



USAID
FROM THE AMERICAN PEOPLE

Pesticide Risks, Safer Use and Compliance



Pests are. . .

living organisms that occur where they are not wanted or that cause damage to crops, animals, humans or other animals.

Examples include: insects, mites, rodents (and other animals), unwanted plants (weeds, invasives), fungi, bacteria and viruses.



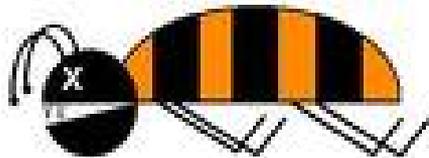
Special 22 CFR 216 Issue: Pesticides

- Pesticides are a commonly encountered element in both agriculture and health activities
- USAID has special procedures within 22 CFR 216 to address pesticide procurement and/or use
- You don't have to avoid using pesticides when they are needed, but you must ensure they are properly selected and safely used



So, What Exactly is a Pesticide?

- Pesticide is the generic term for any substance that destroys, prevents, repels, or mitigates an unwanted organism
- The US Government's experts on pesticides and regulation of them is EPA. As a USG agency, USAID goes only by EPA registrations and labels on safe and appropriate selection and use of pesticides



Types of Pesticides

- **Insecticides**
- **Herbicides**
- **Fungicides**
- **Rodenticides**
- **Microbicides**
- **Repellents**
- **Disinfectants**
- **Etc.**



And, What are Not Pesticides

- **Fertilizer**
- **Natural predators (birds, fish, cats, etc.)**
- **Mechanical devices (bug zappers, fly paper, harvesters, etc.)**
- **Internally taken drugs (for parasites)**



Why Care About Pesticides?



- Poor practice in using pesticides is wide-spread
 - ✓ Overuse accelerates pest resistance which induces increased use
 - ✓ Significant resistance requires switching to less safe and more costly pesticides
- As potent killing agents, pesticides have intrinsic dangers attached to their use
 - ✓ Misuse kills the “good bugs” that are essential to pollination or that naturally control the “bad bugs”
 - ✓ Misuse can result in chronic sickness, birth defects, cancers, and even death
 - ✓ Misuse can seriously impair a country’s ability to export to the U.S., Europe, Japan and other major markets
- The lack of quality control in the production in some developing countries represents a hazard with non-U.S. manufactured pesticides

Pesticide Impacts on Humans

- ❖ **Acute Toxicity:** Immediate (acute) poisoning leading to serious sickness or death.
- ❖ **Chronic Toxicity:** effects over the long term at lower total doses.
For example, **Cancer, Parkinson's Disease, Sterility, Organ Malfunction and Birth Defects.**

