





















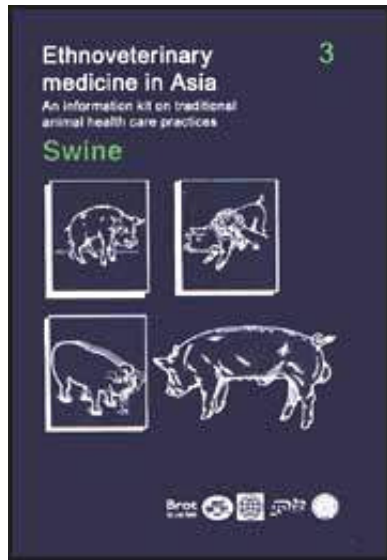

























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  -  **How to use this manual**
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  -  **Diarrhea and dehydration**
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## **An information kit on traditional animal health care practices**

### **Swine**

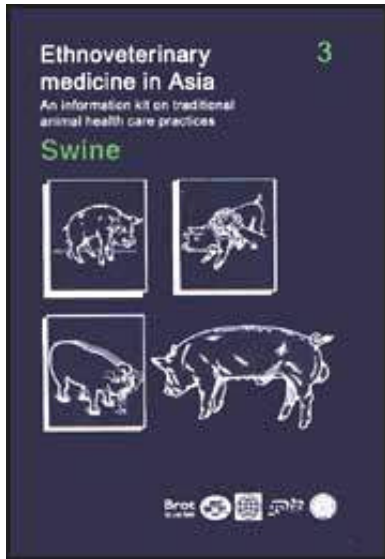
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## Poisoning



**Poisoning**

## Symptoms

- **Arched back.**
- **Salivation.**

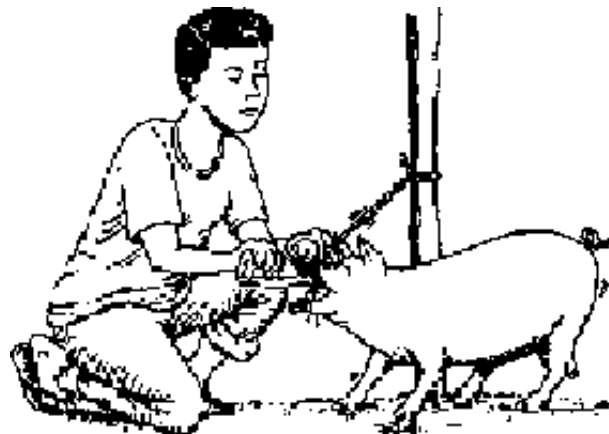
- **Animals staggers or sways.**
- **Fever.**
- **Weakness.**
- **Bleeding from the mouth.**

## **Causes**

- **Eating poisonous plants.**
- **Eating grass from pastures treated with insecticides.**
- **Being fed with fresh, raw cassava roots or cassava peels.**
- **Eating old and moldy feed.**
- **Bites from snakes, scorpions or centipedes.**

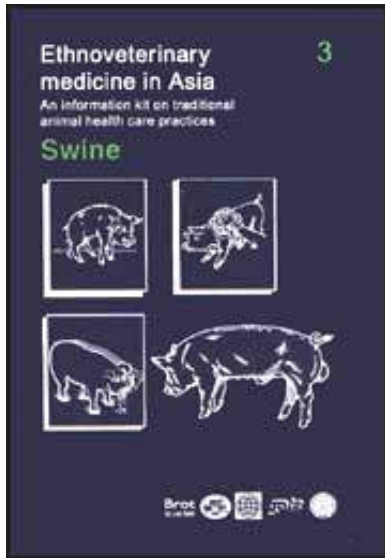
## **Prevention**

- **After applying insecticides to an area, do not release animals in the area to eat.**
- **Keep feed dry and free from mold.**
- **Avoid feeding raw cassava peels and roots.**



## Treatment

- **If an animal shows symptoms of poisoning after eating cassava peels, drench it with coconut oil (about 1 glass for an adult pig). This facilitates the expulsion of the peels and decreases the absorption of poisonous materials. (Philippines. 1, 2, 3)**
- **If you do not know the cause of the poisoning, mix 56 fresh, raw eggs with 1 cup of sugar and drench the animal. The dosage is for a 70-kg pig.**



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 **Diarrhea and dehydration**

 **Constipation**

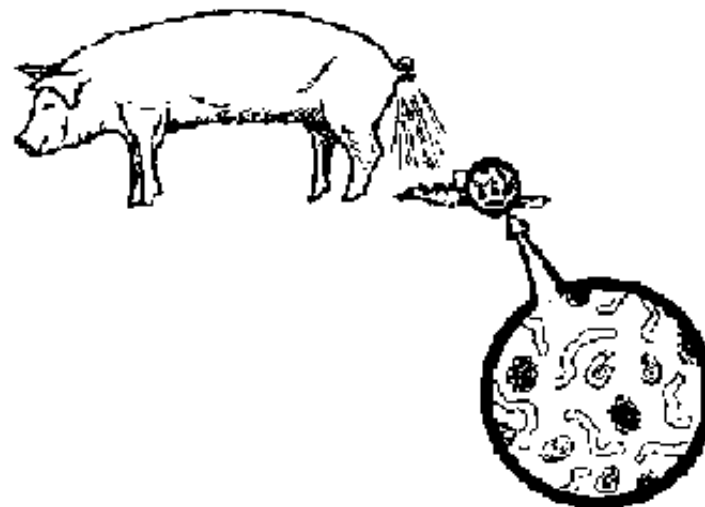
 **Poisoning**

  **Internal parasites**

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## Internal parasites





## Internal parasites

### Symptoms

- **Loss of appetite.**
- **Diarrhea.**
- **Anemia.**
- **Weight loss.**
- **Coughing.**
- **Slow growth.**
- **Dull, thick hair without the normal luster.**
- **Live worms expelled from the feces.**

### Cause

**Roundworms and lungworms are transmitted by eating feed or drinking water that is contaminated. Worms affect animals of all ages and both sexes. They can be spread to people through hands contaminated with worm eggs. Also, worms can spread to humans who eat vegetables contaminated with eggs from pig manure used as fertilizer.**

### Prevention

- **Keep animals and surroundings clean.**
- **Deworm the animals at least every 3 months. Or repeat the first deworming after 21 days to break the life cycle of the roundworm; then repeat every 3 months.**

**- Clean your hands with soap and water after feeding, treating or cleaning the animals to get rid of any worm eggs.**

**- Wash all vegetables before eating, especially those raised with pig manure as fertilizer.**

## **Treatment**

**Treatment should preferably be done in the morning so you can check whether worms are expelled in the feces later in the day.**

### **For lungworm**

**- Pound 6 handfuls (300 g) of mature, fresh fruit of *Diospyros mollis*. Squeeze the ground sample through a cheesecloth to get the extract. Mix 3 tablespoons of epsom salt (magnesium sulfate) in the extract. Mix with 1 bottle of water. Drench with 1 teaspoon of the medicinal juice per 5 kg of body weight. Treatment requires only 1 dose.**

### **For roundworm (*Ascaris* species)**

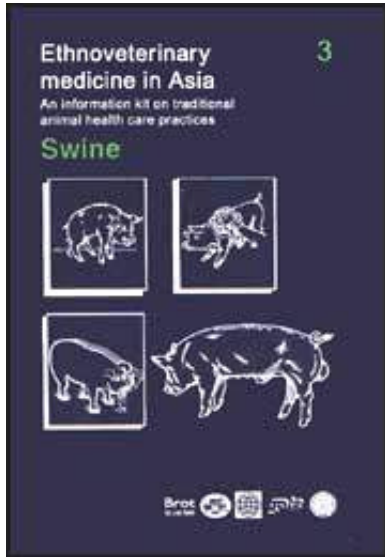
#### **Treatments for roundworm**

<b>Scientific name</b>	<b>Common name</b>	<b>Parts used</b>	<b>Preparation</b>	<b>Application</b>	<b>Dosage</b>
Anona squamosa	Sugar apple	Air-dried leaves	Crush leaves. Add a little water.	Give as drench.	15 g/50 kg body weight. Repeat treatment after 21

					days and every 3 months thereafter. (Cambodia, India, Philippines, Thailand .1, 2, 3, 4, 5)
Areca catechu	Betel nut	Ripe, air-dried nut	Grind. Add a little water.	Give as drench.	15 mg/50 kg body weight. Repeat treatment after 21 days and every 3 months thereafter. (Cambodia, India, Indonesia, Philippines, Sri Lanka, Thailand. 1,2,3,4,5)
Artemisia vulgaris		Air-dried leaves	Grid, then add a little water. Hand- squeeze to get the juice.	Give as drench.	0.1 - 1.0 ml/kg body weight for small animals, 1.0 -1.5 ml/kg body weight for larger animals. Repeat treatment after 21 days and every 3 months thereafter.
Leucaena leucocephala	Leucaena	Air-dried,	Pound seeds to powder.	Mix powder into feed.	30 g powder for every 10 kg body

		ripe seeds			weight. Repeat treatment after 3 months.
Leucaena leucocephala	Leucaena	Ripe, air-dried seeds	Grind seeds Add a little water.	Give as drench.	15 g/kg body weight. Repeat after 21 days and every 3 months thereafter.
Momordica charantia	Bitter gourd	Air dried leaves	Boil the leaves. For every 1 part leaves, use 2 parts water. Take the liquid and dilute the liquid with coconut milk in 1:1 ratio.	Give as drench.	6 ml per 10 kg body weight. Repeat treatment after 3 months.
Moringa oleifera	Horseradish tree	Air-dried, ripe seeds	Pound seeds to powder.	Mix powder into feed.	30 g powder per 10 kg body weight. Repeat treatment after 3 months.
Plumeria acuminata		Air-dried bark	Add 30 ml water for every 60 g bark. Grind. Boil the ground bark for 15-20 minutes. Strain to get the liquid.	Give as drench.	0.2 - 0.5 ml/kg body weight. Repeat treatment after 21 days and every 3 months thereafter.
Tamarindus	Tamarind	Air-	For every 30 g of	Give as	5 -10 ml/kg body

indica		dried leaves or bark	leaves or bark, add 4 cups water, then pound Boil the mixture for 15-20 minutes. Strain to get the liquid.	drench.	weight. Repeat treatment after 21 days and every 3 months there after.
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 **Internal parasites**










  **Pork tapeworm**

 **Scabies or mite infestation**

 **Lice**



## **Infectious diseases**

-  **Problems of the eye**
-  **Wounds**
-  **Sprains**
-  **Housing**
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## **Pork tapeworm**



**Pork tapeworm**

## **Symptoms**

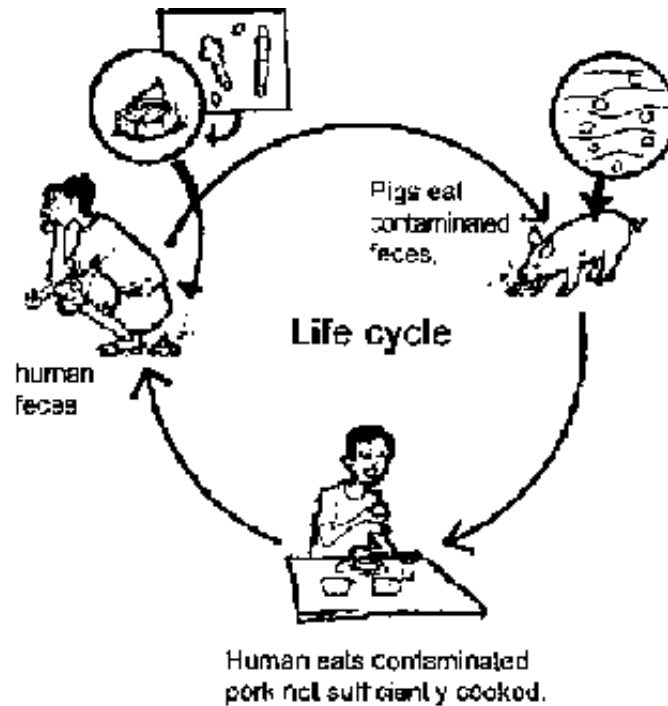
- **Cysts appear as small blisters at the base of the tongue.**
- **In most cases, no symptoms appear at all.**

**Pull the tongue out to the side of the mouth and dry it with a clean cloth. Feel the surface of the tongue at the base to check for cysts. This is the only way to confirm if the animal has cysticercosis.**

## **Cause**

**Tapeworm infestation (cysticercosis) is a condition of cysts in the muscles of pigs caused by the larvae of tapeworm.**

**Each of the cysts in the tongue or muscle of the animal contains a tapeworm larva. This is the result of a pig eating human feces containing a whole or part of the tapeworm, or the eggs of the tapeworm. The tapeworm eggs are then absorbed into the intestines of the pig and are carried in the blood system. They are then trapped in the muscle of the animal and develop into larvae which then become cysts. Humans get the tapeworm by eating contaminated pork which has not been sufficiently cooked.**



**Human eats contaminated pork not sufficiently cooked.**

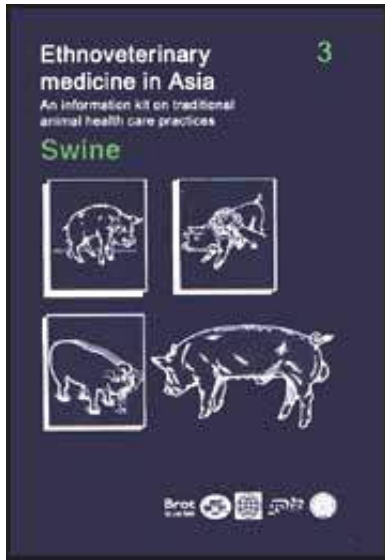
## Prevention

**- Keep the surroundings clean and free from human feces to prevent pigs from eating the feces and becoming infected.**






















## Treatment





**- Boil 5-10 fresh young leaves of *Spondias pinnata* in 1 cup of water for 5-10 minutes. Drench the animal 2-3 times a week with 3-5 ml (1 teaspoon) of the liquid for every 10 kg body weight. After 7 days, check if the cysts have disappeared. Repeat the treatment 2-3 times a week until the animal is cured. (Philippines. 1, 2, 3, 4)**





