized Salt as a health benefit, even with no government legislation on Iodine at the time in spite of government approved levels. The company previously imported refined Iodized Salt from Australia and now, totally from the Salina Diamante Branco Salt field located in Northern Brazil. This Salt Field is owned by the company and its technical partners since 1997.

An inter-country workshop on IDD control in West Africa held in Dakar, Senegal and sponsored/coordinated by Unicef in 1992, served as the springboard for new awareness and commitment to the elimination of IDD in the country. In attendance at the workshop were government officials from the Ministry of Health, Standards Organisation of Nigeria (SON), National Agency for Food, Drug Administration and Control (NAFDAC), and the two major salt producers in Nigeria at the time namely: Union Dicon Salt Plc and Nascon Salt. At the workshop, a new Iodine level of 50ppm was fixed for the country. Previous level was

15-30ppm. Government legislation on Iodization came in 1992 and became operative in January 1994. Incorporated in the Decree of 1992, the Standards Council of the Standards Organisation of Nigeria, in Section 3: 3 of the Nigerian Industrial Standard on Iodine Fortification declares that Food Grade Salt shall be fortified with Iodine using Potassium Iodate at the following levels:

	<u>Iodine</u>	<u>As Potassium</u>
At the factory/Port of entry	50mg/kg	84.3mg/kg
At retail sale	30mg/kg	50.5mg/kg

The successes recorded in Edo State prompted another project to be carried out in the Cross River State of Nigeria, another endemic State in the country. A donation of 15,000 MT was given to the Cross River State Ministry of Health for distribution to the endemic Northern region of the State.

Major Activities

A request for logistic assistance was made by the Edo State Nutrition Service for the Control of IDD in the State. Union Dicon Salt Plc, a company with a commitment to serving the people accepted to take up the challenge and responded favourably. A donation of 30,000 MT of salt was made to Edo State for onward hand-over to the Local Government Areas affected. With a new awareness on IDD and with a determination to create an impact on the target group, a project was suggested with the Ministry of Health, Edo State, and machinery put in place to forestall any government bureaucracy as well as mis-use of the donation.

The project which was sponsored for two years (Dec. 1992 – Dec. 1994) also involved the production of posters for mass education in English and the local dialect, the printing of clinic cards, letter headed papers and files. Provision of logistic support training and expertise was given by the staff of the Nutrition Unit and Local Government Public Health Officers. However, there was no quantitative or qualitative research information obtained on the effect of the posters, clinic cards, training of health providers etc.

Nigeria consumes between 450,000 to 500,000 metric tonnes of salt per year. Over a period of two years therefore, the company provided free of charge, 30,000 metric tones of salt for two years meaning that

at least 7% of the nation's demand for salt was freely donated to one of the hyper-endemic Local Government Areas.

The project which was handled through the Edo State Nutrition Service, allowed for easy access to the Health Centres of the affected local government areas. Printed hospital cards and files allowed donations to be monitored by the Health Centres.

Lesson Learned/Constraints

The programme has had its own positive effect on the company's product. Union Dicon Salt Plc enjoys wide acceptability in the State and Country in general. Recently, the company has gone into the business of supplying most of the other salt industries requirements from the Brazil Salt Field.

The major constraint is the procurement of Potassium Iodate (KIO_3) for the Brazil Plant. Potassium Iodate is procured at the open market at very exorbitant prices. This invariably affects the cost and price of the salt in the market. No wonder there is stiff competition with cheaper non-Iodized sub-standard salt.

The rising cost of Potassium Iodate is to a great extent, affecting the cost of Iodized Salt production globally. The resultant effect of this is the transfer of the marginal increase in the cost of production and shipment to the consumer.

Request to Unicef for the re-imbursable supply of Potassium Iodate to the Brazil Salt Plant is yet to yield fruitful result. In the open market where the Brazil Salt field purchases her Potassium Iodate, 50kg of Potassium Iodate costs \$20.00 per kilogram.

Table 1
1995 Survey Report for Edo State
Number of Communities, Markets and Schools Surveyed and Percentage of
Iodized Salt Found.