**How do
people
receive
dangerous
doses of
pesticides?**



What Not to Do

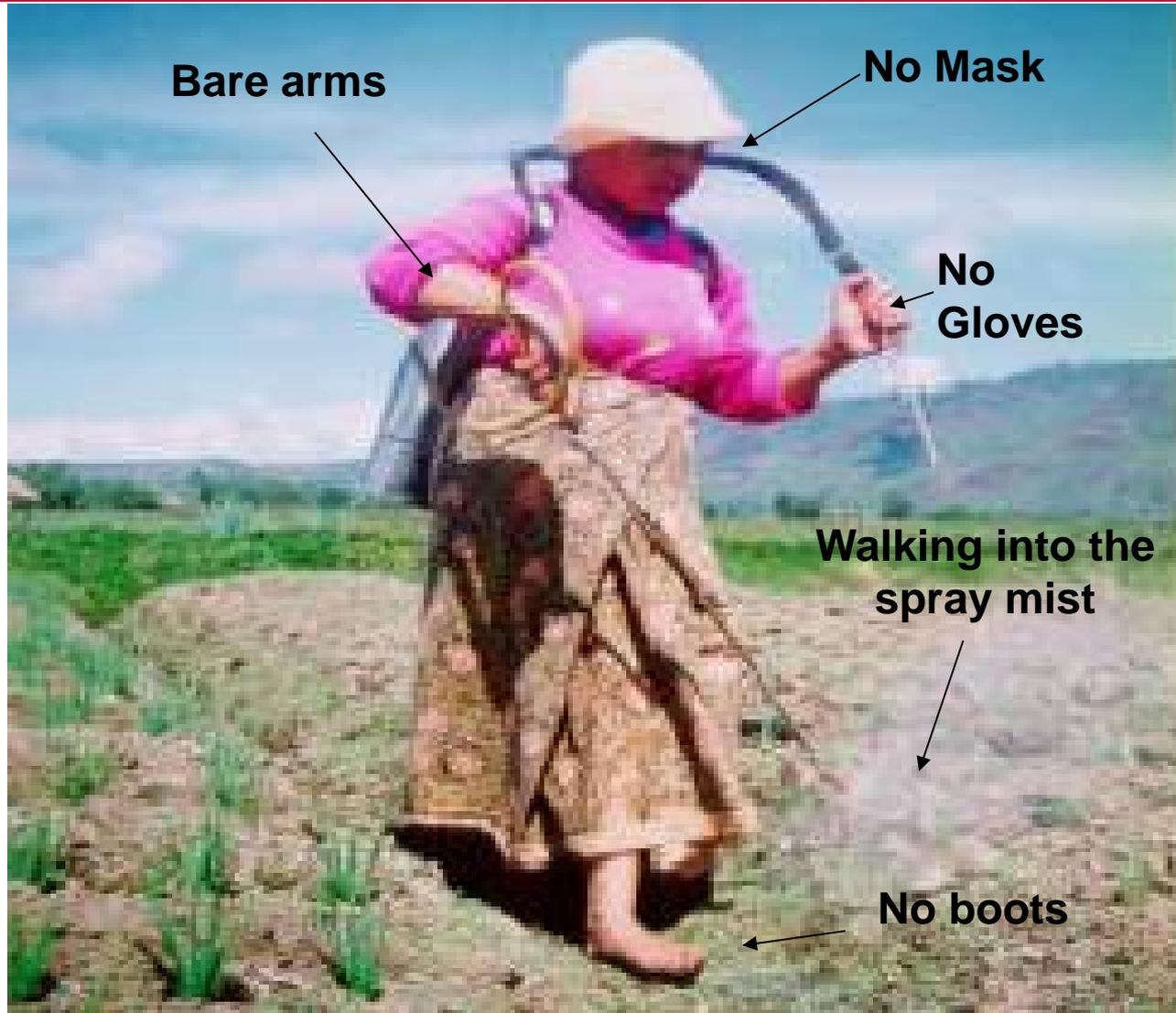


**Mixing pesticides
with bare hands**



**Pouring pesticide into
sprayer without
protection**

Spraying pesticides with no protection



The result . . .