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## Scabies or mite infestation



**Scabies or mite infestation**

## Symptoms

## **- Itchiness.**

**- Scratching. Wrinkled and rough skin. Inflammation of the skin. Falling hair. Moist open wound may contain pus or serum.**

## **Cause**

**The most common form of scabies in pigspigs is the one caused by *Sarcoptes scabiei* var. *suds*, which burrows into the skin and causes intense itching. Scabies is also caused by *Psoroptes* mites. The areas of the body usually infested are the hairless portions, like the back of the pig's ears.**

**Fungal infection may also cause mild skin lesions and can also cause the above symptoms.**

## **Warning**

**People can catch scabies easily. Avoid direct contact with the pig's infected area, especially when applying treatment. Use a stick or banana leaves to apply the treatment. You may also use plastic bags as improvised gloves for your hands. After application, wash hands with soap and water**

**Scabies is spread by direct contact with infected pigs and any surface or object which may contain the mites (such as bedding, stall walls, etc.). Scabies can easily be transmitted to humans and other animals.**

**Prevention isolate the infected animal to protect the other pigs living in the same pen. General sanitation is also important to prevent mite infestation. Keep the pen**

**and the bedding clean. Also keep the animals clean and dry. Do not use infested animals for breeding purposes.**

## **Treatment**

**Use any of the following treatments:**

- Burn 1 coconut shell and mix the ash with 1 glass of coconut oil. Apply on the infected area twice a day for 3-5 days. (Cambodia. 1, 2, 3)**
- Use an oil or alcohol liniment as base when applying medicinal plants. Here's how to prepare a liniment:**

### **Oil liniment**

**Make lime water by mixing lime (calcium hydroxide) with water. Take the water off from the top of the container. This is "lime water."**

**Combine 1 part vegetable oil or used engine oil with 3 parts lime water and 1 part of any of the herbal medications given in the table below. Prepare the mixture by churning or by rapidly stirring the ingredients. Rub the mixture on the infected area part by part. Do not apply it to the whole body at the same time. After 10 days, repeat the medication.**

### **Alcohol liniment**

**Combine 9 liters of diluted detergent solution (1 bar detergent soap dissolved in 9 liters of water) with 2 liters of distilled liquor (such as gin) and 1 part of any of**

**the herbal medications listed in the table below. Prepare the mixture by churning or by rapidly stirring the ingredients. Rub the mixture on the infected area part by part. Do not apply it to the whole body at the same time. After 10 days, repeat the medication.**

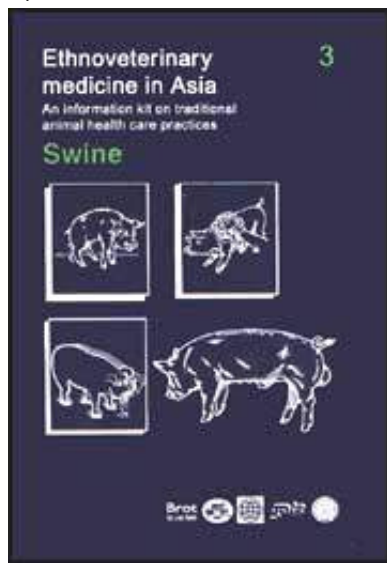
### Herbal medications to treat scabies in pigs
























Scientific name	Common name	Parts used (pounded)
Annona squamosa	Sugar apple or sweet sop	Dried seeds(Cambodia, Philippines, Thailand. 1, 2, 3, 4, 5)
Artemisia vulgaris	Worm wood	Fresh leaves, roots, stems(Cambodia, Philippines. 1, 2, 3, 4, 5)
Cassia alata	Ringworm bush	Fresh leaves, stem, bark, roots (crushed) (Cambodia, Philippines. 1, 2, 3, 4, 5)
Chrysanthemum indicum	Chrysanthemum	Fresh leaves (crushed) (Philippines. 1, 2, 3, 4, 5)
Gliricidia septum	Gliricidia	Fresh leaves, bark, roots(Cambodia, Philippines, Thailand. 1, 2, 3, 4, 5)
Tinospora spp.		All parts (fresh) (Philippines, Thailand. 1. 2. 3. 4. 5)

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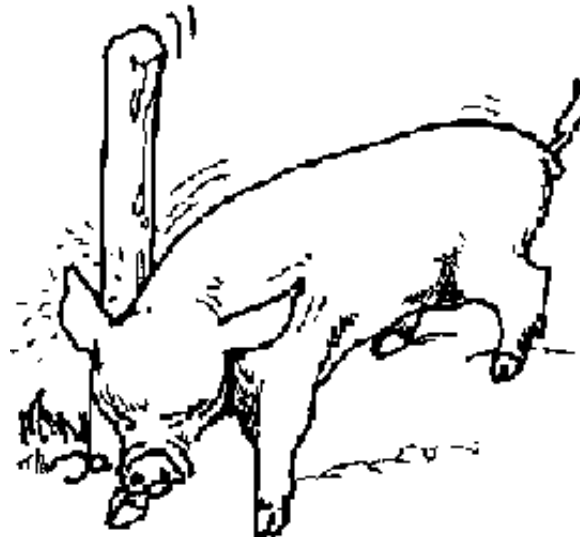
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# Lice



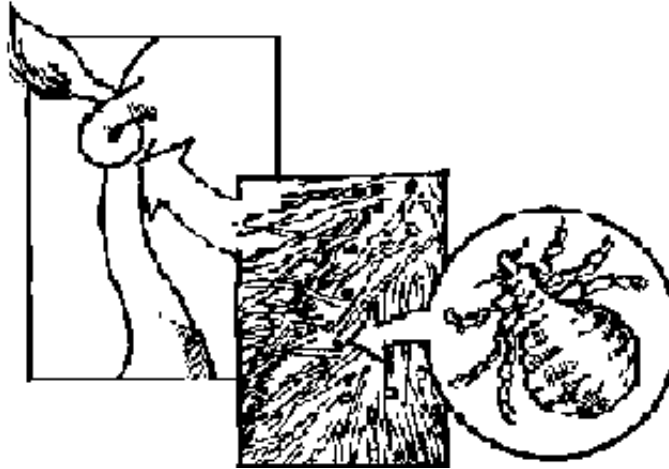
**Lice**

## **Symptoms**

- **Itching and scratching.**
- **Loss of hair due to rubbing and scratching.**
- **Lice can be seen moving around on the skin.**
- **Eggs can be seen attached to the hair.**

**Cause Presence of lice due to poor hygiene.**

## **Prevention**



**General sanitation is important to prevent lice infestation.**

- **Keep the pen and bedding clean.**
- **Bathe the animals regularly and keep them clean.**
- **Isolate the infested animal.**
- **Do not use the infested animal for breeding purposes.**

## **Treatment**

**Use any of the following treatments:**

- **Annona squamosa. Annona reticulata. Annona muricata.**

**Pound or grind 2 kg of ripe, air-dried seeds of any of the three plants above. Soak the ground seeds in 5 liters of water for 24 hours. Pour the water through a coarse cloth (such as mosquito netting) to remove the solids. Mix 1 part of the liquid with 5 parts of water before use. Use a brush or coconut husk to rub the solution on the whole body of the infected pig once a day. Treat the animal until all the lice and eggs are removed. For future use, cover and store the undiluted liquid in a cool,**

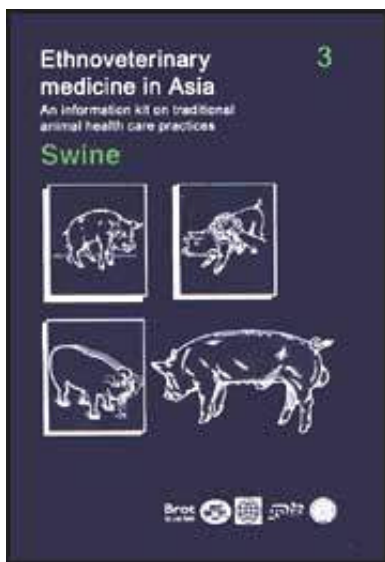


**dry place. It can be kept for up to 20 days. (India, Thailand. 1, 2, 3, 4, 5)**











**- Premna odorata Gliricidia septum.**
















**Pound or grind 2-3 small bundles of fresh leaves of either plant (this is enough for an average-sized adult pig). Rub the ground leaves over the whole body of the animal. Apply 2-3 times a day until all the lice and eggs are removed. (Philippines, 1, 2, 3, 4, 5)**

**- In severe cases of lice infestation, shave the animal to remove all hair, lice and eggs.**



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## **Infectious diseases**

**Infectious diseases are caused by microorganisms, such as viruses or bacteria. The treatments given in this section will alleviate the symptoms of the disease. They will not eliminate the organism that causes the disease.**

### **Enteric colibacillosis**

- Death is common.**
- Spread by contact with sick animals.**

## **Symptoms**

- **Profuse watery diarrhea, yellowish in color and may contain mucus.**
- **Dehydration.**
- **Shivering.**
- **Piglets are weak.**
- **Commonly found in nursing piglets and weanlings.**

## **Prevention**

- **Thoroughly wash sow before farrowing.**
- **Proper hygiene and sanitation.**
- **Make sure every piglet suckles colostrum from the sow.**
- **One to two weeks before farrowing, feed fecal material or intestines from dead piglets to the pregnant sow.**
- **Provide good housing, adequate bedding and source of heat to piglets.**

## **Treatment**

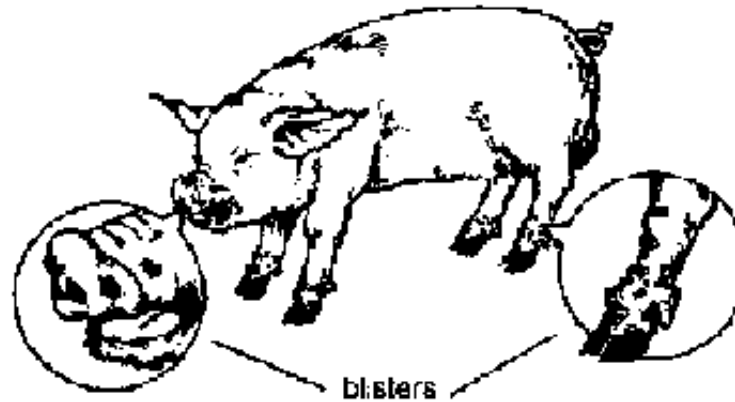
- **See Diarrhea and dehydration, page 9.**

## **Foot-and-mouth disease**

**Many young animals fall sick or die of this disease. It spreads by air or contact. People may serve as mechanical carriers.**

## Symptoms

- **Wound lesions or blisters in the mouth, snout, feet and udder.**
- **Lack of appetite.**
- **Fever.**
- **Salivation.**
- **Lameness or limping.**



- **Difficulty in walking due to pain caused by the lesions on the feet.**

## Prevention

- **Vaccinate regularly.**
- **Isolate sick animals and avoid contact with other animals.**
- **Disinfect pen area of infected animals.**

## Treatment

- **See Wounds.**

## Hog cholera

**This disease affects pigs of all ages. It appears suddenly and spreads rapidly through direct or indirect contacts with sick animals. It has a high death rate, sometimes reaching 100 percent in young piglets.**

### Symptoms

- **Weakness.**
- **Loss of appetite.**
- **High fever.**
- **Discharge from the eyes and nose.**
- **Constipation, followed by diarrhea (bad odor).**
- **Difficulty in breathing.**
- **Paralysis and convulsions.**



- **Pigs pile up or huddle together.**

### Prevention

- **Dead animals should be burned and buried with lime or wood ash.**
- **Cook kitchen scraps before feeding.**
- **Provide regular vaccination.**
- **Disinfect pen area of infected animals.**

## **Treatment**

**No indigenous treatment is recorded.**

## **Pasteurellois**

### **Symptoms**

- **Fever.**
- **Rapid breathing.**
- **Coughing.**
- **Discharge from the nose.**
- **Swaying walk as rear end is very weak.**
- **Bluish discoloration of skin, especially in ears, snout, abdomen and inside thighs.**

### **Prevention**

- **Avoid stress to the animal like crowding, heat, etc.**
- **Proper hygiene and sanitation.**

### **Treatment**

- **See Coughs and colds.**

## **Swine dysentery**

- **This disease affects all ages. It is especially common in animals weighing 60-70 kg.**
- **Spreads by contact with sick animals.**

## **Symptoms**

- **Mucus and blood appear in diarrhea.**
- **Alternating between constipation and diarrhea.**
- **Loss of appetite, with or without fever.**
- **Weakness and loss of weight.**
- **Dehydration.**

## **Prevention**

- **Avoid contact with infected animals.**
- **Proper hygiene and sanitation.**
- **Isolate infected animals.**
- **Prevent feces of infected animals from mixing with feed.**

## **Treatment**

- **See Diarrhea and dehydration.**

## **Swine erysipelas**

- **Mortality may be very high. Death may occur up to 6 days after the first sign of**

## **illness.**

- **The disease is spread through contact with sick animals.**

## **Symptoms**

- **Fever.**
- **Animals walk stiffly on their toes.**
- **Animals lie on their chest and abdomen.**
- **Animals lie separately instead of in groups.**
- **Purplish areas of discoloration in the ears, snout and abdomen.**
- **Diamond-shaped skin lesions all over the body, which may peel off in prolonged cases.**

## **Prevention**

- **Cook kitchen scraps before feeding. These may contain infected materials that can affect the health of the animals.**
- **Proper hygiene and sanitation.**
- **Isolate infected animals.**
- **In Northern Philippines, new animals which are introduced into communities are allowed to be reviewed by other members of the community to ensure that the animals are not diseased or do not possess undesirable characteristics. This can serve as an indigenous method of quarantine.**

