

CAUSES OF FIRE

Fire is a major destructive agent that accompanies natural disasters. Also, fire occurs due to our carelessness and ignorance. The negligence of one person often results in huge loss of life and property. Housewives careless over kitchen fire, smokers forgetting to extinguish the lighted butt of the cigars, children playing with matches, burning lamps left unattended - all these can result in a fire breakout leaving behind a trail of devastation.

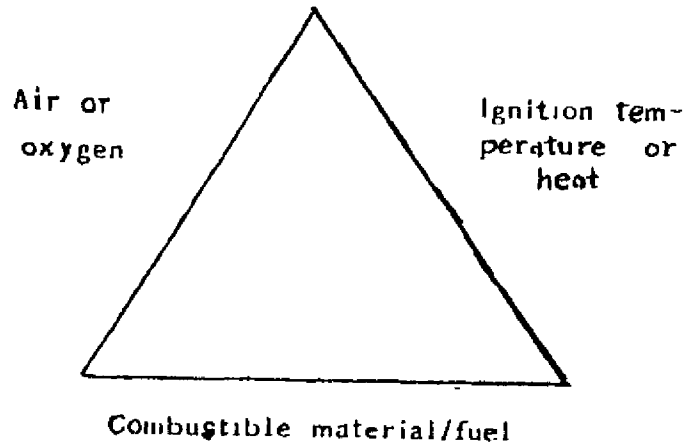
No doubt fire prevention is better than fire fighting. But in the eventuality of a fire, one should know how to put it out. One can arrest the fire only if one has the elementary knowledge of fire fighting methods, rather than waiting for a fire brigade to arrive.

The focus of this Chapter is on the principle of fire breaks and some common sense directives to prevent it. It will come handy to the task forces and enable them to do the job efficiently.

***DESTROY FIRE
BEFORE FIRE DESTROYS YOU***

When light or flame is produced during combustion, it is called FIRE.

Components



Hence a fire can be extinguished if any one or more of these components are removed from the scene.

SPREAD OF FIRE IS DECIDED BY

- Surface area
- Heat generated
- Conductibility of material
- Wind direction and velocity
- Humidity

Enabling Factors.

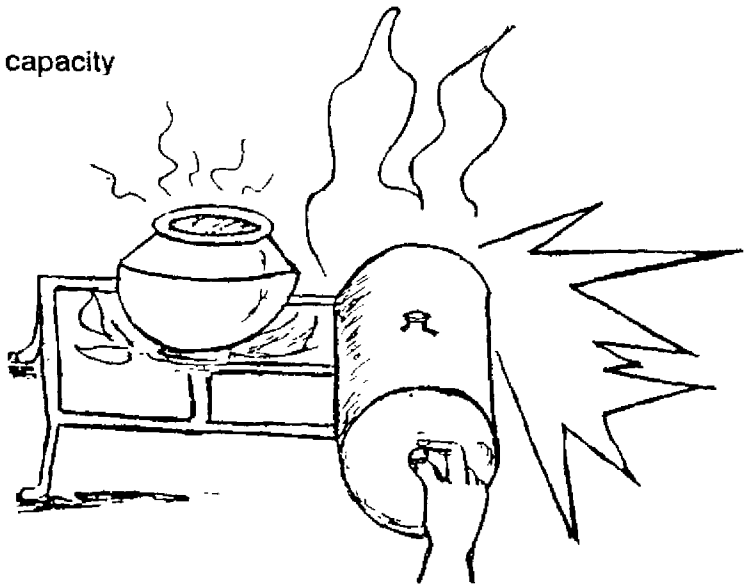
- Wind
- Inflammable material
- Proximity/Contact

CAUSES

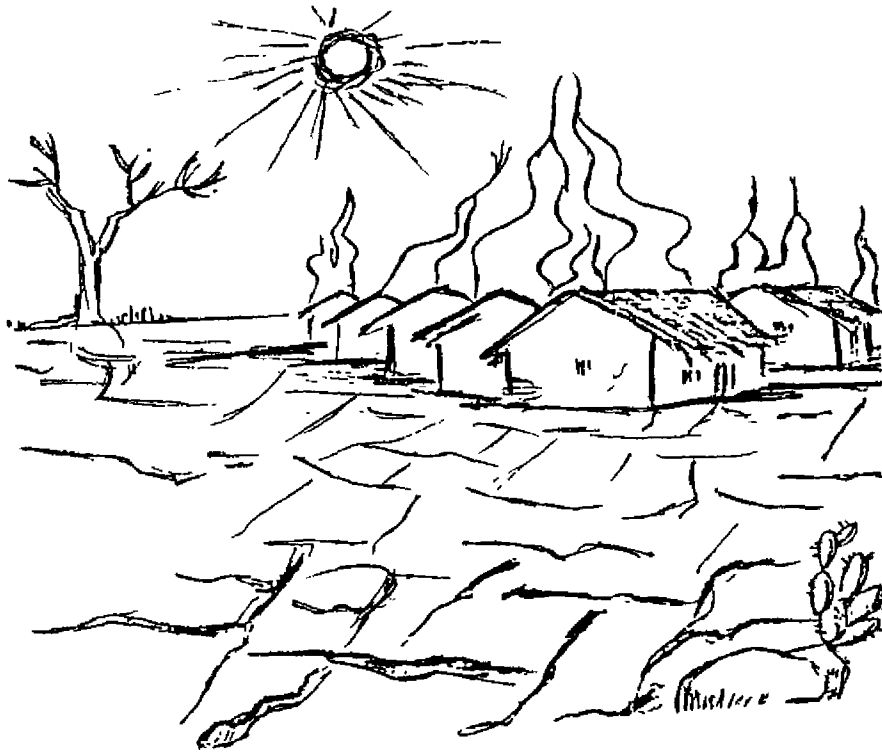
Nylon clothes touching the fire.



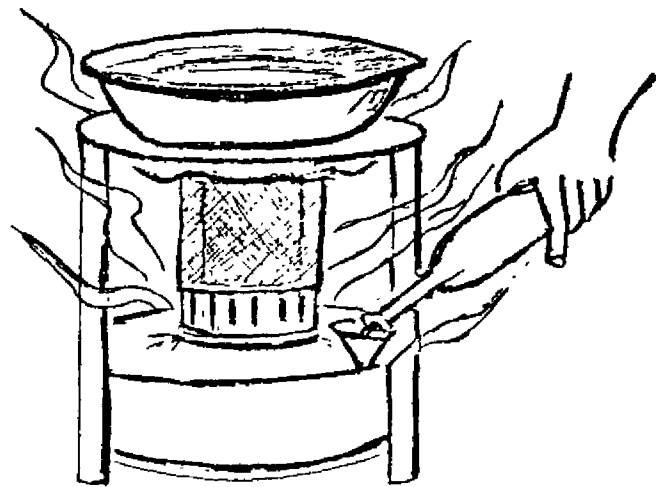
Pumping the stove much beyond its capacity of air makes it burst, catching fire.



