Controlling Pesticide Health and Environmental Hazards at Community Level in Lake Eyasi Basin, Karatu District, Tanzania

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PRESENTATION AT RAMAZZINI DAYS 2010
Introduction

- Tanzania: over 940,000 km²
- Population: over 39 million
- Agriculture the main employer, over 70%, > 50% of GDP
- Pesticides: mainly in agriculture and public health
While pesticides seem to have increased agricultural production and improved public health,

- they could also be detrimental to human health and the environment.

The real impacts of pesticides are not easily documented in most circumstances.

- Acute effects are easier to observe, but they could also be confused with common illnesses.
- Pesticides may also cause chronic diseases.
- Pesticide externalities are also not taken into consideration.
Chemical pesticide use in horticulture in Tanzania was historically low,

- recent developments in demand for increased food production and expansion in horticulture have resulted in higher consumption of chemical pesticides
Controlling Pesticide Hazards Project

- Lake Eyasi Basin in Tanzania has a history of intensive pesticide use.
- Vegetables are grown throughout the year and pesticides are widely used.
- TAPOHE embarked on a project to train local communities to “self-monitor” the impact of pesticide use in their area.
- Supported by PAN UK/DFID
Specific objectives

• Increase farmer awareness of the burden of illness created by indiscriminant use of pesticide.

• To document the incidence of mild and moderate pesticide poisoning not necessarily reported by the local health care system.

• To undertake initial response measures and make appropriate recommendations for further action on pesticides.
Materials and Methods

• Protocol development-
  – data collection tools developed by FAO in Asia were adopted to local situation *(translated and then pre-tested)*

• Training –
  – conduct seminars/meeting with the community representatives

• Data collection and analysis–
  – Establishment of Community Pesticides Monitoring Teams and data collection
Hazardous practices
Farmer’s training

PRESENTATION AT RAMAZZINI DAYS 2010
## Results

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprays/person/month</td>
<td>1.48</td>
</tr>
<tr>
<td>Mild episodes/spray</td>
<td>7.19</td>
</tr>
<tr>
<td>Moderate episodes/sp</td>
<td>2.33</td>
</tr>
<tr>
<td>Severe episodes/spr</td>
<td>0.03</td>
</tr>
</tbody>
</table>
AVERAGE MONTHLY SPRAY EVENT & ILLNESS EPISODES PER FARMER - QANG'DEND
## Pesticide mixtures in L. Eyasi

<table>
<thead>
<tr>
<th>TRADE NAME</th>
<th>COMMON NAME</th>
<th>TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dursban + Selecron + Profectron + Fenom C</td>
<td>Chlorpyrifos + profenofos + profenofos + profenofos + cypermethrin</td>
<td>Insecticide</td>
</tr>
<tr>
<td>Thionex + Polytrin + Selecron</td>
<td>Endosulfan + profenofos + cypermethrin + profenofos</td>
<td>Insecticide</td>
</tr>
<tr>
<td>Fenom Plus + Profecron + Dursban</td>
<td>profenofos + lamda cyhalothrin + profenofos + chloropyrifos</td>
<td>Insecticide</td>
</tr>
</tbody>
</table>
FARMERS’ SELF-REPORTED SIGNS AND SYMPTOMS OF PESTICIDE POISONING, QANG’DEND – APR-JULY 2010

- Exhausted
- Dizziness
- Headache
- Itching
- Nausea
- Runny nose
- Sore throat
- Blurred vision
- Insomnia
- Chest pain
- Muscle cramp
- Excessive salivation
- Red eyes
- Numbness
- Burning nose
- Muscle weakness
- Burning eyes
- Short breath

% Freq (Apr-July 2010)
Summary

- Mixtures of pesticides in spray session - uneconomical and a health and environmental hazard
- Empty containers disposed haphazardly in streams and farms - reused
- Pesticides suppliers - not sensitive/conscious of health and environmental hazards.
Conclusion

• Application of pesticides in the study areas is high and poses health risks to the farmers that use them, consumers of products and to the environment

• Communities lack vital training – about pesticides and their impact, reading labels to make choices, disposal of containers etc