## **Treatment**



**No indigenous treatment is recorded.**

## **Warning**

**Swine erysipelas can affect people; avoid or minimize contact with affected animals.**

## **Swine influenza**

- **Usually occurs in cold weather.**
- **Spread by air and contact.**

## **Symptoms**

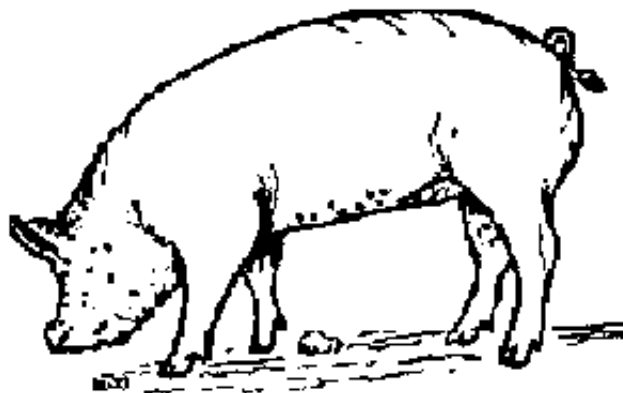
- **Difficulty in breathing.**
- **Animal is inactive.**
- **Fever.**
- **Coughing and discharge from the nose and eyes.**
- **Lack of appetite.**
- **Weakness.**

## **Prevention**

- **Keep animals away from damp conditions.**
- **Provide adequate housing and bedding, especially for piglets.**

## **Treatment**

- **See Coughs and colds, Lack of appetite and Fever.**



**Swine pox**

- **Occurs frequently in 3-6 week-old pigs, but all ages may be affected.**
- **Spreads through lice or by contact with skin blisters of affected animals.**

### **Symptoms**

- **Skin blisters or lesions.**
- **Small red areas on the face, ear, inner thighs and abdomen. These later develop into scabs.**
- **Lack of appetite.**
- **Mild fever.**

### **Prevention**

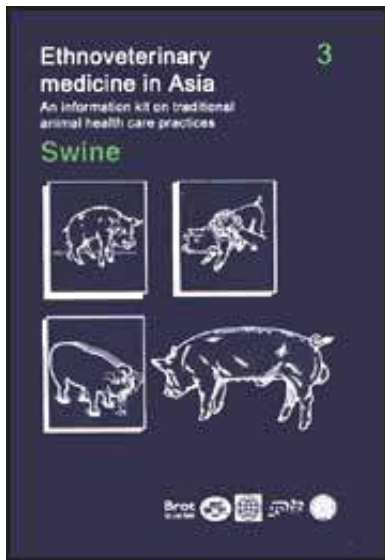
- **Vaccinate.**
- **Proper hygiene and sanitation.**
- **Eradicate lice and other biting insects (see Lice, page 29).**

## Treatment












**These treatments are to help heal the wounds only. They do not eliminate the organism that causes the disease.**














**- Prepare a decoction of 1 whole fresh turmeric plant (*Curcuma longa*) in 1 liter of water. Use a cloth to wash the whole body with the liquid.(India, Philippines, Sri Lanka, Thailand. 1, 2, 3, 4)**

**- See also additional treatments in Wounds, page 43.**



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-  **Internal parasites**

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-  **Scabies or mite infestation**
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## **Problems of the eye**



## **Problems of the eye**

### **Symptoms**

- **Eyelids are pink.**
- **Eyes are swollen, itchy and watery**
- **Animal keeps eyes closed.**
- **Eyes are covered with dried material.**
- **Animal tries to stay away from direct sunlight.**

### **Cause**

- **Bacteria, viral or systemic diseases.**
- **Object stuck in eye (such as dust, etc.)**

- **Vitamin A deficiency.**
- **Insects.**
- **Eye worms.**

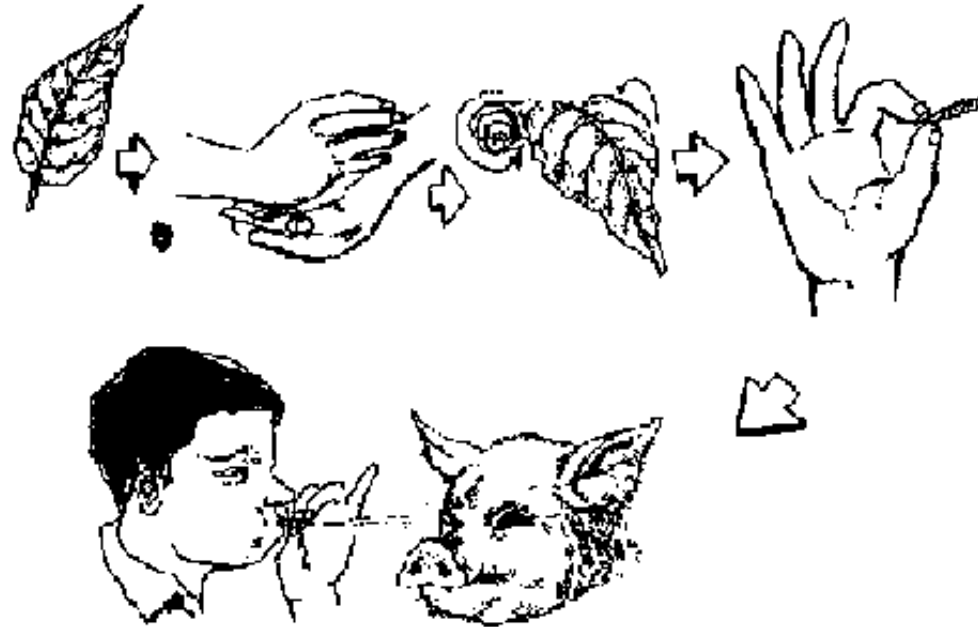
**Bacteria can be spread by direct contact with infected animals or by flies or other insects.**

### **Prevention**

- **Separate animals with eye problems from herd.**
- **Control flies and gnats by keeping the animals' surroundings clean.**
- **Feed green roughages as a source of Vitamin A.**

**Eye problems can affect animals of any age, any sex and during any season, but mostly during the dry season.**

### **Treatment**



**Use any of the following treatments:**

- **Burn and grind 1 pod of *Sterculia foetida*, 1 handful of snail shells and 1 thumb-size piece of red limestone. Grind 1/2 teaspoon of alum very fine. Mix the ashes and alum thoroughly. Blow the powder into the affected eyes—a light dusting each morning—until symptoms disappear. (Thailand. 1, 2, 3, 4)**
- **Boil about 500 g tender leaves of *Leptadenia reticulata* (corkswallow) in water. Feed the leaves and cooking water twice a day until symptoms disappear. (India. 1, 2, 3, 4, 5)**
- **Boil 1 kg of fresh *Morifolium* leaves in 3 liters of water until 2 liters remain. Strain and cool. Give 2 cups as a drench to the affected animal 3 times for 3 days. Used in central and northern Cambodia to treat**

**conjunctivitis, coughs and colds.(Cambodia. 1, 2, 3, 4)**

**- Bruise a fresh leaf of *Annona squamosa* (custard apple) and roll it like a cigarette between the thumb and forefinger. At a distance of about 10 cm from the eye of the animal, blow through the rolled leaf. Repeat each morning until symptoms disappear. Used in Cambodia to treat keratitis, the inflammation of the cornea. (Cambodia. 1, 2, 3, 4)**

**Any of the following treatments can be used as an eye wash:**

**- Rinse affected eyes with milk each day until symptoms disappear. (Cambodia, India. 1, 2, 3, 4)**

**- Rinse affected eyes each day with sea water until symptoms disappear. Instead of sea water, you can dissolve 1 flat teaspoon of salt in 1 liter of water.(India, 1, 2, 3, 4)**

**- Make an infusion using 1 teaspoon of tea leaves and 1 cup (250 ml) of water. Let stand overnight.. Strain the tea and rinse the affected animal's eyes each day until symptoms disappear (India. 1, 2, 3, 4)**

**- Pound and squeeze the juice from 2 teaspoons (10 g) of fresh ginger rhizome and leave it overnight. Rinse the affected eyes in the corning. Repeat the treatment for 23 days until the animal is cured.(Northern India. 1, 2, 4)**

**- Boil 3 leaves of betel (*Piper betle*) in 3 liters of water until 2 liters remain. Strain and cool. Rinse affected eyes each day until symptoms disappear.**

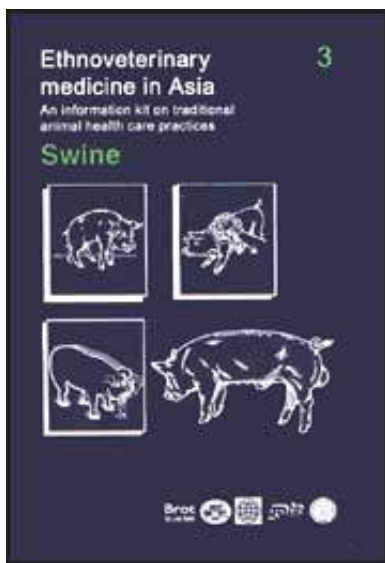


## **(Cambodia, Thailand. 1, 2, 3, 4)**

**- Rinse affected eyes with coconut water each day until the animal is cured. (Philippines, Thailand. 1, 2, 3, 4)**
















**- Squeeze 1-2 drops of juice from the fleshy seeds of pomegranate (*Punica granatum*) fruit directly into the eyes of the affected animal. Repeat this 3 times a day for 3 days. (Thailand. 1, 2, 3, 4, 5)**

**- Make a powder from dried leaves and stems of ophthalmic burberry (*Berberis aristata*). Boil 1 teaspoon of the powder in 1 glass of water, strain and cool. Drop in infected eyes 3 times a day for 7 days. (India, 1, 2, 3, 5)**



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## Wounds



## Wounds

**Wounds can be caused by mechanical injury and animal bites. They may become infected by bacteria.**

### Prevention

**- Keep the housing free of sharp objects.**

### Treatment

**Use any of the following treatments:**

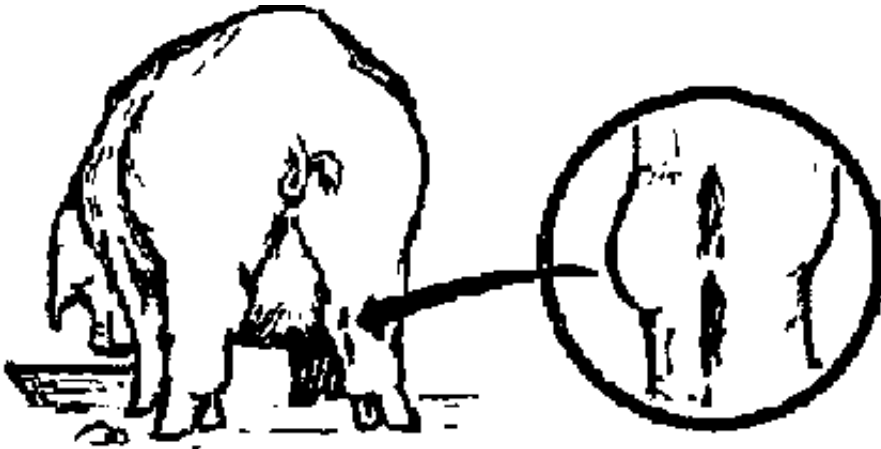


## For abscesses

- **Boil whole plant of *Spondias pinnata* for 10-15 minutes. Gently rub the decoction onto area around the wound.(Philippines, Thailand. 1, 2, 3, 4)**
- **Boil the skin of a python until the oil is extracted. Let it set for about 1 hour until it becomes waxy. Then apply the decoction to the abscess to remove the pus.(Cambodia, Laos, Thailand. 1, 2, 3, 4, 5)**

### **To stop bleeding**

- **Pound the whole plant of *Chromolaena odorata* and squeeze extract. Apply as poultice until the bleeding stops. (Philippines. 1, 2, 3, 4)**
- **Grind 5-10 upper leaflets of *Eupatorium odoratum* and mix with 1 teaspoon of salt (or urine). Apply as a poultice to the wound.(Cambodia, Laos, Thailand. 1, 2, 3, 4)**
- **Mix *Eupatorium odoratum* upper leaflets with alum and apply as a poultice to dry a wound. (Thailand, 1, 2, 3, 4)**



- Mix 1 part brown sugar with 1 part powdered limestone. Apply as a poultice until the bleeding stops. See Udder infection, page 69.

**For oozing wounds (as astringent or disinfectant)**

- Pound leaves of *Chromolaena odorata* and squeeze the extract. Mix 1 part water with 1 part extract. Gently apply to the wound as astringent. (Philippines. 1, 2, 3, 4, 5)

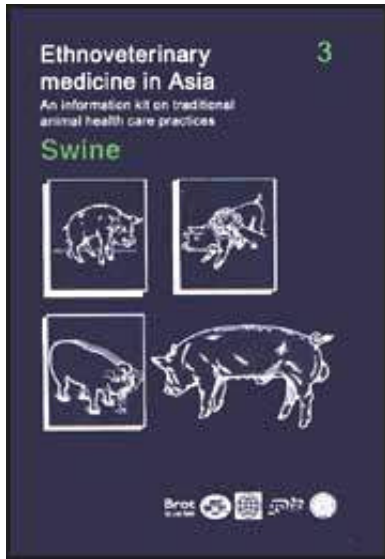
- Decoctions can also be made from any of these ingredients:

- banana leaves.
- neem (*Azadirachta indica*) leaves.
- guava (*Psidium gunjava*) leaves.
- turmeric (*Curcuma longa*) rhizome.
- sandalwood (*Santalum album*) paste.


















**(See Wounds in Ruminants for dosage details.)**








## For castration wounds

See Treating castration wounds in General information.