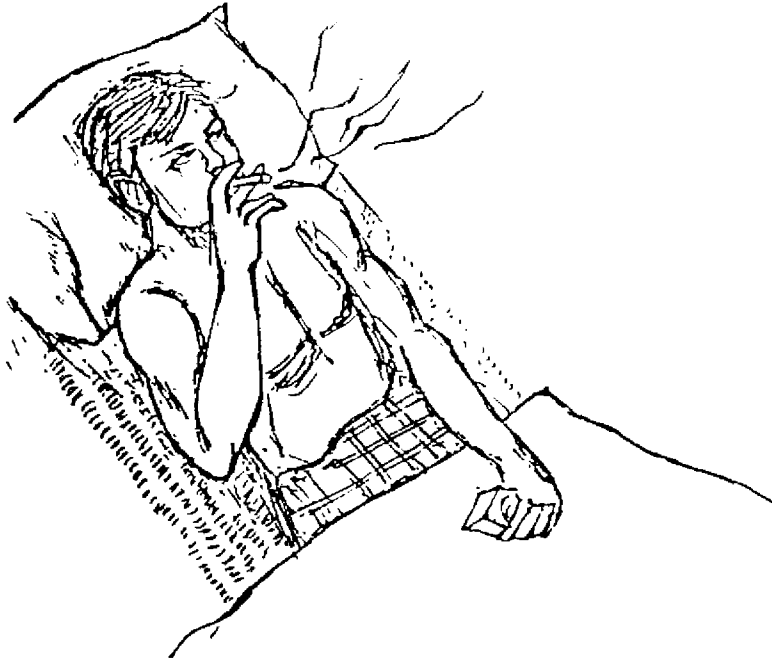
In parched , drought prone areas hot rays from the sun could spark off fires early.



It is dangerous to pour fuel into a stove while it is burning.



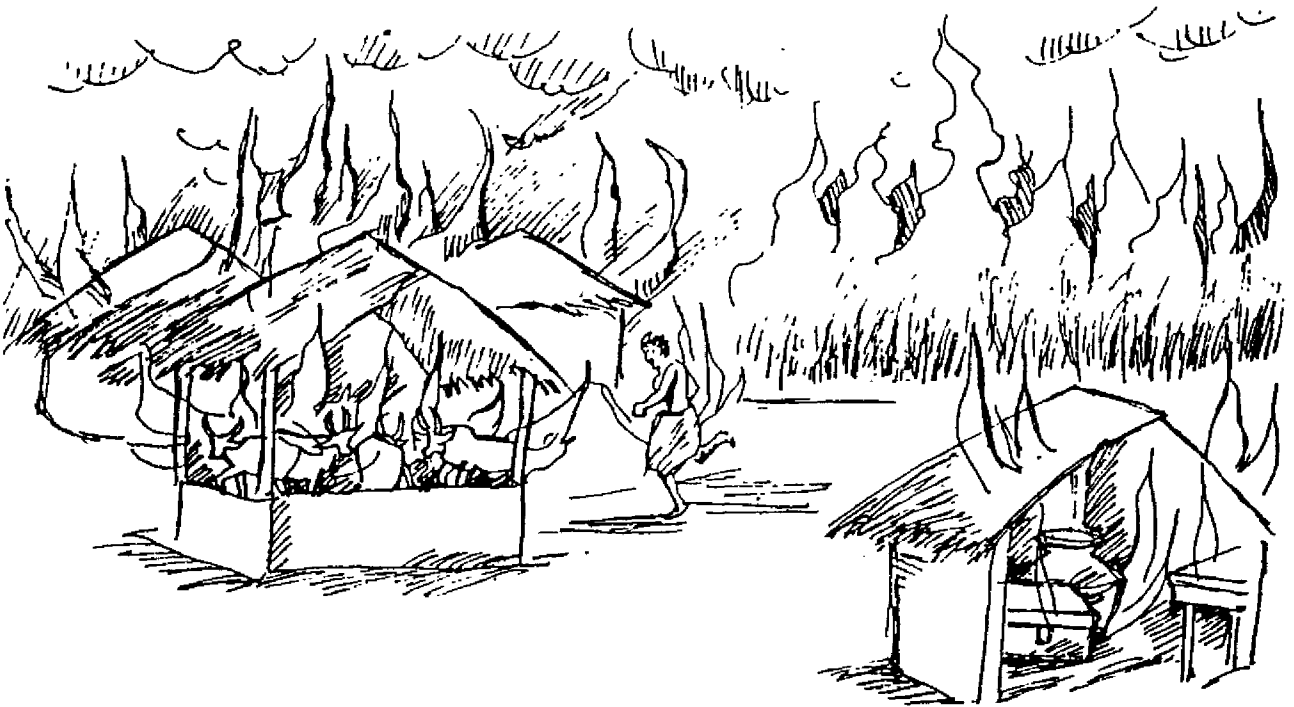
Smoking in bed and when sleepy results in careless handling of burning match sticks and cigarette butts



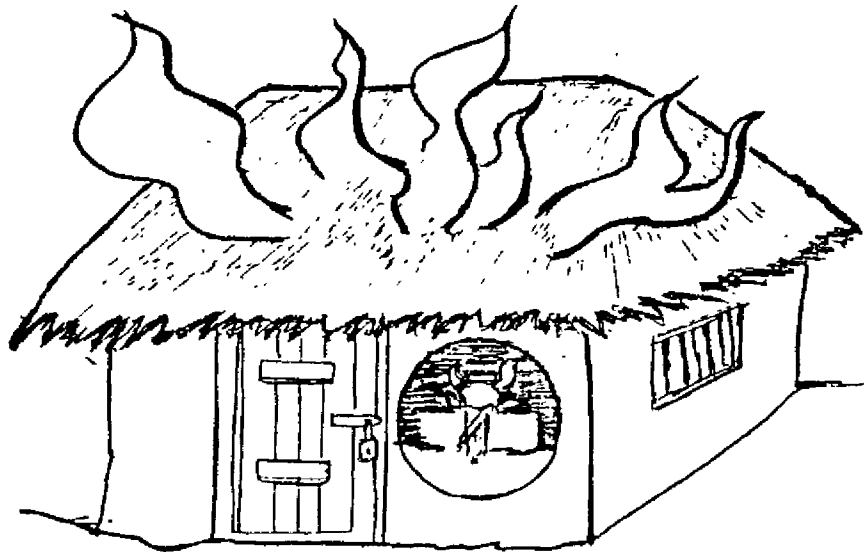
Fire spreads easily with winds:



Fire from burning hut spread easily to neighbouring fields resulting in economic losses.



Before leaving the house ensure that all fires are put off.



CLASSIFICATION

(Based on type of combustible material)

Class A	Paper, wood, grass. cotton etc. which leave ash alone as residue.
Class B	Inflammable liquids, Petrol, diesel, kerosene, spirit etc.
Class C	Petroleum Gas.
Class D	Metals, such as rusted iron, phosphorus,mercury.
Class E	Electricity.

Precautions.

- Handle fire carefully.
- Keep fuel/inflammable material away from fire.
- Switch off electric gadgets soon after use.
- Do not leave children near fire.
- Leave space between roof and walls in thatched houses.
- Do not build thatched houses very close to each other.
- Have ready access to fire hooks, fire extinguishers, water and sand in risky situations.

Effects

Economic loss

Loss of lives

Burns and disfigurement

BURNS AND SCALDS

Causes

- Boiling liquids, red hot metal, sun, steam.
- Electricity - naked metal wire
- Strong chemicals - acids and alkalis.

Effects.

- Redness of skins
 - Boils
 - Tissue destruction
 - Loss of body fluids and shock
 - Scars/deaths
-
- Handling hot metal



Treatment Of Burns

- Reassure the victim and keep him quiet.
- Do not touch the affected parts unnecessarily
- Wash your hands thoroughly before attending to burns.
- Do not remove victims's clothes.
- Do not use lotions to treat wounds.
- Only vaseline or gentian violet to be applied.
- Cover the burnt area with sterile or very clean cloth or cotton.
- Do not apply bandage tightly if there are boils.
- Do not burst open the boils.
- If burns are severe do not feed the victim with anything but water as it may be required to anaesthetise the victim for treatment.
- For mild burns, give adequate fluids to the affected person.
- If face is burnt prop the victim up and keep under continuous observation for breathing difficulty. An open airway may be necessary.

METHODS OF FIGHTING FIRE

Fire Extinguishing Methods

Starvation

Removal of burning material from the fire or removing the fire from the material.