Skin lesions

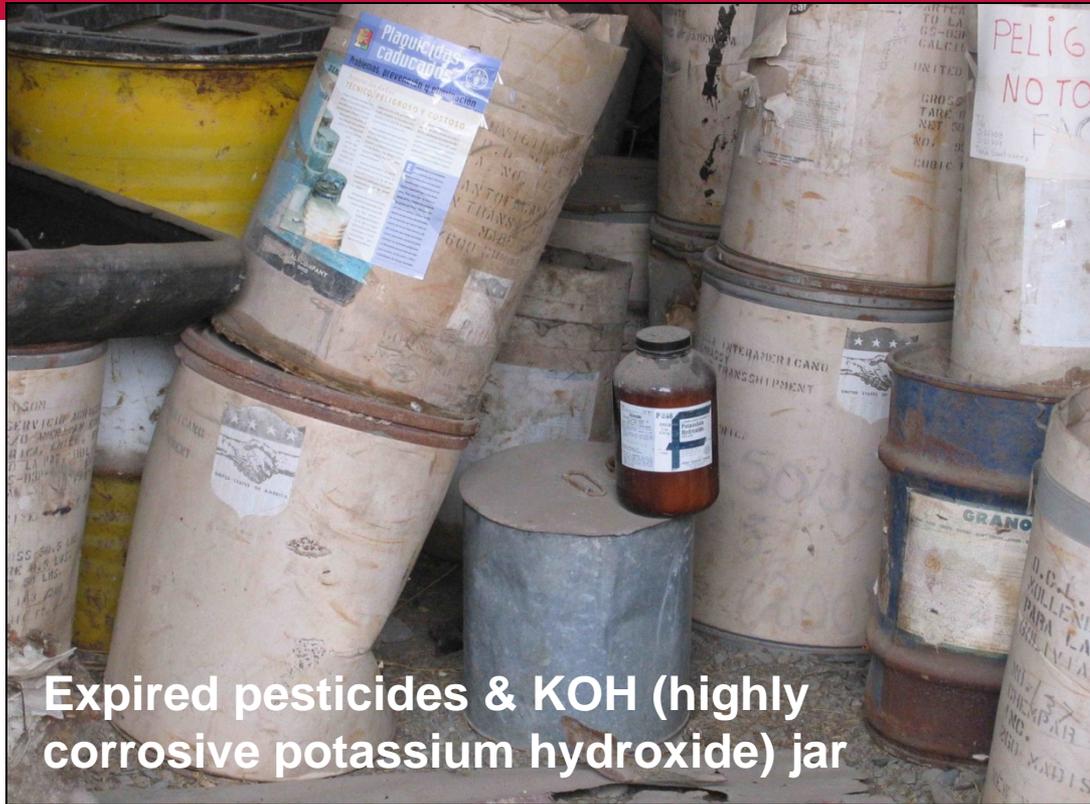


and unfocused vision

- ***With an appropriate EIA, combined with monitoring during implementation, these health problems could have been avoided***

Another Problem – Obsolete Pesticides

(found during 2003-2004 FAO Survey)



Expired pesticides & KOH (highly corrosive potassium hydroxide) jar



- Proper disposal starts at \$3,000 to \$5,000 per ton, depending on which pesticides are found. Highly toxic ones are much higher.
- Costly site cleanup also needed after the barrels are removed



USAID's response to these dangers. . .

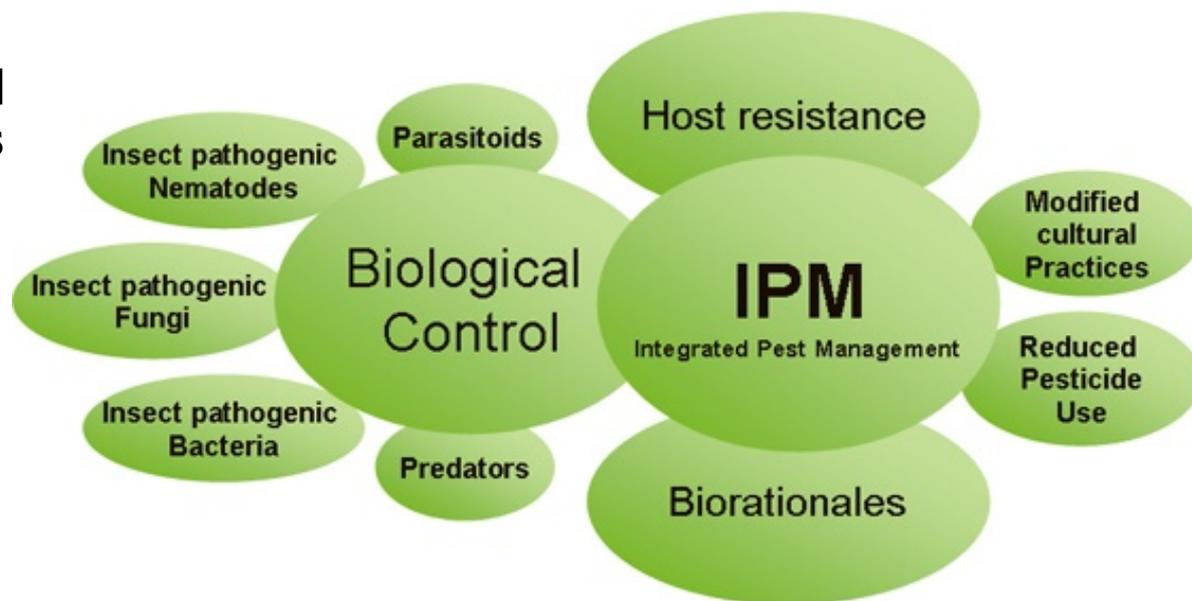
1 Agency-level policy commitment to [Integrated Pest Management](#) and SAFER USE more broadly

2 The “[Pesticide Procedures](#)” (Special and additional environmental review requirements under the agency's mandatory environmental procedures.)