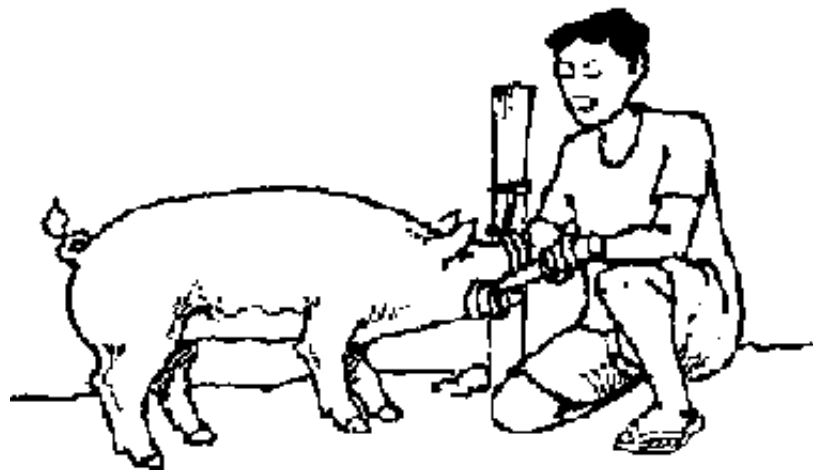


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## Sprains



**Sprains**

## Symptoms

- **Animal usually lying on its side in a corner of the pen.**
- **Limping.**
- **Affected area is swollen, warm and sensitive to touch.**

**Sprains are common in gestating animals, animals that are overfed and in Daland and Landrace breeds. It is a primary concern in breeding or other valuable animals, especially gilts being bred for the first time.**

## **Causes**

**The following conditions may cause the animal to slip and suffer a sprain.**

- Overfeeding, making the animal heavy.**
- Uneven ground of the pen.**
- Use of large boars for breeding gilts.**

## **Prevention**

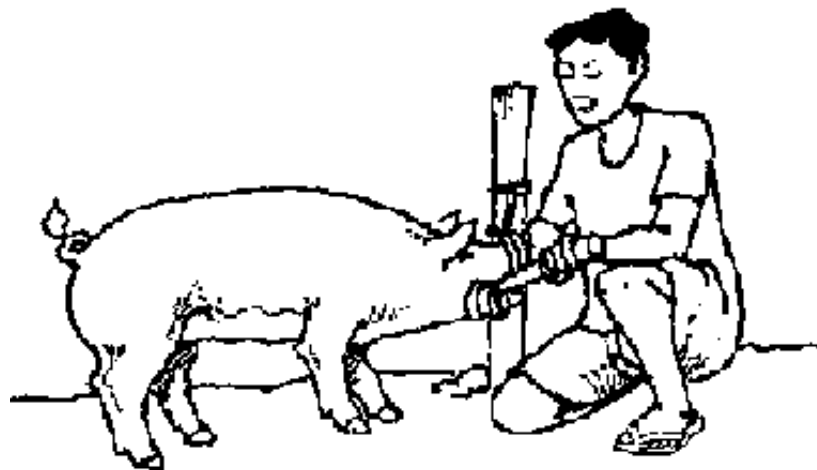
- Level the floor of the pen.**
- Provide ample space for the animal.**
- Avoid smooth, slippery flooring.**
- Prevent animals from becoming too heavy (especially breeding animals).**
- Treatment**

**Use any of the following treatments to sedate the pig, so the animal will not move, thus allowing the sprain to heal. If the sprain has not improved within 1 week, consider calling a professional (local expert, respected healer or veterinarian).**

- Boil a handful of mature, air-dried *Gliricidia septum* leaves, bark or roots in 1 liter of water for 15-20 minutes. Divide the resulting liquid into 3 parts. Give 1 part each day for 3 days as a drench.  
(Philippines. 1, 2, 3, 4, 5)**



**- Boil a handful of air-dried, mature Mimosa pudica leaves, bark or roots in 1 liter water for 15-20 minutes. Strain and divide the resulting liquid into 3 doses. Give 1 dose per day as a drench. Caution Mimosa pudica contains mimosine, which can poison the animal; use only the recommended amount.(Philippines. 1, 2, 3, 4, 5, 6)**



**- Soak overnight a handful of mature, air-dried Glycine max (soybeans) in 500 ml of water. On the following day, strain and give the liquid as a drench.(Philippines. 1, 2, 3, 4, 5)**

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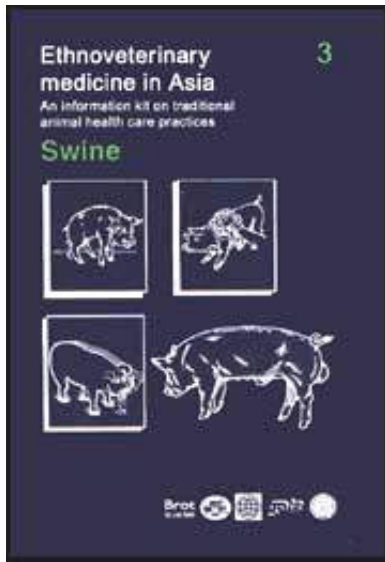
 **(introduction...)**




















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## Housing

**Pigs need protection from extreme cold and heat. They are housed in many different ways, depending upon the local practices.**

**Low-cost housing materials** If possible, pig pens should be built on higher ground, preferably near water sources. Orient the house in an eastwest direction. This orientation keeps the floor of the pen dry by allowing the sun to dry the pen floor as the sun crosses the sky during the day.

### **Roofing materials**

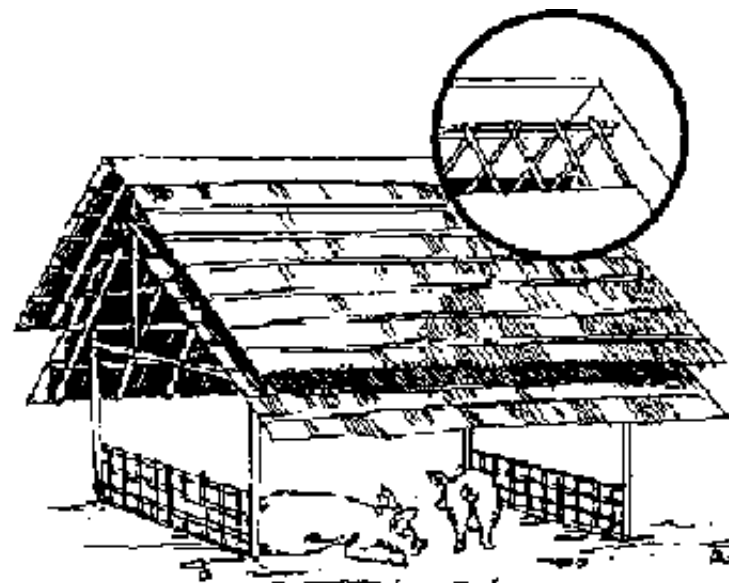
- **Bamboo.**
- **Coconut leaves.**
- **Wooden tiles (layered).**
- **Cogon (*Imperata cylindrica*) grass.**
- **Palmyra (*Borassus flabellifer*) palm leaves.**

### **Sidings/wall materials**

- **Bamboo.**
- **Wood planks.**
- **Stones.**
- **Nipa (*Nypa fruticans*) palm leaves.**
- **Old galvanized iron sheets.**
- **Betel nut leaves.**
- **Other locally available thatching materials.**

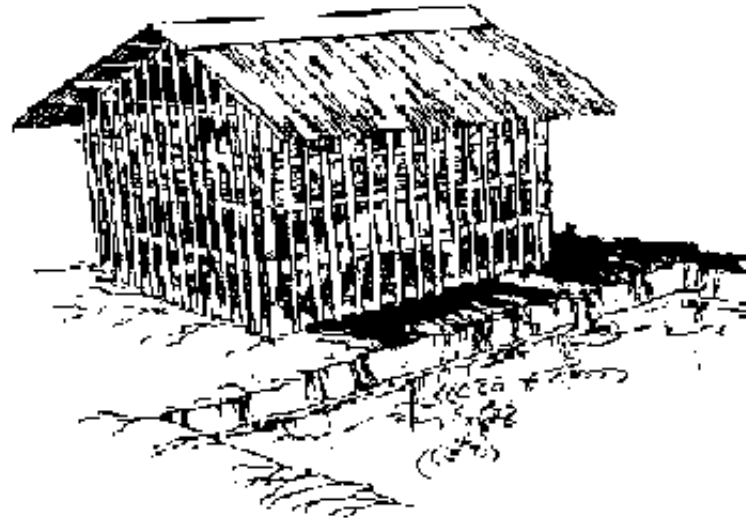


**Shelter your pigs under storage sheds. This cuts construction costs and makes good use of space.**

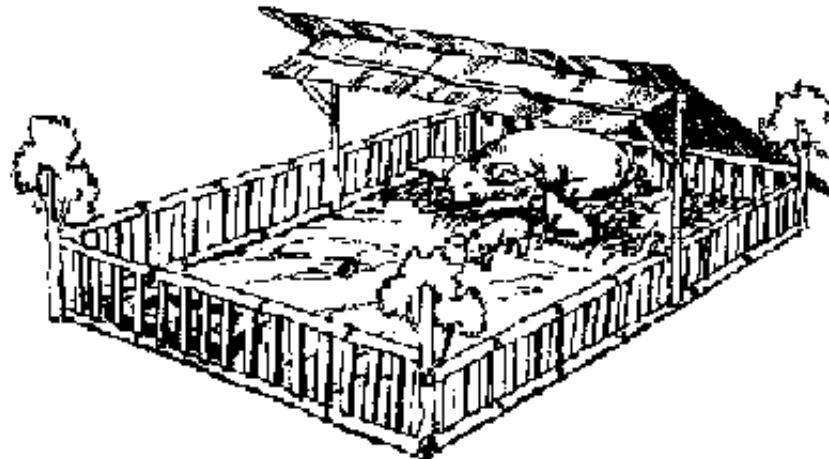


**In Thailand, some farmers build open shelters with special ventilated roofs.**

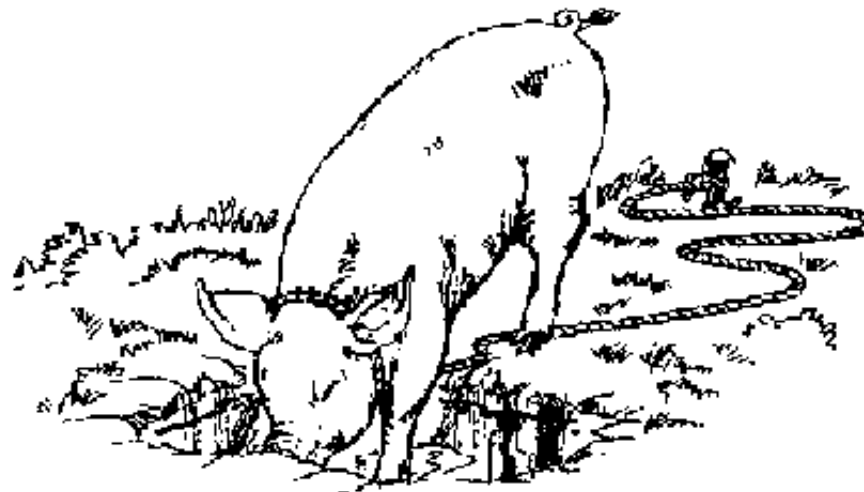
**A space separates the inner roof, which has an open peak, from the outer roof**



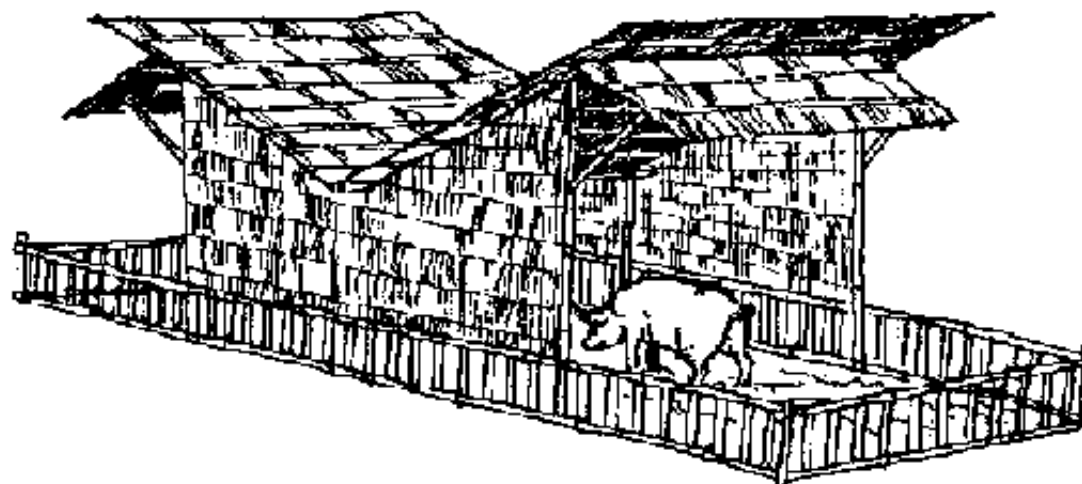
**You can house pigs under your poultry. Pigs will eat chicken manure and, if you have a nearby pond, your fish will eat any nutritious runoff.**



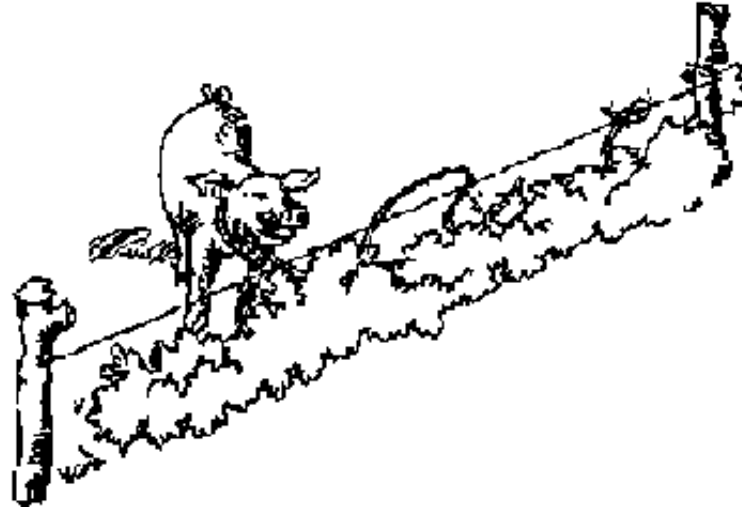
**Farmers in some parts of the Philippines build open pens with thatched bamboo shades. The pigs have a cool place to rest and an open area in which to eat, defecate and roam.**