Eg : Class A

Cooling

Lowering the temperature of the burning materials to a point below ignition point.

Eg : Class A and Class D using water.

Smothering or Blanketing

Restricting the supply of oxygen/air by covering the burning material with sand/foam/dry earth.

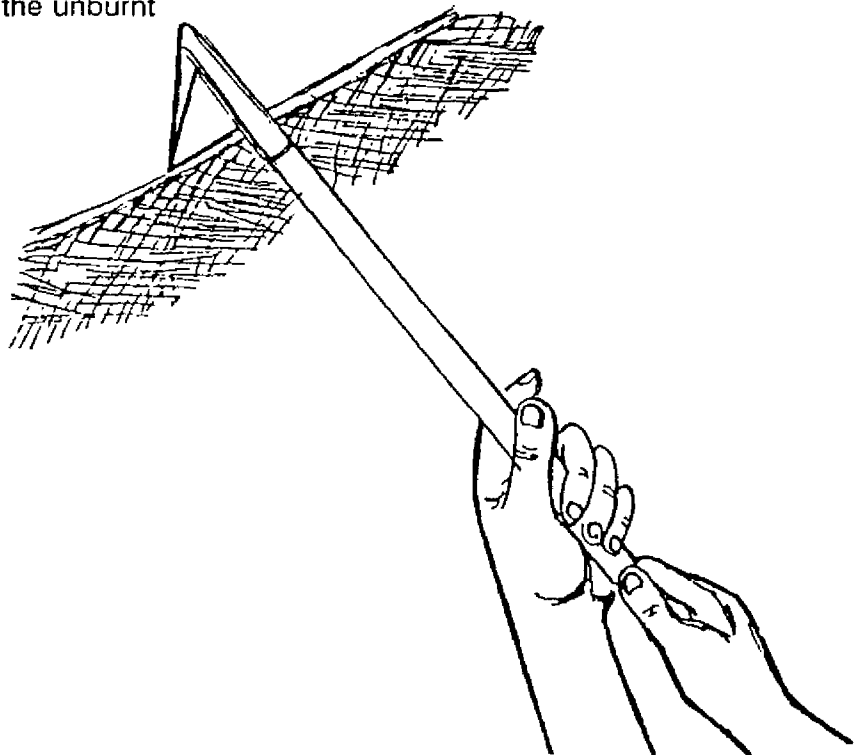
Eg : Class B and Class D.

Methods of extinguishing fire by the joint efforts of Task Forces in the villages.

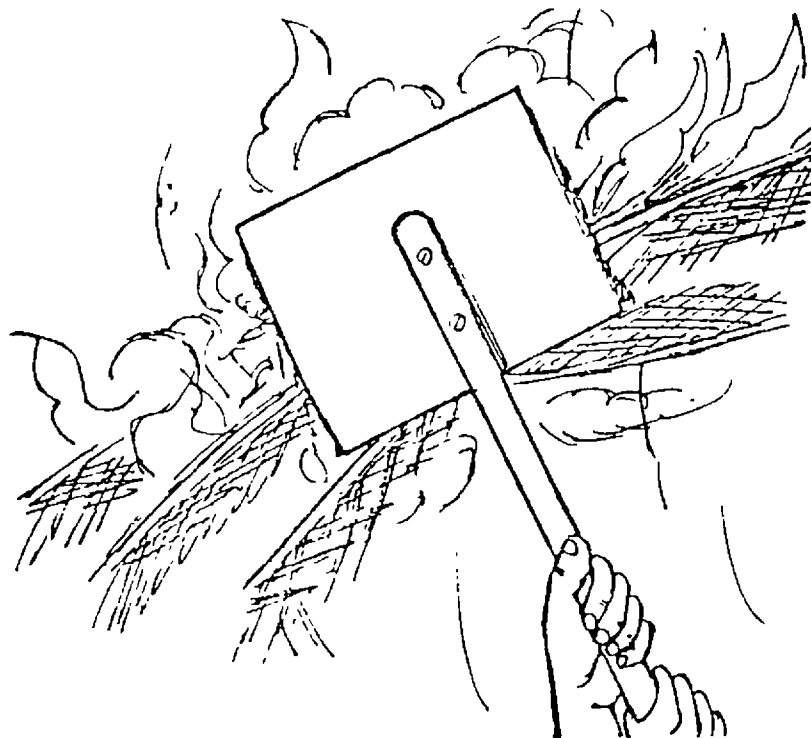


Remove the burning thatch with a long pole attached to a hook.

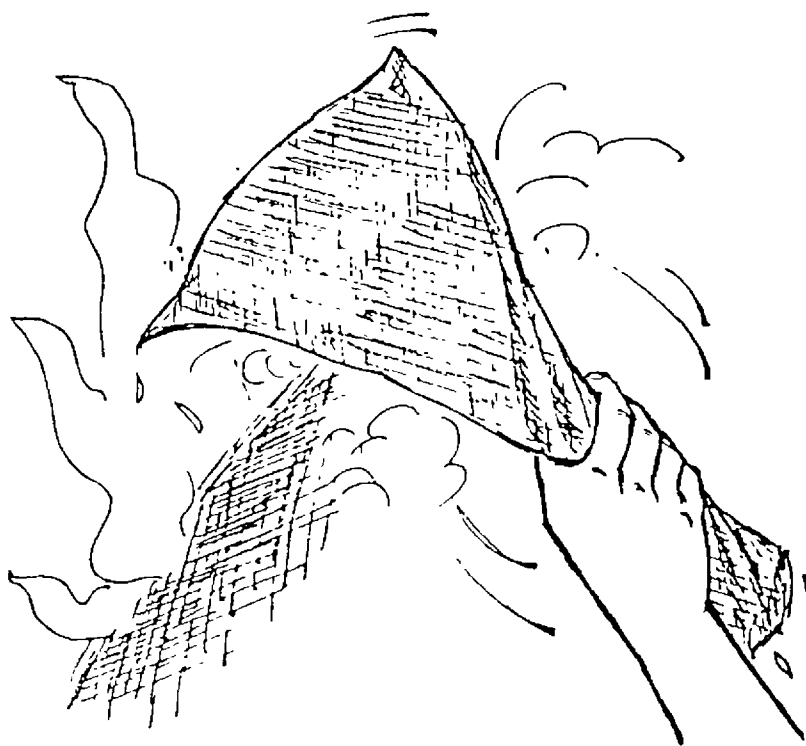
As a safety measure remove all the unburnt thatches.



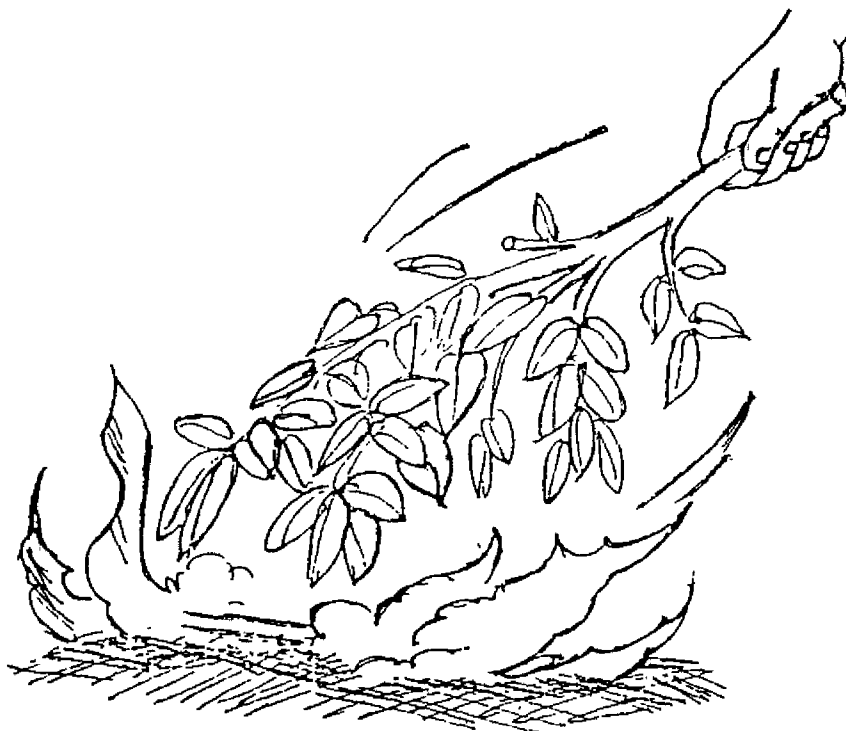
Extinguish the fire with a pole on which a piece of tin sheet is nailed.