USAID and Integrated Pest Management (IPM)

IPM aims at controlling pest populations by anticipating pest problems and preventing the damage they cause with minimal chemical use

- ❖ **Respond to clearly identified pests and their consequences**
- ❖ **Evaluate non-pesticide management options**
- ❖ **Use least toxic, safest pesticides and only as actually needed**



It is USAID policy to rely on Integrated Pest Management (IPM) as the framework for every activity (agricultural, health or other) that involves pesticide procurement or use

USAID Pesticide Procedures

- ❖ **Applies to every project that will **procure, use, or recommend for use** one or more pesticides**
- ❖ **The environmental review required for all project or sector programs must assess the proposed pesticide use in terms of the 12 factors outlined in 22 CFR 216.3 (b)(1)(i)**
 - ✓ US EPA registration status
 - ✓ Basis for selection
 - ✓ Extent to which IPM is used
 - ✓ Application methods and safety equipment
 - ✓ Toxicology and mitigation measures
 - ✓ Efficacy
 - ✓ Target vs. nontarget species
 - ✓ Environmental conditions at the location of proposed use
 - ✓ Availability of alternatives
 - ✓ Country's ability to control and regulate pesticides
 - ✓ User training
 - ✓ Monitoring provisions

USAID Pesticide Procedures

- ❖ This analysis is specialized IEE, sometimes called a **PESTICIDE EVALUATION REPORT & SAFER USE ACTION PLAN (PERSUAP)**
- ❖ The **SUAP** sets out the conditions that would govern pesticide use to assure safety.
- ❖ Based on the **PERSUAP**, use of the pesticide(s) is granted or denied, or more detailed study required.
- ❖ Conditions specified in the **SUAP** must then be implemented.

NOTE: Sometimes, a full Environmental Assessment is called for (e.g., for pesticides that are not registered by **USEPA** or are subject to restricted use but are judged essential)

What is “pesticide procurement or use”?



Be aware. . .

*USAID interprets
“pesticide procurement
or use” very broadly.*

Specifically. . .

What is “pesticide procurement or use”?

Procurement includes . .

- 1. Direct purchase of pesticides*
- 2. Payment in kind, donations, provision of free samples and other forms of subsidies*
- 3. Provision of credit to borrowers could be procurement*
- 4. Guarantee of credit to banks or other credit providers could be procurement*

Use includes . .

- 1. Sale*
- 2. Handling, transport, storage,*
- 3. Mixing, loading, application*
- 4. Disposal*
- 5. Provision of fuel to transport pesticides*
- 6. Technical assistance in pesticide management*

The definition of “procurement or use” does NOT include...

- ❖ Pesticide used in **evaluation plots & other research, IF the following requirements are met:**
 - *Surface area of under 4 ha,*
 - *Supervised by researchers,*
 - *Application by trained individuals*
 - ***The treated products are not consumed by people or livestock,***
- ❖ **Technical assistance for development of host country pesticide regulatory capabilities**
- ❖ **Support for training in safer pesticide use, not involving actual application or use of pesticides.**

Useful Web Sites

- www.epa.gov/pesticides/reregistration/status.htm
- www.pmep.cce.cornell.edu/profiles/extoxnet
- www.pesticideinfo.org (Pesticide Action Network (PAN) Pesticide Database)
- www.epa.gov/pesticides/safety/healthcare/handbook/handbook.htm (English and Spanish versions of pesticide poisoning recognition handbook)

Note: The information in these websites is useful for development professionals but does not substitute for an expert to apply it correctly