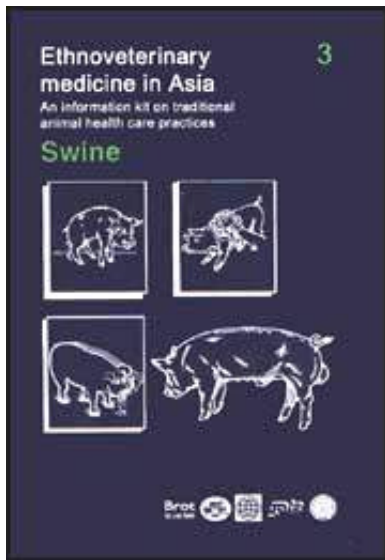
**Try tethering your pigs to a stake, within reach of drinking water and a cool wallowing hole.**



**In Thailand, farmers build back-to-back shelters of thatched bamboo and fencing.**



**To give your pig room to roam, tether it on a wire or cord stretched between two wooden stakes. When the forage is eaten away, the stakes can be moved.**


















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-  **Poisoning**
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## **Collaborating organizations**

**Bread for the World**

**P.O. Box 10 11 42**

**D-70010 Stuttgart, Germany**

**Heifer Project**

**INTERNATIONAL**

**1015 South Louisiana P.O. Box 808 Little Rock, Arkansas 72203, U.S.A.**



## THE WORLD BANK

**Small Grants Program 1818 H Street, N.W. Washington, D.C. 20433 U.S.A.  
German Appropriate**

### Technology Exchange

**Dag-Hammarskjold-Weg 1**

**P.O. Box 5180**

**65726 Eschborn, Germany**

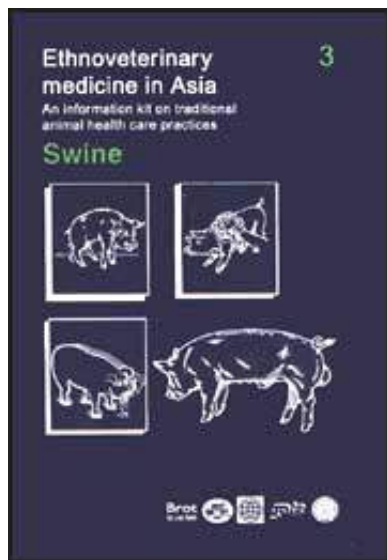
### International Institute of

**Rural Reconstruction**









**Y.C. James Yen Center**

















**Silang, Cavite 4118**

**Philippines**



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## Feeding

**Good feed is necessary for growth, body maintenance and the production of meat and milk.**

**Stores sell pre-mixed rations that have the right amounts of ingredients for pigs of various ages. However, these pre-mixed feeds can be expensive. Instead, you can**

**use locally available feeds that are less expensive, but can be nutritionally complete when properly prepared. In fact, pigs can be fed well, using only kitchen scraps from a family's household.**

**The nutritional needs of pigs can be divided into six categories or classes. These are water, carbohydrates, fats, proteins, vitamins and minerals.**

## **Water**

**Pigs should have free and convenient access to water. The amount required varies with age, type of feed and environmental temperature. Normally, pigs will consume 25 kg of water per kg of dry feed. The range may be from 7 to 20 liters of water per 100 kg of body weight daily.**

## **Water sources**

- Banana trunks.**
- Leaves of Ipomoea batatas, Ipomoea aquatica.**
- Rind of watermelon (Citrullus lanatus).**

## **Low-cost, locally available feeds**

## **Protein-rich feeds**

**Help an animal grow faster, give more milk. Also give to pregnant animals.**

## **Plant sources**

- **Grated coconuts.**
- **Leucaena leucocephala leaves.**
- **Gliricidia septum leaves.**
- **Beans.**
- **Moringa oleifera leaves.**
- **Pigeonpea (Cajanus cajan).**
- **Groundnut cake (leftover after oil extraction).**
- **Seed skins of mung bean sprouts.**
- **Waste of soybean cake (liquid).**
- **Rice bran.**

### **Animal sources**

- **Fish rejects.**
- **Frogs.**
- **Shrimps.**
- **Snails.**
- **Earthworms.**
- **Maggots, grubs, other insects.**
- **Crabs (from the rice field).**

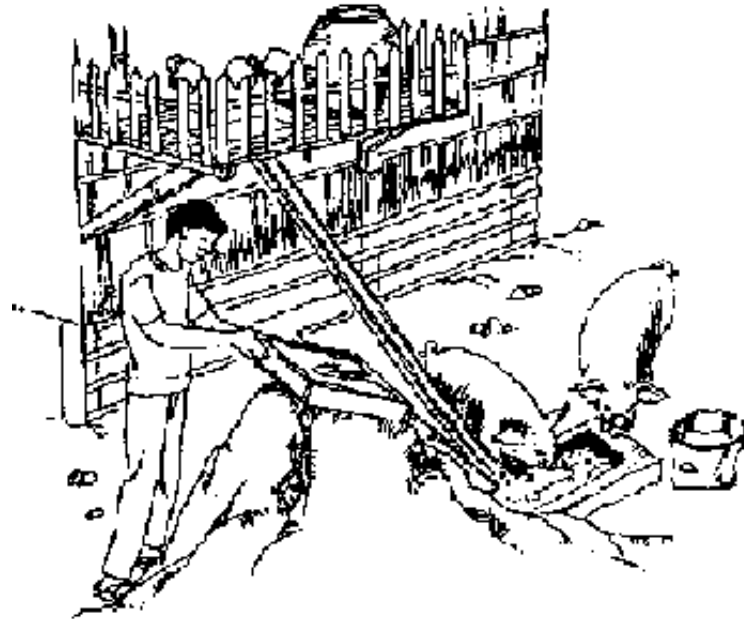
### **Carbohydrate sources**

<b>Scientific name</b>	<b>Common name</b>	<b>Parts used</b>
Colocasia esculenta	Taro	Corm
Dioscorea alata	Greater yam	Tuber
Dioscorea esculenta	Lesser yam	Tuber

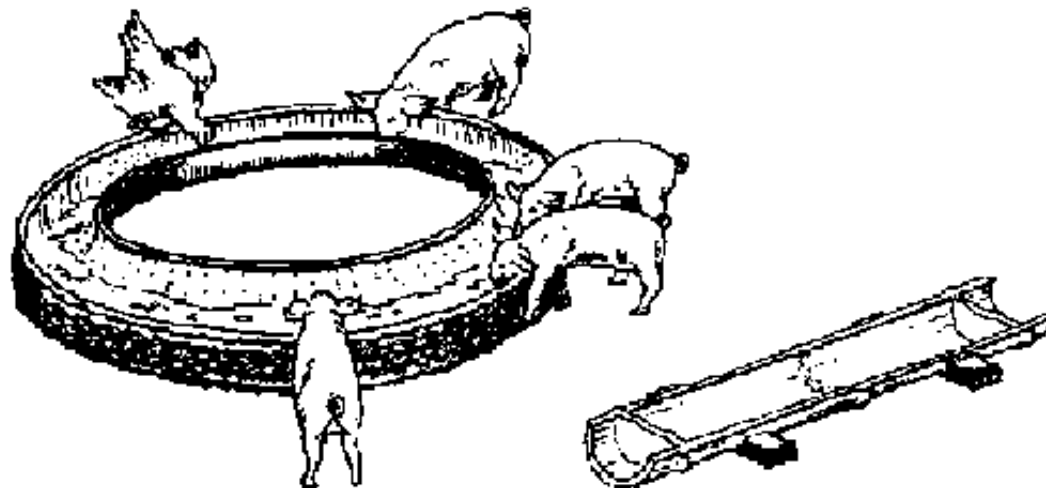
Ipomoea batatas	Sweet potato	Root
Manihot esculenta	Cassava	Root
Maranta arudinacea	Arrowroot	Root
Oryza sativa	Rice	Bran
Zea mays	Maize	Grain

## **Vitamin and mineral sources**

- **Pounded bones.**
- **Leaves of Moringa oleifera.**
- **Salt.**
- **Molasses.**
- **Fruit rejects/peelings.**
- **Ipomaea aquatica.**
- **Water hyacinth (Eichhornia crassipes).**
- **Green and leaf; vegetables stables.**

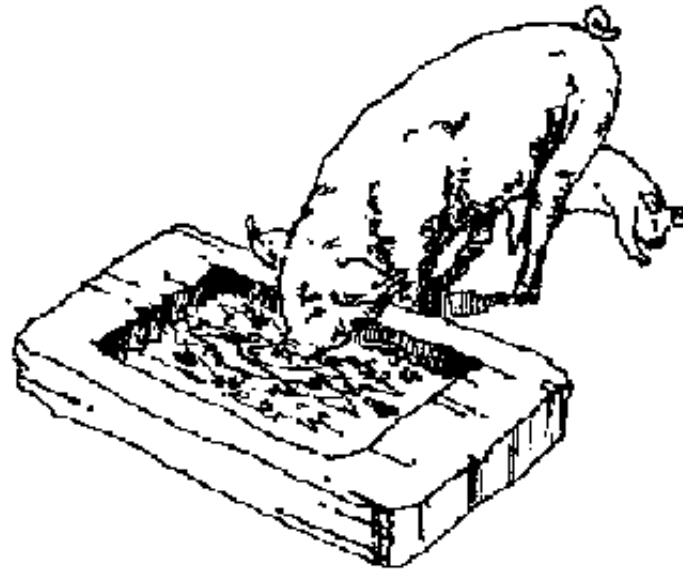


**Pigs will eat insects and kitchen waste. Some farmers in the Philippines trap termites and feed them to their pigs. A wooden box is left on top of a termite mound. From time to time termites are shaken out of the box directly into the pig trough. A split bamboo duct can be used to send kitchen waste—first rinse only, without soap—to your pig trough.**



**A piglet feeding trough can be made by cutting a car tire in half along its circumference.**

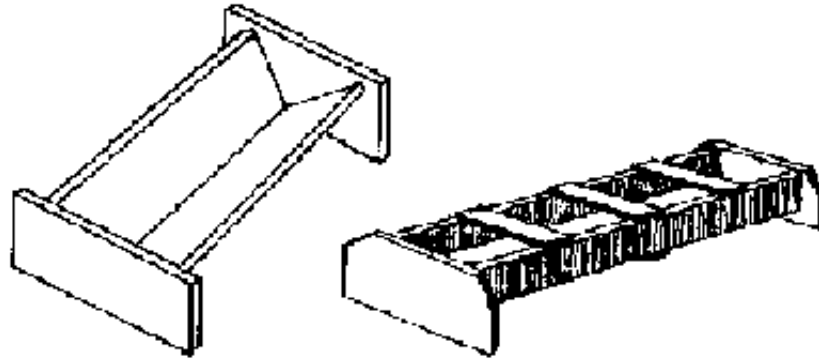
**Or, a piglet feeding trough can be made from split bamboo.**



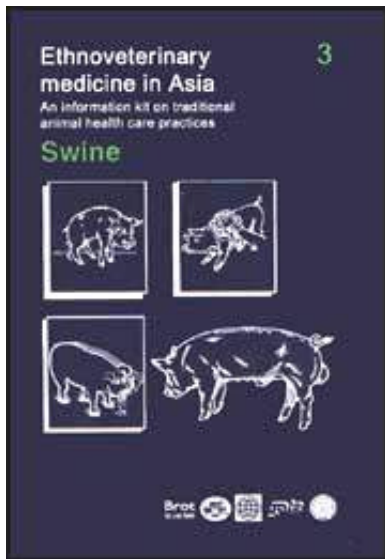
**A good trough can be made by hollowing out a section of log.**














## Old cooking pots make good feeding troughs.
















A variety of feeding troughs can be made easily with lumber.



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	<b>Pork tapeworm</b>
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	<b>Housing</b>
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 →	<b>Breeding</b>
	<b>Care of newborn</b>
	<b>Udder infection</b>
	<b>Anemia in piglets</b>

## **Breeding**

### **Heat detection**

#### **Common signs of heat**

- The sow's vulva is flushed (reddish) and swollen two or three days before standing heat.**
- The vaginal discharge is watery.**

- **The vaginal discharge is watery.**
- **The sow is restless.**
- **As the sow comes into heat, she will mount other pigs or will allow other pigs to mount her. She will move away unless she is in full "standing heat".**
- **The sow stands still when she feels pressure on her back.**

**Heat lasts about 24 hours. After that, the sow will not stand still for the boar. Some sows bleed from their vulva following a heat Period.**



## How to induce heat

**After farrowing, a sow may be slow to come into heat Here are a few methods used by farmers to induce heat.**

- Gently stroke the sow's vagina with a freshly cut papaya stalk every morning for 3-5 days.**
- Spray the sow's (or gilt's) pen with boar urine every morning for 3-5 days.**
- Grind 1 kg of fresh or dried lotus (Semen nelumbinis) seeds. Mix with 20 kg of dry feed. Feed to the sow twice a day for 5-7 days.**
- Bring the sow to the boar, or place the sow in a pen next to the boar.**

### Mating

**During her 24-hour heat period, a sow should be mated 2 times at approximately 12-hour intervals. Do not mate animals during the hot time of day.**



**Assistance**

**Young boars may need assistance in lining up their mate. Make sure your hands and wrists are clean and your fingernails are trimmed.**

**Pigs mate slowly. The boar may take a minute or more to reach the point of ejaculation.**

**To improve conception**

**- Crush 1 kg of Semen nelumbinis (lotus) seed and mix with the sow's feed. Give 2 times per day for 3-5 days.**

**- Fat sows may have difficulty conceiving. Therefore, if a sow is too fat, reduce her feed.**

## **Reasons for not conceiving**

- **The sow is too fat.**
- **It is the animal's first heat cycle.**
- **The boar is too young.**
- **The boar is overworked (used for more than five matings a week).**

## **Pregnancy detection**

**If a sow does not show signs of heat three weeks after mating, then it is very likely that she is pregnant.**

## **Care during pregnancy**

- **Separate pregnant sows from other animals.**
- **Protect pregnant sows from high temperatures.**
- **Do not transport a pregnant sow.**
- **Until the final stages of pregnancy, exercise is good for pregnant sows. Give the sow space to walk in.**

## **Feed for pregnant sows**

- **Provide a good supply of clean drinking water.**
- **If you are feeding a concentrate ration, gradually reduce the ration one week before farrowing.**