Blow off the fire with wet gunnies.

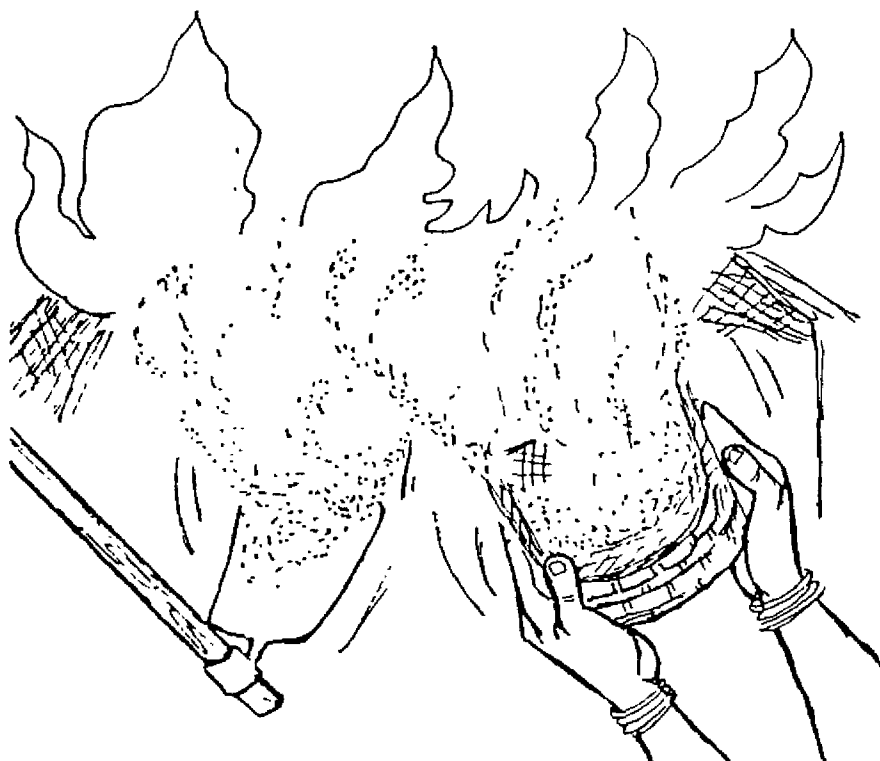


Blow off the fire with branches having green leaves.



Throw sand on the burning fire.

Mamotty, winnow could be used.



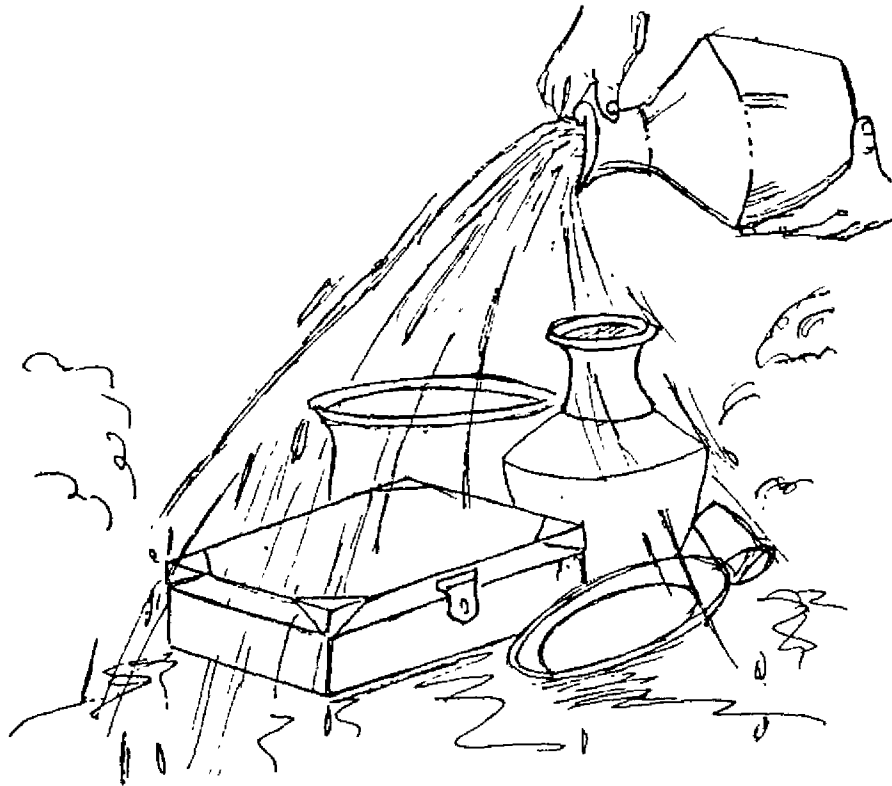
As a precautionary measure remove all the unburnt thatches from the neighbouring houses.



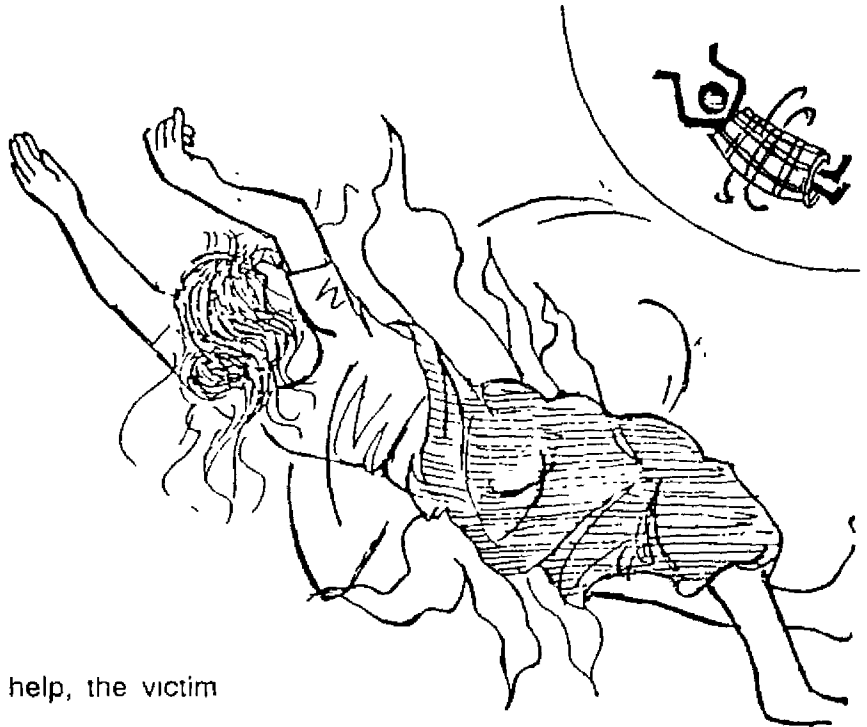
The thatched roofs of the houses near the burning house should be made wet with buckets of water being poured on them.