S/N	Local Government	No. of Communities	No. of Markets	No. of Schools		Percentage of Iodized Salt Found
				Primary	Secondary	
1.	Akoko Edo	20	10	4	6	100
2.	Etsako East	18	6	2	6	96
3.	Etsako West	19	6	2	8	96
4.	Oredo	20	6	-	-	100
5.	Owan East	16	5	3	6	98
6.	Owan West	15	3	2	4	96
TOTAL		108	36	13	30	97.6%

Table 2
Multi-centre Study of IDD in 2 Hyper-endemic Local Government Areas
In Nigeria in 1995

LOCATION		TGR%			
STATE	LGA	PRE	1993	1993	1995
Enugu	Uzo Uwani	36		67	40
Cross River	Obudu/Obanleku	34		62	
Benue	Okpokwu	28		60	
Edo**	Akoko Edo	19		32	26
Ekiti	Ekiti East	26		38	
Oyo	Saki (Ifedapo)	24		38	
Katsina	Bakori	11			
Zamfara	Anka	22			
Kano	Gwarzo	13			
Plateau	Bassa	16		26	

Discussion and Conclusion

With the programme has come increased awareness on IDD in the salt industry. There is close interaction with the government Regulatory Agencies, as well as Unicef with a view to achieving the goal of Universal Salt iodization (USI) in the country by the year 2000.

Collaboration with Unicef has been on for a long time dating back to 1992 when the company participated in the Salt Workshop in Dakar, Senegal. Since then, Unicef and Union Dicon Salt Plc have gone on to collaborate in the Edo State initiative where salt was donated free of charge. Union Dicon Salt Plc has been actively involved with Unicef in the monitoring of levels of Salt Iodization in the field, as well as the following::

- 1) Development of the IDD action plan in Nigeria,
- 2) Review of IDD/USI on yearly basis..

Union Dicon Salt Plc received an Award of Excellence Certificate from Unicef in 1997.

In the area of public activities, Union Dicon Salt Plc and the Regulatory Agencies – SON and NAFDAC, work very closely to ensure that the structural facilities for the maintenance of Standards are in place not only in Union Dicon Salt Plc but in other salt industries in Nigeria. In addition, Union Dicon Salt Plc assists the government in keeping surveillance on the activities of small scale salt importers. There is always willingness by the Regulatory Agencies to enforce the provision of the decree on Salt Iodization.

Apart from this, there is close interaction of the salt manufacturers (now six in number) to protect our business from the influx of sub-standard salt which still find their way into the Nigerian market even though in very little quantity.

Union Dicon Salt Plc is also actively engaged in IEC (Information, Education and Communication). Union Dicon Salt Plc has over the years, funded programmes on Television and Radio on the consequences of IDD and their control using Iodized Salt. The Distributors' Forum, initiated by the Company to educate our distributors, has also yielded itself as an avenue for disseminating of information about the need to Iodize Salt.

Reports received by the Edo State Nutrition Service show numbers of communities, markets and schools surveyed in 1995 (See Table 1). The highlight of the table is the coverage of Iodized Salt in the catchment Local Governments areas where on the average, the consumption of Iodized Salt at the household level was 97.6% in 1995.

A 7-country African Multicentre study to access the impact of Salt Iodization in Iodine status of the population of Nigeria was carried out. (See Table 2). This study was conducted by an ICCIDD team in 1995 to assess the prevalence of Iodine Induced thyrotoxicosis in Nigeria. The team was led by Prof. Dan. Lantum and they found out that goitre prevalence in Akoko Edo Local Government Area had decreased by 19% within 2 years of Universal Salt Iodization.

The success of the project depended on the strict monitoring of the donation through proper network to ensure that only target groups were catered for.

To date Union Dicon Salt Plc is the largest salt manufacturer in the country and is determined to get bigger. While providing social support, there has been social and economic benefits.

The project was indeed a success judging from the report received. The Local Government areas affected have witnessed a major turn around in their lives. Of greatest importance however, is the fact that goitre will be a thing of the past for future generation as long as the people continue to widely consume Iodized Salt.

Today the distribution network of the company covers the entire country. The company remains committed to the vision of health for all. It is a thing of pride to know that 98% of Nigerian household consume adequately Iodized Salt contributed largely by Union Dicon Salt Plc.

Indeed, the success of Salt Iodization in the country is the success of Union Dicon Salt Plc and the salt industry in the country.