- **Make green forage available to the pregnant sow.**
- **Throughout the pregnancy, feed pregnant sows rice water (the water left after cooking rice).  
(Thailand. 1, 2)**
- **Add *Amaranthus gracilis* and *Amaranthus spinosus* to the pregnant sow's feed. Feed a ration of 2 percent of the sow's body weight per day throughout pregnancy.(Thailand. 1, 2, 3, 4)**
- **Feed the fresh leaves and stems of water spinach or swamp cabbage (*Ipomoea aquatica*) daily to pregnant sows. (Thailand. 1, 2, 3, 4)**
- **Feed sows a soup made of rice and one eel once each day for 7 days before birth. This is said to make farrowing easier. (Cambodia. 1, 2, 3, 4)**
- **Feed 3 to 5 lombrice (round earthworms) every day throughout pregnancy. Earthworms are a good source of protein. Some farmers also think that the earthworm's long, thin shape helps ease the birthing process. (Cambodia. 1, 2, 3, 4)**
- **If the sow is constipated during pregnancy, feed large amounts of rice bran or sweet potato leaves as a laxative. See Constipation, page 13.(Philippines. 1, 2, 3, 4)**

## **Farrowing**

**A sow needs a special place for farrowing (birthing). One week before the animal**

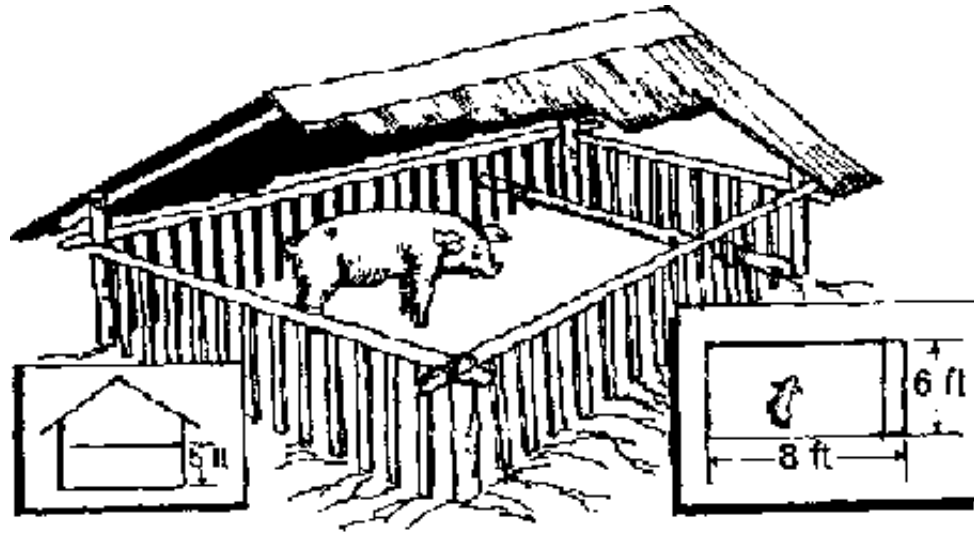
**is expected to farrow, put it in the farrowing pen so it can adjust to the area. Provide a separate farrowing pen for each animal.**

**A farrowing pen should be 2 m by 2.5 m in size. The pen should have piglet guard rails along the sides. These can be planks or poles 20 to 25 cm off the floor, reaching about 30 cm from the walls. Guard rails will help prevent piglets from being crushed by the sow.**

- Disinfect the farrowing each time before it is used. To disinfect, pour boiling water over the entire pen.**
- Allow proper ventilation in the pen, but make sure there are no drafts or winds.**
- Keep the birthing area clean and dry.**
- Provide sufficient drinking water.**
- Scrub the whole body of the sow with clean water and a clean cloth. One day before farrowing, brush the animal to remove external parasites. This will help protect the piglets from parasites.**

**If no special pen is provided, the sow will follow her mothering instincts and prepare her own farrowing area. She will dig a shallow pit in the ground as a farrowing place.**

**In tribal areas of northern Thailand, it is seen as bad luck for a sow to farrow inside the village. In such cases, the sow and piglets are killed. To avoid this, sows are encouraged to farrow in an area outside the village.**



**Pigs should have a place to go where they are protected from the elements. A simple open shelter can be constructed from sticks and thatch.**

### **Bedding materials commonly used**

- **Chopped hay or straw.**
- **Coarse sawdust.**
- **Dried banana leaves.**
- **Jute or burlap sacks.**
- **Newspaper.**

**Birthing** In a normal birth, piglets begin arriving within 30 minutes of the first labor signs. Normally, they are born at intervals of 10 to 15 minutes. All piglets are usually born within 3 hours. The placenta (afterbirth) should follow within 20 to 30 minutes.

### **Symptoms of birthing difficulties**



- **The sow makes an effort to expel the piglets, but no piglet will come out.**

## **Cause**

- **Hard stool is putting pressure on the birth canal.**
- **Piglet is in an abnormal position.**
- **Sow is too fat and has a narrow birth canal.**

**Prevention Ensuring that the animal is in good condition is the best way to avoid problems at farrowing time. See the section on Feed for pregnant sows, page 59.**

## **What to do if a piglet is stuck**

**If a piglet is stuck in the birth canal, you will have to help. First, trim your fingernails, wash your hands and arms well with soap and apply a lubricant of vegetable oil. Gently slide your hand into the sow's vagina and feel for the piglet.**

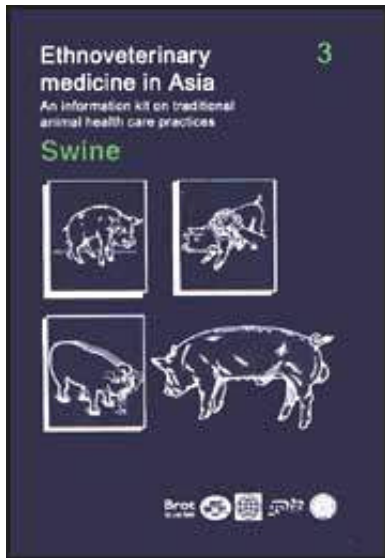
- **If it is a large piglet, pull it gently but firmly in time with the sow's pushing.**
- **If the piglet is stuck sideways, push it back in and try to turn it so it comes out straight (head first or hind first).**
- **If you cannot correct the problem, call a professional (a local expert, respected healer or veterinarian).**

## **Retained placenta**











**Sometimes, the placenta will stay inside the sow after farrowing. If this happens**















**you can try one of the simple treatments below. See also the section on Pregnancy and birthing in Ruminants for more remedies.**

- Grind together 7 dry garlic cloves, 7 dry black pepper seeds, 7 slices (5 mm thick) of fresh ginger rhizome and 7 upper leaflets of 7 cotton plants. Grind the ingredients together in 1/2 cup of whisky (do not strain) and give as a drench. If 1 drench does not work, repeat the treatment.(Northern Thailand. 1, 2, 3, 4)**
- Grind 3 leaves of betel (Piper betle) and mix with 1 cup of water. Strain and give as a drench 1 time. If 1 drench does not produce results, drench again at 2 hour intervals.(Cambodia. 1, 2, 3, 4)**



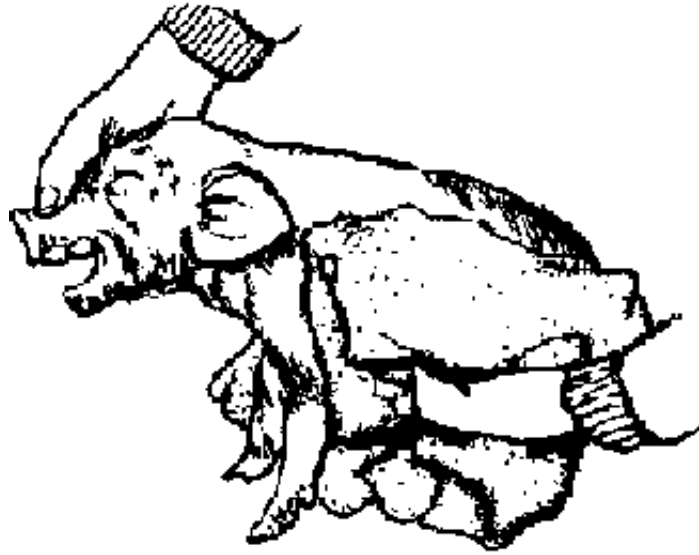
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## Care of newborn



### Care of newborn

**At birth, piglets are wet and covered in a thin mucous membrane. This membrane will dry and disappear very quickly. Most piglets will not need special attention from the farmer. However, sometimes they need help.**

#### **Newborn piglets**

**A newborn piglet may appear lifeless. Here are some methods for reviving piglets:**

- Clear the piglet's nose and mouth of mucus.**
- Gently shake the piglet with head down to drain the mucus.**
- Briskly rub a cloth up and down the piglet's back.**
- Gently blow air into the piglet's nose; or hold the piglet on its back and gently**

**and rhythmically pump the back legs forward and back until the piglet breathes.**

**- Dip the piglet into a bucket of water (this might shock it to life) and then rub it dry with a cloth.**

**- If a piglet is listless, cover it with a large cooking pot. This protects the piglet from drafts and helps the piglet retain its body heat. (Cambodia)**

**When the piglet is born, the umbilical cord will hang from the animal. Within 2-3 days, it will dry and fall off. (Note: it is recommended to treat the navel by applying iodine, wood ash or powdered limestone.)**

### **Keeping piglets warm**

**It is very important to keep piglets warm. Here are some techniques for doing this:**

- Rub the piglets with vegetable oil.**
- Put newborn piglets in a box.**
- Provide a heating lamp (if electricity is available).**
- Use chopped, dry rice straw or dried banana leaves for bedding.**
- Use empty jute sacks as bedding.**
- Burn rice husks, straw or charcoal in a metal bucket to supply warmth.**

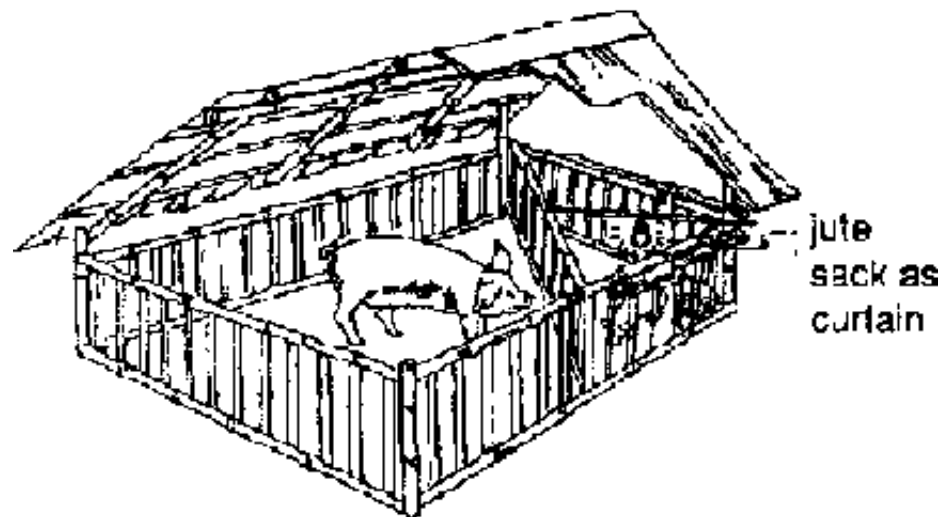
### **Caution**

**- Long rice straw might tangle the piglets, causing them to fall under the sow and be crushed.**

**- Care must be taken to ensure that the bucket is properly placed so pigs are not burned.**

**Build a piglet warm-box from sheets of wood, making sure to leave an exit and a portion of the roof open. To provide warmth, hang a light bulb over the roof opening.**

**A piglet shelter can be constructed from wood and jute. Build a low, rectangular frame of wood and wrap it tight with jute.**



### **Avoiding crushing newborn piglets**

**Newborn piglets can easily be crushed by their mother, until they learn to get out from under her when she lies down. The farrowing area should have barriers to prevent the sow from crushing the piglets. After the first two weeks, the barriers can be removed.**

### **Getting piglets to suckle**

**Sows develop their own styles of nursing. Sometimes, they stand up; sometimes they lie on their side. After a day or two, each piglet will establish ownership of a teat. In a small litter, piglets might share the extra teats. Weaker piglets get the hind teats. A sow might be able to raise more piglets than she has teats. But generally, it is better to take extra piglets away and place them with another recently farrowed sow (or raise the extra piglets on cow's milk).**

**Often, a sow will drive off or kill piglets that are not her own, but she can be fooled into accepting foster piglets. Rub the piglets and the nose of the foster sow with the urine of the foster sow or with vinegar. Also, keep the foster piglets in a box with the natural piglets of the sow so their smells will blend.**

## **Reminder**

**Make sure the piglets get some colostrum (the first milk) from their natural mother before moving them to a foster mother**



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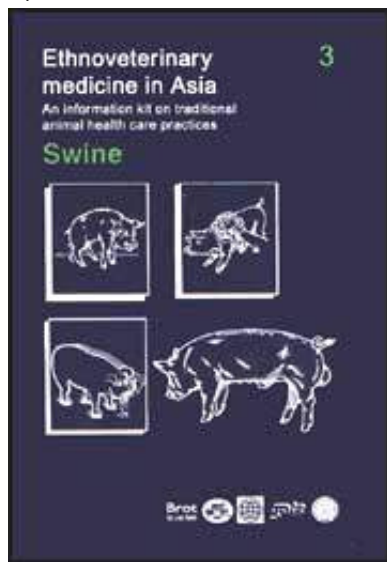
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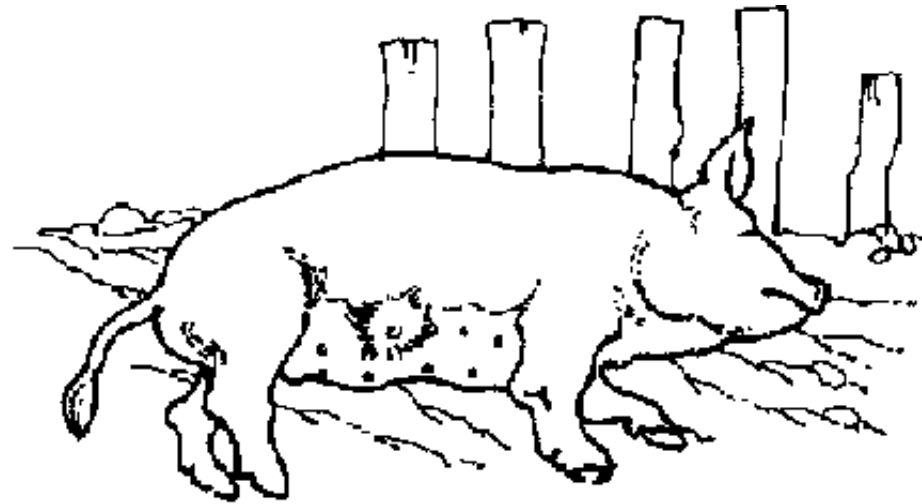
 **Fever**