Safeguard the household articles by pouring water on them.



Wrap a wet blanket/gunny on a person who catches fire and roll that person until the fire blows off.



If there is no one near to help, the victim should roll on the ground.

By pouring water, the heat in the body of the victim could be brought down and injuries minimised.

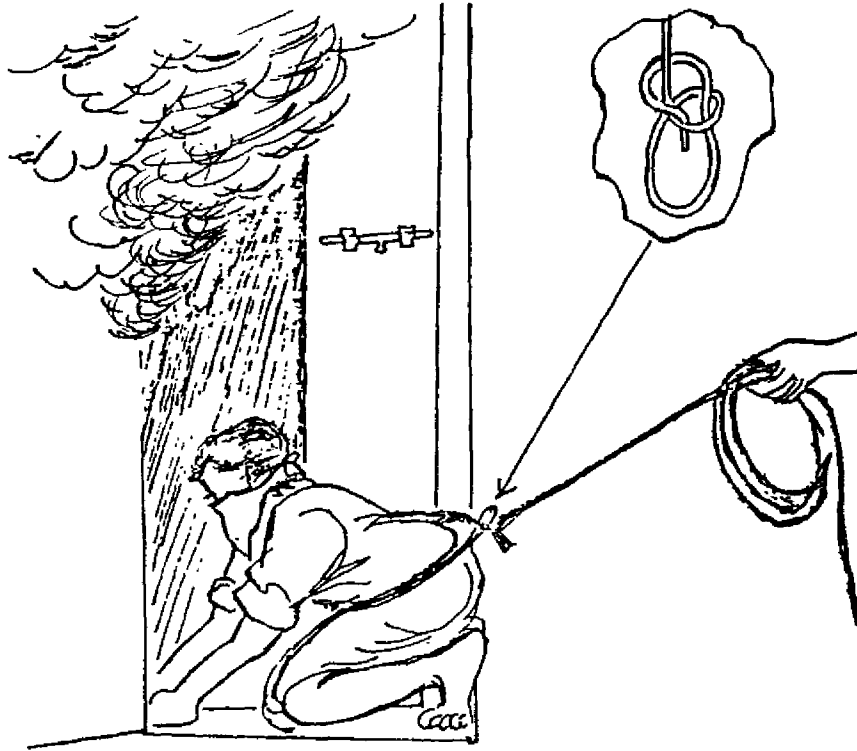


RESCUE OF FIRE VICTIMS



If the building that is destroyed by fire is of brick, smoke filled, then

Stand in hiding near the door, cover face with a wet cloth, bend down and slowly open the door to prevent being smothered by smoke.



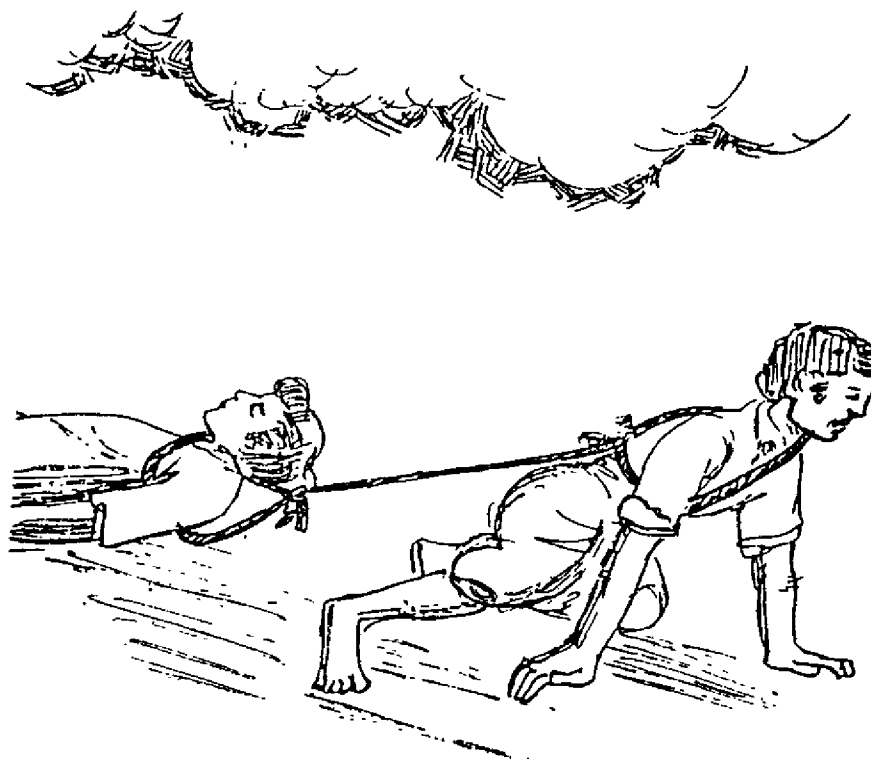
As the carbon monoxide is very high in a smoke filled room, bend and crawl on your knees to enter.

The rescuer should tie a bow line knot around his waist, hand this knotted rope to a person outside the room and then alone get inside the smoke filled room. If he feels faint due to the monoxide he could signal by tugging the rope and this will help to save him.

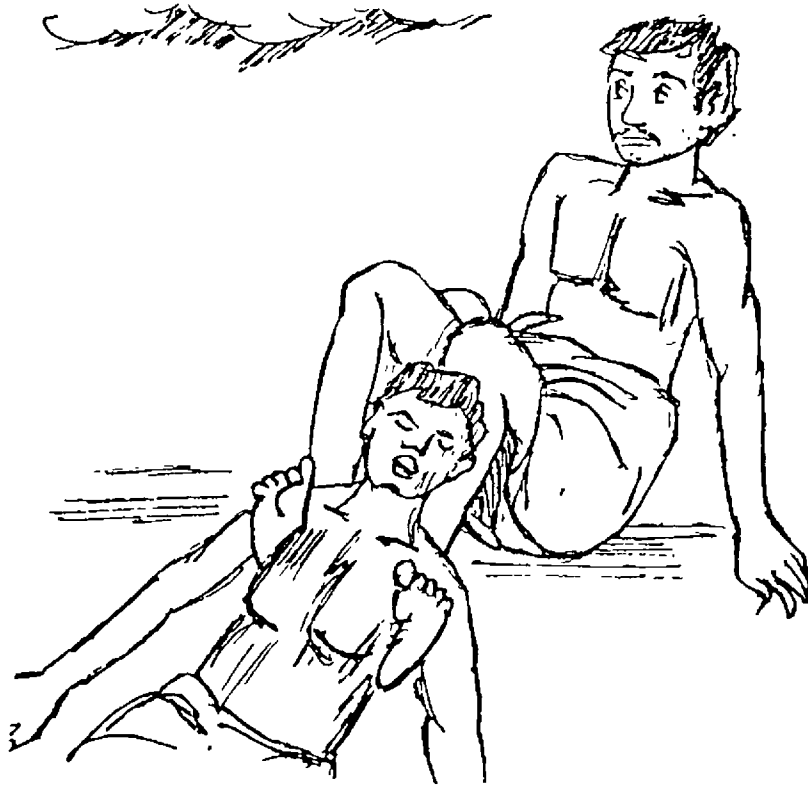
An unconscious victim inside the room may be pulled out by Crawl Method.



