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A For Africa: Combating Vitamin A Deficiency in Africa

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Short Term Plan

1. Acquire funding
2. Purchase supplements
3. Educate locals and distribute supplements
4. Set up local clinics
5. Train local assistants
6. Test for vitamin A deficiency
7. Observe patients as they take pills
8. Keep detailed records
9. Twice yearly dosage



A local assistant observes a patient while he takes his supplement

Cost:

- 2 cents a pill, twice a year = 4 cents a year per person
- \$1404/month for doctors

Benefit:

- Decrease childhood blindness
- Decrease infant mortality
- Decrease risk of growth retardation
- Improve function of immune and respiratory systems

Present Situation

- WHO identified that Nigeria has one of the highest risks for Vitamin A deficiency in the world
- 80,000 Nigerian children die due to Vitamin A deficiency annually
- Vitamin A deficiency can be linked to 34-69% of child blindness in Nigeria

Need

Short term:
 Immediate treatment for vitamin A deficiency

Long term:
 Sustainable local source of Vitamin A

Approach

Short term:
 Modified DOTS distribution

Long term:
 Introduce experimental crop in local plantations



References

Vanguard online edition: <http://www.vanguardngr.com/2010/03/80000-nigerian-children-may-die-of-vitamin-a-deficiency/>
 Pubmed.gov: <http://www.ncbi.nlm.nih.gov/pubmed/12073301>
 Doctors Without Borders: <http://www.doctorswithoutborders.org/work/field/>
 Wrongdiagnosis.com: http://www.wrongdiagnosis.com/v/vitamin_a_deficiency/symptoms.htm
 Moringausa: <http://www.moringausa.com/>
 Working group on new TB drugs: [http://blog.newtdrugs.org/2010/07/the-sanatorium-files-part-4-dots/Moringa and Healing Herbs: http://www.moringa4healing.com/](http://blog.newtdrugs.org/2010/07/the-sanatorium-files-part-4-dots/Moringa%20and%20Healing%20Herbs)
 Jerry Pettit: <http://www.jerrypettit.com/blog/?m=200704&paged=2>

Long Term Plan

1. Cultivate the plants in experimental plantations
2. Provide local farmers with the tree limbs
3. Pay subsidies to participating farmers
4. Farmers conduct business as usual

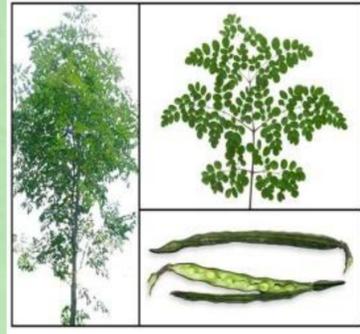


Cassava

- Grows in hot, dry climates
- Yellow-Fleshed cassava: very high in vitamin A
- Yellow cassava is resistant to diseases

Moringa

- Leaves contain 4 times the vitamin A of carrots
- Common and cheap in northern Nigeria
- Drought and disease resistant



Cost:

- Cost of construction of experimental plantations
- Cost to import the experimental plants
- 5 years of subsidies for farmers

Benefit:

- Save thousands of lives
- Help stimulate Nigeria's economy
- Increase quality of life