-  **Coughs and colds**
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-  **Udder infection**
-  **Anemia in piglets**

## Udder infection





**Udder infection (A)**



**Udder infection (B)**

## Symptoms

- **Reddening of the udder.**
- **Swelling of the udder.**
- **The infected udder is warmer to touch than healthy udders.**
- **Wounds on the udder. Fever.**
- **Absence or reduction of milk in affected udder.**

## **Cause**

**Udder infections are caused by bacteria, wounds caused by the milk teeth of baby pigs, insect bites and abscesses.**

## **Prevention**

- **Provide adequate bedding.**
- **Keep the pig pen clean.**
- **Clip milk teeth of baby pigs.**

## **Treatment**

**Before any treatment, wash the udder with soap or potassium permanganate (if possible) and clean lukewarm water. Do not allow the litter to suck milk from an infected sow. Remove and discard milk from the infected teat.**

## **Allowing wounds to heal**

- **Separate sow from piglets and reduce their access to teats (allow a few piglets to suckle at a time).**

- **Begin hand-feeding the baby piglets.**
- **Give piglets to a lactating foster mother.**

## **Wound treatments**

**Make a poultice from any of the remedies below and apply to the infected udder once a day until the redness disappears or the wound heals. Use either a strip of banana stalk or strips from old clothes to hold the poultice.**

- **Pound and extract the juice from 5-10 fresh leaves of betel (*Piper belle*). Mix it with 5-10 chopped fresh *Psidium guajava* (guava) leaves and 5-10 chopped, fresh tobacco leaves. (Philippines. 1, 2, 3)**
- **Pound 5-10 fresh leaves of *Ficus minahassae*. Extract and mix with 3-5 teaspoons of coconut oil. (Philippines. 1, 2, 3)**
- **Pound 5-10 fresh *Psidium guajava* (guava) leaves and mix the extract with 3-5 chopped fresh leaves of *Stachyta jamaicensis*. (Philippines. 1, 2, 3)**

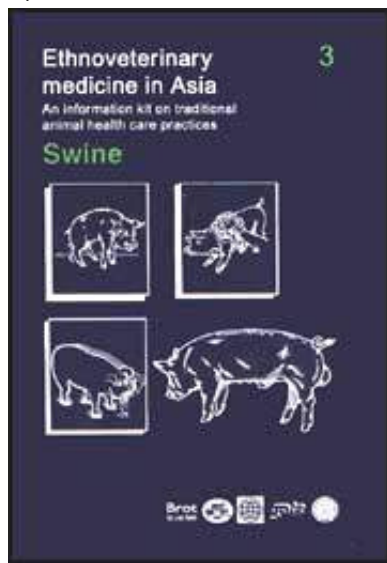
**These treatments are widely practiced by farmers in western Leyte, Philippines.**
























**Note: For further treatments, see Wounds.**



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  **Anemia in piglets****Anemia in piglets****Symptoms**

- **Gums, tongue or inside of eyelids are pale (normal color is pink).**
- **Loss of appetite.**
- **Piglet is weak and inactive.**
- **Shivering.**

**If left untreated, the disease worsens. The piglet's resistance to infections weakens. It can easily catch more serious diseases such as pneumonia and diarrhea. (See Coughs and colds, page 7 and Diarrhea and dehydration, page 9.) Big piglets are usually affected first.**

**Cause**

**Nutritional anemia can occur at any time of a pig's life. However, anemia caused by iron deficiency usually occurs in week-old baby pigs that are kept in pens without access to soil.**

**Newborn pigs are born with only a small supply of iron and they eat little dry feed before 3-4 weeks of age. It is usually necessary to administer iron to piglets. Milk, which is extremely low in iron, is the major or only part of the diet of these pigs.**

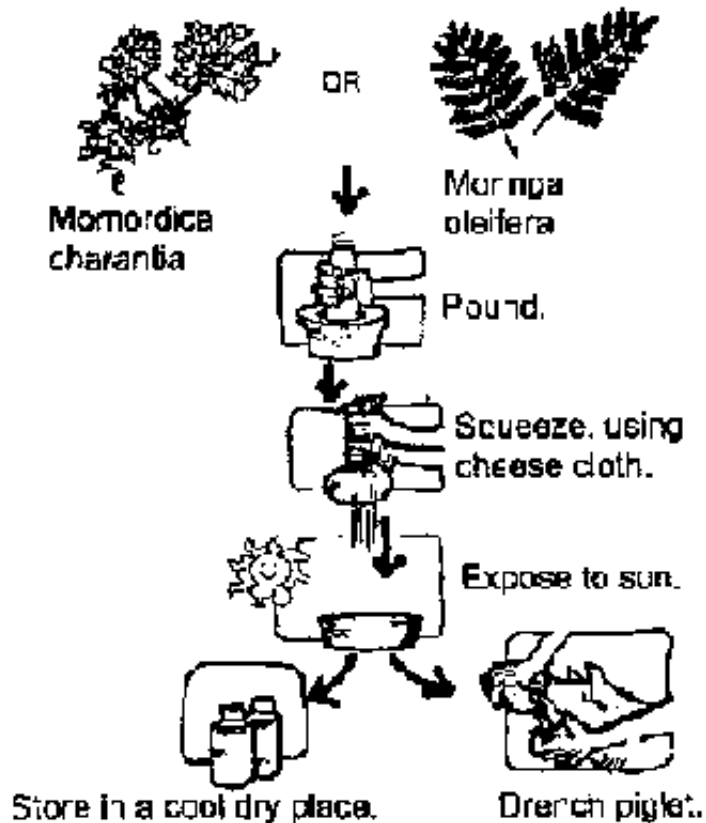
**Prevention and treatment**

**Anemia in newborn pigs can be prevented by providing extra iron. Some people recommend providing red soil to newborn pigs to allow them to eat the soil as a source of iron. Some plants that are rich in iron are commonly used to prevent and treat anemia.**

**- Grind 40 g of fresh leaves of *Momordica charantia* or *Moringa oleifera* with 5-10 ml of water. Handsqueeze the ground leaves to get the juice. Pass the juice through a cheesecloth. Place the extracts in an uncovered container and concentrate them by placing the container in direct sunlight or inside a covered box. Give as a drench to the piglet in one dose each during the 4th and 5th day after birth.**

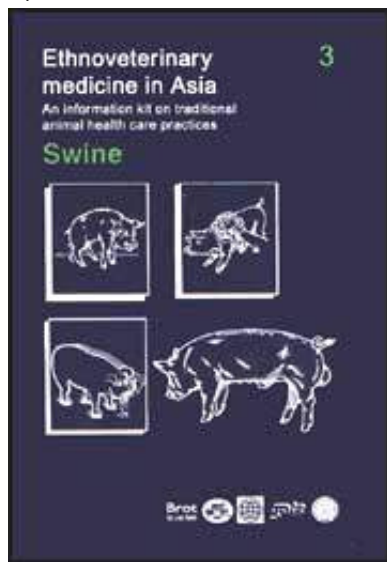
**For future use, keep the extracts in a bottle or any suitable container. Cover and store in a cool place.(Philippines, Thailand. 1, 2, 3, 4, 5)**





















**Note: Farmers prefer to give *Moringa oleifera* over *Momordica charantia* because pesticides are sometimes applied to *Momordica charantia*, but rarely to *Moringa oleifera*.**



**- Fresh *Momordica charantia* fruits are fed to pregnant sow during gestation as a source of iron. (Thailand).**

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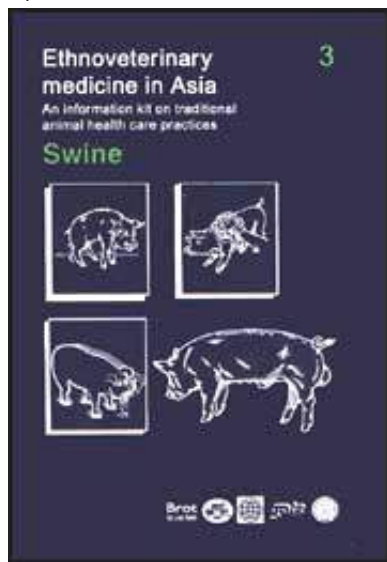
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## How to use this manual

**This is one of four manuals on traditional animal health care practices (or "ethnoveterinary medicine") in tropical Asia. The manuals were compiled during a participatory workshop held at the International Institute of Rural Reconstruction in July 1994. The four manuals cover swine, poultry, ruminants (cattle, buffaloes, sheep and goats) and general information. For details, see the General information manual.**

**The topics in this manual have been broadly presented to include the whole spectrum of "conditions" which a field practitioner may encounter in the care and management of livestock.**

**Topics which describe a disease or condition present the following information:**

**Symptoms key symptom(s) by which the disease can be identified.**

**Causes primary cause(s) of the disease.**

**Prevention appropriate preventive measure(s) to avoid disease onset.**

**Treatment a detailed description of the treatment(s).**

**The treatments list the ingredients by their botanical (or Latin) name and a common English name. For some commonly known species (e.g., garlic, ginger, coconut, banana, guava), only the English name may appear in the text. The General information manual contains a complete list of plants named in the four manuals.**

**The treatments or remedies which require multiple ingredients are presented in a**

**step-by-step "recipe" format which lists all ingredients to be used and describes how to prepare them. See the General information manual for details on how to prepare remedies such as fomentations, poultices and decoctions. Many remedies which require only a single ingredient are presented in tables. Each remedy is identified by the "." mark; where several remedies are presented, the choice of the remedy is left to the user.**

**After each treatment, the countries in tropical Asia where the treatment is practiced (as validated by the workshop group or through references) are presented in boldface parentheses. Immediately after the names of the countries is a series of numbers that reflect the validation criteria used in the workshop:**

- 1. Workshop participants agreed that the treatment would be useful.**
- 2. Treatment is widely used in a region or a country (some remedies were also validated against practices from outside Asia).**
- 3. Workshop participants had first-hand knowledge of the remedy's use on-farm.**
- 4. Traditional healers are known to use the remedy.**
- 5. The remedy is cited in the literature in one of two ways: (1) it is used to treat the same problem in humans or another animal species; or (2) this plant has proven pharmacological activity to treat the problem in question. For instance, laboratory tests have shown that *Nicotiana tabacum* (tobacco) leaf extract is effective against *Staphylococcus aureus* bacteria in vitro (Syat 1990). This**

**tends to support the use of tobacco leaves in treating wounds.**

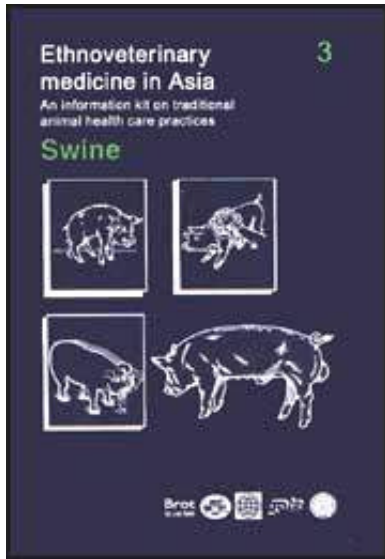
**6. The remedy has been scientifically validated as effective to treat the problem in the livestock species in question. Relevant references are given under the corresponding plant name in the Glossary of medicinal plants in the General information manual.**

**Dosages and preparation methods in indigenous practice are often imprecise and vary widely between individuals and regions. The dosages and methods given are those that, according to the professional judgement and experience of the workshop participants, are most suitable, are easy to prepare and are likely to be effective. The workshop participants and IIRR have made every attempt to ensure that the remedies are effective and are not harmful. However, they cannot guarantee this or be held liable for problems arising from these practices.**

**Unless noted to the contrary, all dosage quantities for treatments are for single dosage applications; in other words, each treatment should be prepared at the time of application according to the quantities specified. Dosages for treatments in swine are usually given in terms of live body weight (a simple calculation procedure for estimating live body weight for all species is explained in the Estimating live weight of animals section).**

**Where possible, simple measurements (handful, cup, etc.) have been given for ease of use by field practitioners. The General information manual contains a guide to commonly used weights and measures. More detailed measure meets (milliliters, etc.) are also given to allow a practitioner to be as precise as the particular conditions may allow.**

**All references used in this manual are listed in the References section in the General information manual.**



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## **Lack of appetite**



**Lack of appetite**

## **Symptoms**

- **Feed is left uneaten.**
- **Animals are inactive.**

## **Cause**

- **Pain.**
- **Fever from infection.**
- **Stress.**

- **Severe incidence of parasites, such as intestinal worms or lice.**
- **Mouth wounds.**

**If none of these is the problem, something is wrong with the feed. Change the feed type.**

## **Prevention**

- **Avoid abrupt changes in feed mixtures and rations.**
- **Deworm regularly (see Internal parasites, page 17).**
- **Maintain hygiene and sanitation.**
- **Provide good housing (see Housing, page 48).**
- **Vaccinate regularly against common diseases in the area.**

## **Treatment**

- **Pour 1/2 cup of cane molasses on 1 kg of the animal's regular feed ration. Divide this into 3 parts. Feed 23 times a day for 2-3 days.**