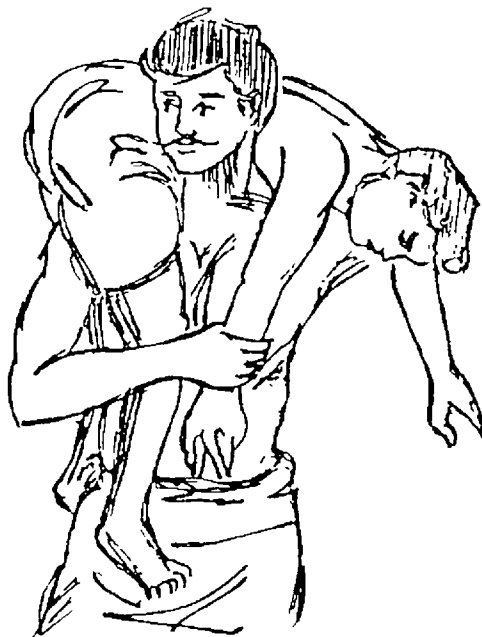
Victim being saved by bowline drag method.



Victim rescued by toe dragging.



A convenient way to carry a victim. '



SAFE HANDLING OF PESTICIDES

Pesticides, fertilizers, high yielding varieties of seeds have become part of the modern agricultural package. Viewed globally, the levels of pesticide use in India have not reached a high like in other market oriented subsidy based farm economies. What causes concern, however, is the total disregard of safety measures and a lack of awareness of pesticide hazards at the user level. The most vulnerable sections of our society routinely handle these chemicals with little or no thought to their long term effects.

It is necessary to have educational and awareness campaigns on the judicious use of agro-chemicals in conjunction with other pest control methods, and not in isolation.

However, to tackle the immediate threat of "Slow disasters" in our environment and people, the knowledge of basic safety measures in purchase, storage, and pesticides use is essential.

In this section , the use of pesticides at the field level and precautions in handling them are illustrated.

WHAT ARE PESTICIDES?

- Pesticides are chemicals used to control pests or diseases that attack crops
- It controls insects, fungi and weeds.

Classification

By the type of pest on which they are designed to action :

- Insecticides for insects.
- Herbicides for herbs.
- Fungicides for plant diseases.

By their chemical composition:

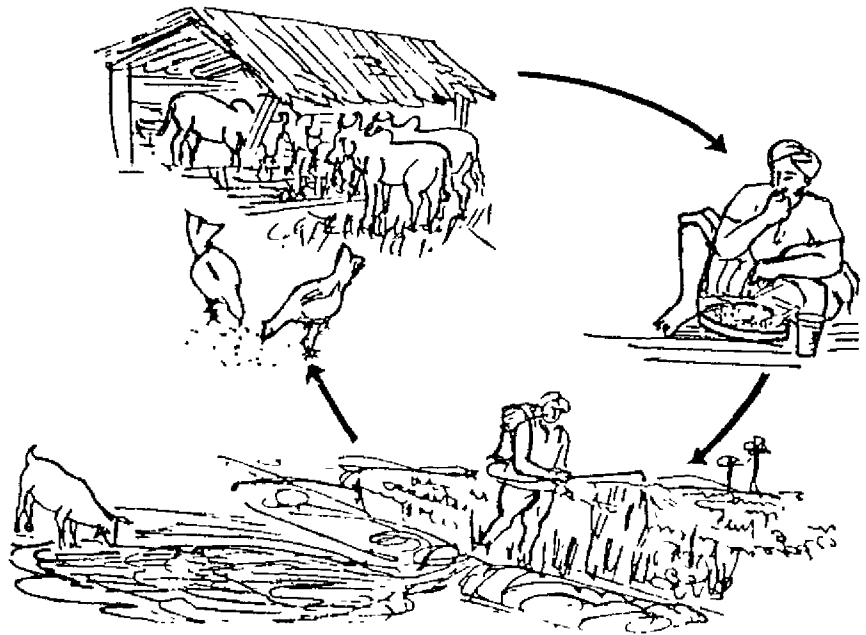
- Organochlorines (DDT)
- Organophosphates(Parathion, Malathion etc)

Pesticides Are Harmful

- Pesticides are toxic substances.
- They affect living organisms.
- They are dangerous to human beings if the exposures are high and for long duration.



Pesticides Do Not Disappear



- They pollute our water, soil and environment
- They contaminate our food chain.
- Therefore, they are present in our body fat as residue.

Pesticides Are Toxic

Users must be trained to :

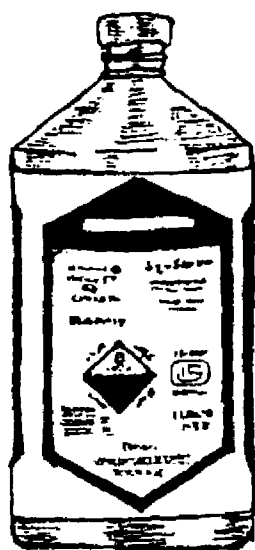
- Handle pesticides carefully.
- Use correct pesticide on the crop.
- Observe field safety measures.
- Use pesticides only when necessary.
- Use them along with other pest control methods.



Buy The Right Product

- Do not accept or buy damaged packs.
- Check the seals, they must be intact
- Buying more will create storing problems.
- Do not transfer pesticides into other containers.

Every Pesticide Container Has A Label



- Label carries information on toxicity of the pesticide.
- Read label carefully for dosage and dilution.
- Use correct dosage.
- High dosage will NOT produce better effects.



RED



YELLOW



BLUE



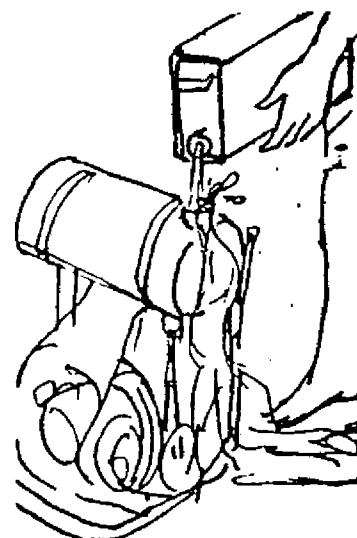
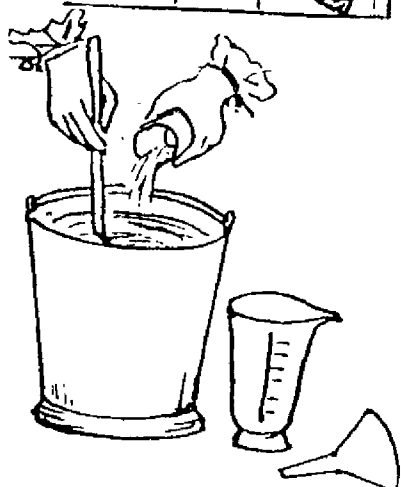
GREEN

MIXING AND HANDLING OF PESTICIDES

Do Not Allow Children To
Handle or Mix Pesticides



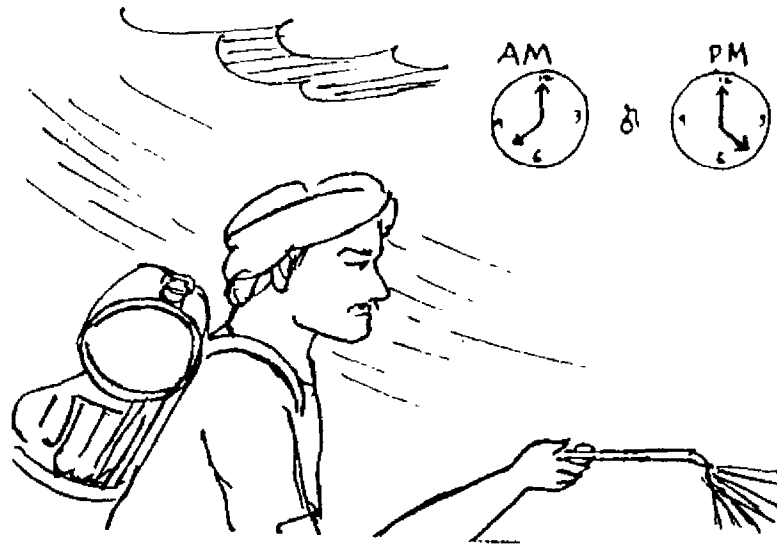
- Mix pesticides in open or well ventilated place.
- Mix them away from houses, livestock.
- Do not use hands to take out or mix pesticides. Use sticks or bamboo.
- Always use graded, suitable measures.
- pour liquid pesticide carefully to avoid splashing.
- Always stand with wind at your back while mixing or loading pesticides



WHILE SPRAYING

ALWAYS SPRAY DURING THE COOLER PART OF THE DAY

ALWAYS SPRAY WITH THE WIND AT YOUR BACK



Protect Your Mouth And Nose

- Cover them with a piece of cloth.
- Do not use towel or turban. They will be soaked.
- Use a separate piece of cloth.

Protect Your Body

- Cover lower limbs with full dhoti.
- Cover torso with a full sleeved shirt



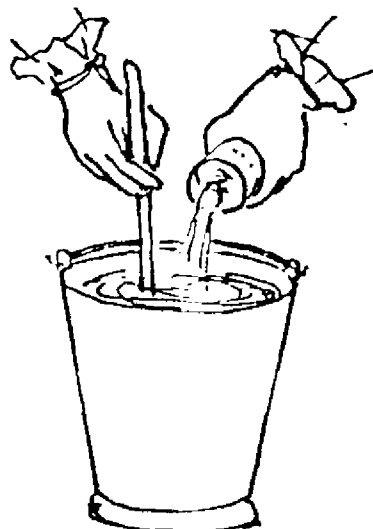
Protect Your Head

- Hair can accumulate dust or liquid.
- Wear a turban or tie a towel around the head.



Protect Your Hands

- Use gloves so that the skin is not exposed to pesticides.
- Gloves provided in the container are flimsy. They do not last long.
- Instead, use plastic bags to cover your hands.



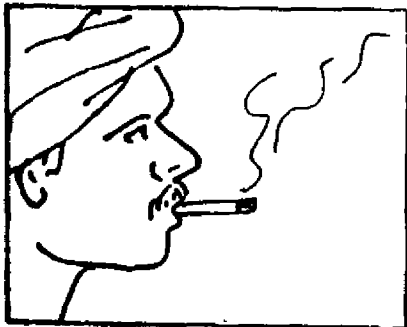
DO NOT CLEAR BLOCKED NOZZLE WITH YOUR MOUTH.



**NEVER USE DEFECTIVE SPRAYERS, THEY CAN DRENCH
YOUR BODY AND CONTAMINATE YOU.**



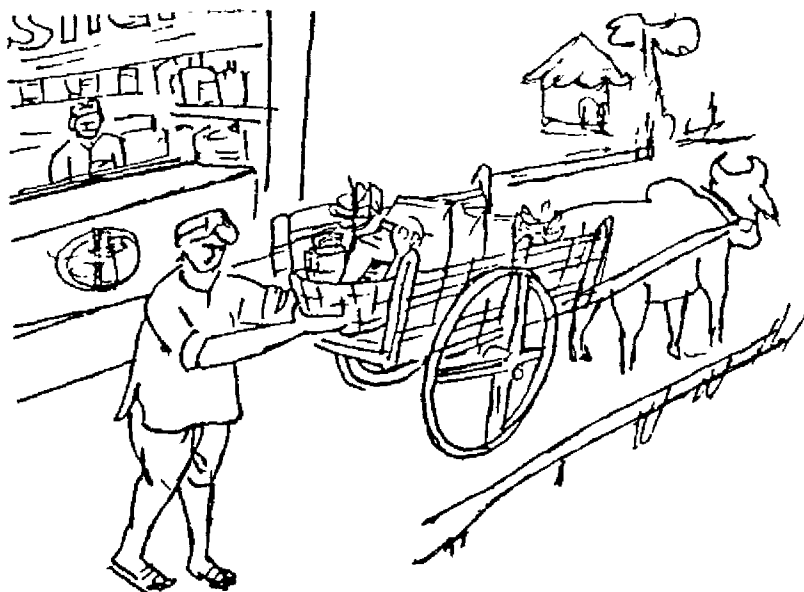
**DO NOT SMOKE, DRINK, OR RUB YOUR EYES AND FACE
WHILE USING PESTICIDES.**



AFTER SPRAYING

- Wash body thoroughly with soap and water.
- Wash hair, finger nails, toe nails, armpits and thighs.
- While washing, take care to keep the water out of your eyes.
- Soak your clothes separately in soap and washing soda for 1 1/2 hours. Wash with clean soap and water.
- Empty the sprayer completely while spraying. If not empty, dispose the left over pesticide under one metre of soil away from water sources.
- Wash, clean the buckets and measuring cups. Also, check the equipment.
- DO NOT reuse the pesticide container however attractive they are.
- Destroy and bury the containers away from people, livestock and water sources.

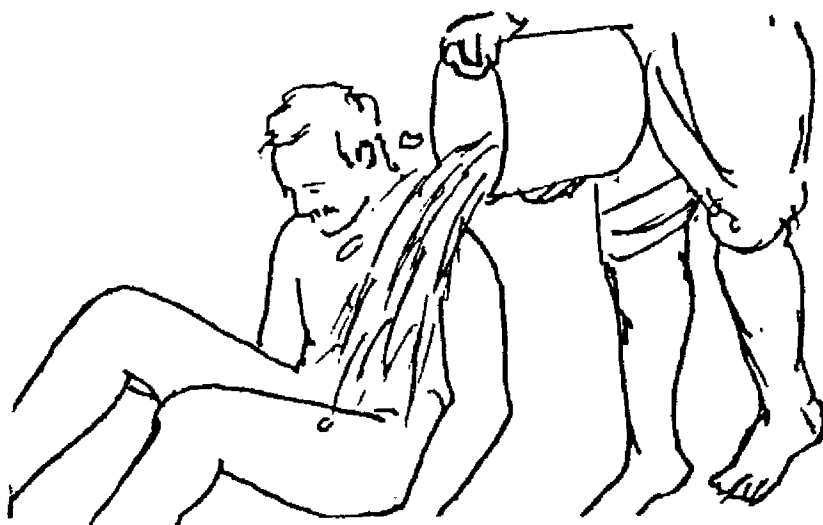
TRANSPORTATION OF PESTICIDES



- Transport pesticides carefully.
- Do not transport them along with other food stuffs.
- Do not carry pesticide bags on your head.
- Keep details regarding the pesticides being transported antidotes etc. readily available to be used in case of accidents.



IF PESTICIDE CONTAMINATION OCCURS...



Seek medical advice as quickly as possible .

Show the label of the container to the doctor from which the pesticide came.

Loosen clothing around throat and chest in case of pesticide inhalation.

Wash with plenty of water in case of skin absorption.

Remove contaminated clothing.

If pesticide gets into the eyes, wash eyes well with clean water for 10 minutes.



ALTERNATIVE PEST MANAGEMENT

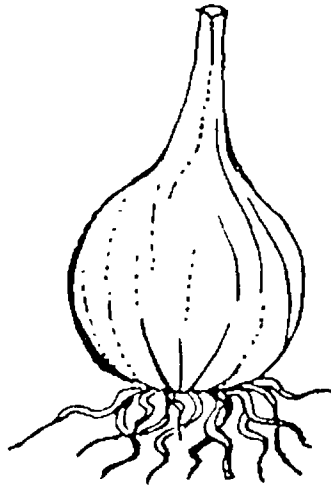
EDUCATE AND TRAIN COMMUNITIES IN ALTERNATIVE, SAFER METHODS OF PEST MANAGEMENT.

The Other Methods Are :

- Control by natural enemies (Bio-Control).
- Control using plant products (Use of Botanicals).
- Physical or mechanical control.
- Control by other agronomical practices.
- Control using animal products.
- Control by water management in the field.

Control Using Plant Products

GARLIC



NEEM



Cultural Control

- Blocking holes created by pests
- Production of continuous sounds thereby disturbing mating of pests.
- digging field bunds and catching rats
- Leaving rice at the corners of each fields - Birds eat up this and therefore do not attack the crop - and consequently eat the worms around.

Agronomical Practices

- Mixed cropping - Having different crops in same field.
- Crop rotation - Cereal rotated with pulse
- Burning stubbles after harvest
- Synchronised sowing.
- Use of trap crops.
- Use of resistant varieties.
- Use of humus to prevent attack by pests

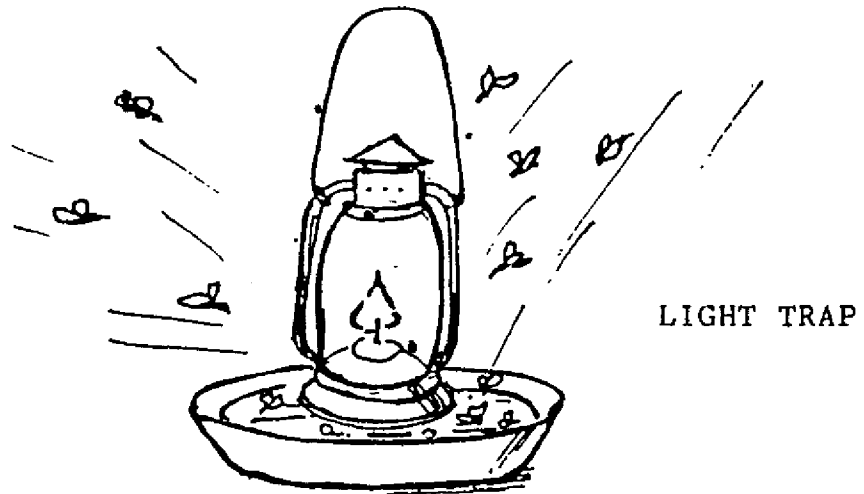
Animal Products

- Using Cow dung.
- Storing seeds in container plastered with Cow dung.
- Application of mixture of nematodes and earth to infected parts.
- Avoidance of fresh Cow dung as manure.
- Use of urine of Cow.

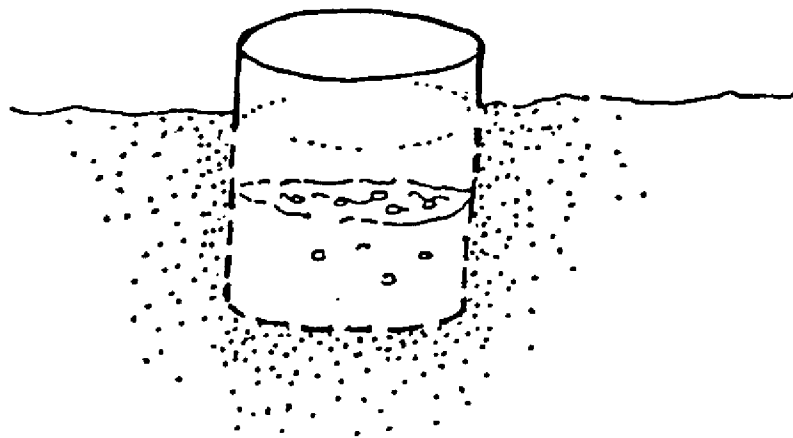
Water Management.

- Flooding the fields.
- Flood irrigation and subsequent draining.
- Irrigation of the clayey soil thereby allowing the weeds to germinate and subsequent ploughing.
- Irrigation after pest attack.
- Converting land heavily infested with weeds into wet lands.
- Constant submergence of the plant for weed control.

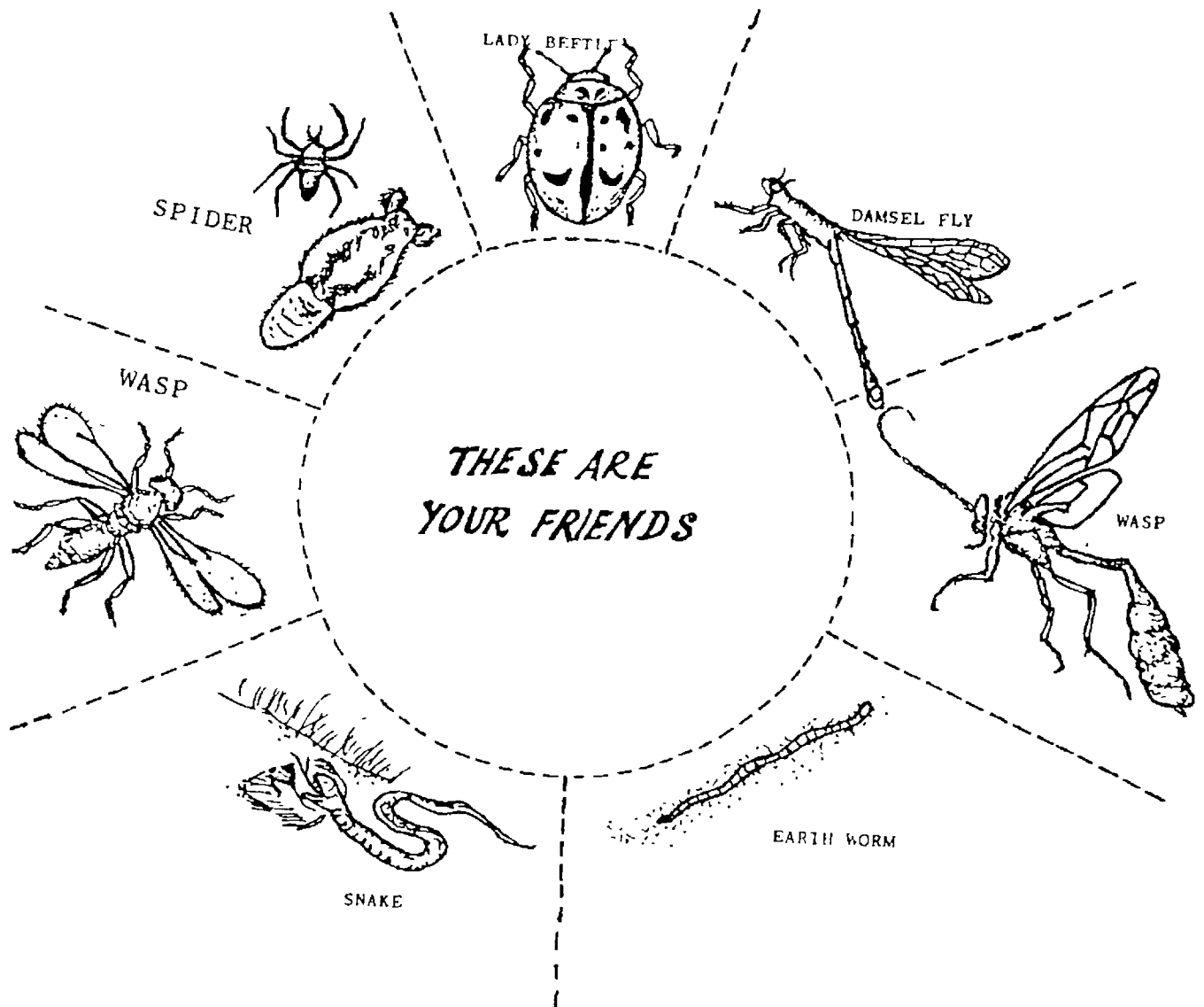
MECHANICAL CONTROL



TRAP FOR RATS AND MICE



EVEN IF YOU SEE THEM DO NOT KILL THEM



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