**Instead of molasses, you can add 1 teaspoon of salt, 2 tablespoons of brown sugar or 2 tablespoons of fish sauce on 1 kg of the regular feed ration. Divide this into 3 parts. Feed 2-3 times a day for 2-3 days.(Cambodia, Philippines, Thailand. 1, 2, 3, 4, 5)**

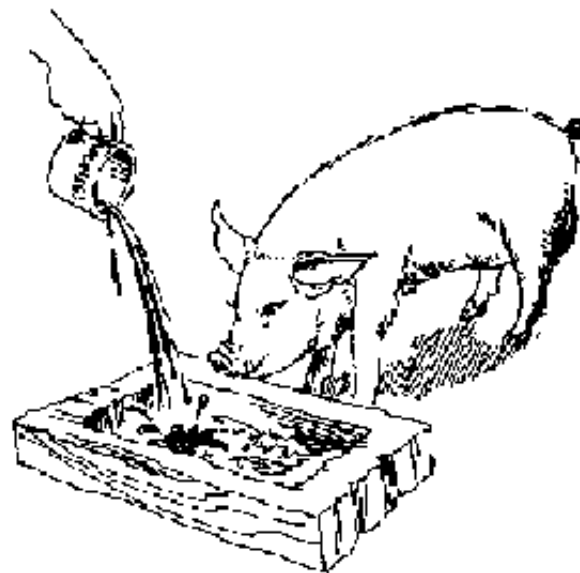
- **Mix 3 fresh (raw) eggs with 1/2 cup of molasses. Drench the mixture 2-3 times a day for 2 days. (Indonesia, Thailand. 1, 2, 3, 4)**
- **Give a small bundle of fresh sweet-potato tops as feed, 23 times a day for**

## **2 days.(Cambodia, Philippines. 1, 2, 3, 4)**

**- Mix 1 teaspoon of salt with 1 teaspoon of dried seeds of *Trachyspermum ami* and pound. Force-feed 1-2 teaspoons of the mixture 2-3 times a day for 23 days.(India, Philippines. 1, 2, 3)**

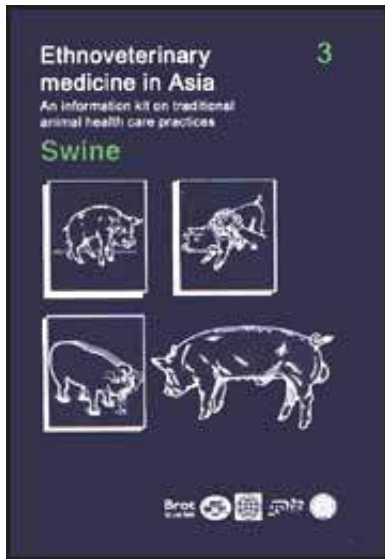
**- 2 g (1/2 teaspoon) of powder from each of the following dried plants: *Swertia chirata* (whole plant); *Alstonia scholaris* (bark, leaf and stem); and ginger (rhizome).**

**- 0.75 g (1/4 teaspoon) of powder from each OF THE following dried plants: *Picrorhiza kurroa* (roots); *Veronica anthelmentica* (leaf, seed or whole plant); *Trachyspermum ami* (seeds); *Peucedenum graveolens* (seeds); *Trigonella foenum-graecum* (seeds); and *Brassica nigra* (seeds).**



**A pinch of salt. A pinch of baking soda.**

**Mix all ingredients. Force-feed 3-5 g (1 teaspoon) of the mixture twice a day. Treat the animal for 5-6 days or until it regains its appetite. The effectiveness of the mixture will not be affected if 2-3 of the plants mentioned are not available. (India. 1, 2, 3)**



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## **Fever**



**Fever**

## **Symptoms**

- **Pigs are inactive.**
- **Animals are frequently thirsty and shivering.**
- **Animals are constipated.**

**Touch the neck or the base of the ears to feel the animal's body heat. If the body**

**temperature of the animal is higher than usual, the animal has fever.**

## **Causes**

**Fever can result from many types of infections or injuries.**

## **Reminder**

**Very high fever can be dangerous to the pig and it almost always results in death. Cool down the animal immediately using the treatments discussed in this section.**

## **Prevention**

- Ensure proper ventilation through adequate housing.**
- Keep surroundings clean.**
- Vaccinate animals against common diseases in the area.**

## **Treatment**

**Note: These treatments can help reduce the fever but do not cure the disease that causes it.**

- Heat (not boil) 1.2 liter (500 ml) of vinegar in an earthen pot for three minutes. Moisten a clean cloth with lukewarm vinegar and gently rub it on the whole body. Repeat the application every 20 minutes until the fever subsides or when necessary. The warm vinegar gradually enlarges the skin pores and helps release the body heat. (Philippines. 1, 2, 3, 4)**

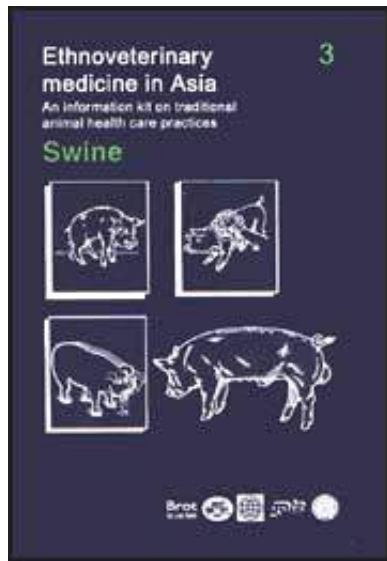
**- Dissolve 2 handfuls of table salt in 5 liters of water. Moisten a clean cloth in the solution and gently rub it over the whole body. Repeat application until the fever subsides. (India. 1, 2, 3, 4)**

**Other treatments for fever are given in the table on the next page.**

### **Treatment for fever**

<b>Scientific name</b>	<b>Common name</b>	<b>Parts used</b>	<b>Preparation</b>	<b>Dosage</b>	<b>Application</b>
Blumea balsamifera		Fresh or dried leaves	Pound 10 leaves. Extract juice.	2 teaspoons of juice	Drench 3 times a day until fever subsides. (Cambodia, India, Philippines. 1, 2, 3, 4, 5,)
Citrus madurensis		Fresh leaves	Boil 2 handfuls of leaves in 2 liters of water.		Bathe the animal. (Cambodia, Philippines. 1, 2, 3, 4, 5,)
Hibiscus rosa-sinensis	Hibiscus	Fresh leaves and flowers	Pound 1 kg of leaves and 1 kg of flowers. Mix with water.	Enough for a 60-kg pig	Apply gently all over the body until fever subsides (Cambodia, India, Philippines, Thailand. 1, 2, 3, 5,)
Picrorhiza kurrooa		Dried roots	Boil 10 g of roots in 1 liter of water.	10 ml	Drench twice a day for 2 days. (India 1, 2, 3, 4, 5,)
Swertia chirata		Fresh whole plant	Boil 10 g of plant in 1 liter of water	10 ml	Drench twice a day for 2 days. (India. 1, 2, 3)





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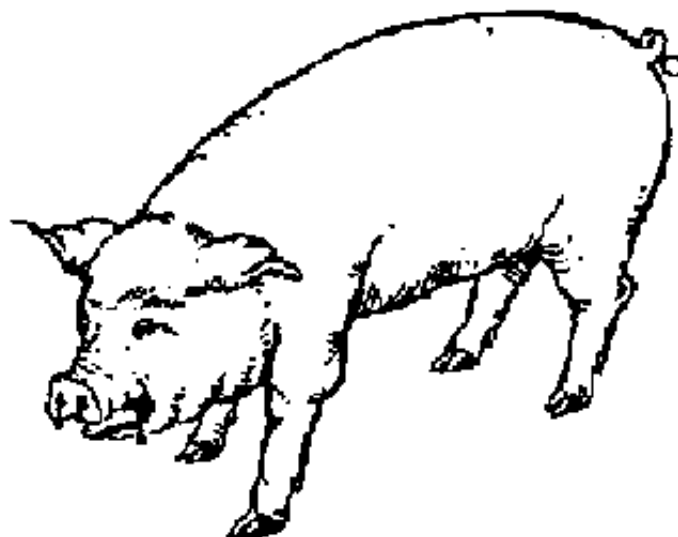
 **Wounds**

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## **Coughs and colds**



**Coughs and colds**

### **Symptoms**

- **Coughing.**
- **Runny, wet nose.**
- **Difficult, rapid breathing.**
- **Yellowish discharge from nose.**

## **Causes**

- **Infection, such as pneumonia.**
- **Internal parasites, especially lungworms.**
- **Changes in weather.**
- **Irritation to inside of throat caused by coarse feeds, such as rice bran.**

## **Prevention**

- **Keep animal's pen dry and clean.**
- **Moisten fine feed mixtures (especially rice bran) before feeding animals.**
- **Provide a sheltered area for animals (see Housing, page 48).**
- **Regularly deworm (see Internal parasites, page 17).**
- **When giving a drench, apply the drench in a proper manner (see Application of herbal medicine in General information).**

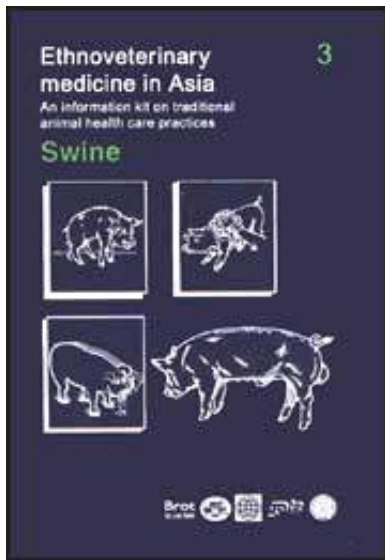
## **Treatment**

- **Pound and press the fresh fruit of *Diospyros mollis* and extract 100 ml (or 1 small Coke bottle) of juice. Mix the juice with 50 ml of honey. Drench the sick animal (1 ml or 1/4 teaspoon for each 5 kg of bodyweight) each morning for 2-3 days. Or, the mixture can be mixed with a small amount of feed and fed once a day for 2-3 days (same quantities as for the drench). This treatment will help ease coughs due to parasites. (Cambodia, Thailand. 1, 2, 3, 4, 5)**

**- 4 teaspoons Albizzia myriophylla bark. 4 teaspoons Tamarindus indica, mature fruit. 4 teaspoons Acacia rugata pods, grilled over a fire until soft. 10 g salt..**

**Mix the four ingredients with 3 liters of water. Boil them until only 2 liters are left. Cool and strain. Give one liter of the strained fluid to the sick animal as a drench each morning for 2-3 days. Or, mix it in the animal's feed as described above. This treatment will help remedy coughs and colds due to infections.**

**(Philippines, Thailand. 1, 3, 4, 5)**



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## Diarrhea and dehydration



**Diarrhea and dehydration**

## **Symptoms**

- **Watery feces.**
  - **Profuse yellowish feces**
  - **Feces have a foul odor.**
  - **Blood in feces.**
  - **Dehydration.**
- Very dry nose.**
- Animal urinates less than normal.**
- Skin is slack. Softly pinch the skin and pull it. Then let go. If the piglet is not dehydrated, the skin will snap back into place.**
- Animal twitches uncontrollably (in late stage).**

## **Causes**

- **Internal parasites.**
- **Bacteria.**
- **Virus.**
- **Digestive problems due to sudden change in diet.**
- **Eating unclean feed.**

**Diarrhea can result from poor sanitation. It can occur during any season and can affect pigs of all ages, but especially strikes newborn piglets up to 30 days old. The piglet becomes thin and too weak to stand up or suckle and finally it dies.**

**In young pigs, an abrupt change in the diet can cause diarrhea. This is called "baby pig scours". If an animal's diarrhea comes and goes, it might be caused by internal parasites. If the runny feces are flecked with blood and the animal is losing weight and strength, then the problem might be swine dysentery, which usually strikes when the pig weighs between 60 and 70 kg.**

**Diarrhea, excessive urination, vomiting and/or fever can lead to dehydration and death in young pigs.**

### **Prevention**

- Keep pens, feed and water troughs clean.**
- Separate affected animals from healthy animals.**
- Avoid stress on young pigs by keeping their feed schedule regular and by providing shelter.**
- If the diet of animal must be changed, make the change gradually.**

### **Treatments**

**Use any of the following remedies.**

#### **For diarrhea**

- Wild ginger rhizome (Zingiber zerumbet) Clove, roots and bark of Eugenia caryophyllus Fresh pomegranate leaves (Punica granatum) Opium (poppy) gum from fruit (Papaver somniferum)**

**Common ginger rhizome (Zingiber cassumunar) Limestone (one thumb-sized**

**piece)**

**(If available, a root nodule of a plant known as "Krasarn" in Thailand can also be included).**

**Dry the plant ingredients and grind each into a fine powder. Mix equal amounts (1 teaspoon) of each powder. Add 1 tablespoon of the mixture to a 1-liter mixture of water and powdered limestone. Boil the resulting mixture and let it cool. Drench the affected piglets with 1 teaspoon (5 ml) of the mixture twice a day (in the morning and evening) for 2-3 days.(Thailand. 1, 3, 4)**

**- Boil 1 kg of fresh Punica granatum (pomegranate) leaves and stems in 3 liters of water until 2 liters remain. Drench the affected animal with 1/2 liter of the cooled fluid, including plant material, 3 times a day for 2-5 days.(Cambodia, Philippines. 1,2, 3, 4)**

**- Boil 1 kg of fresh Psidium gunjava (guava) leaves in 3 liters of water until 2 liters remain. Cool and strain the fluid. Drench the affected animal with 1/2 liter, 3 times a day for 2-3 days. In Indochina, the mature fruits of the native guava are also used in a similar preparation to treat diarrhea.(Cambodia, Philippines, Thailand. 1, 2, 3, 4)**

**- Boil 1/2 kg of fresh Chrysophyllum cainito (star apple) leaves in 1 liter of water. Drench animal with 1 cup of the strained, cool fluid 3 times a day for 1-3 days. (Cambodia, Philippines. 1, 2, 3, 4, 5)**

**- Carbonize the husk and shell of 1 mature coconut. (Do this by partially burning them in a fire. Put out the fire when the husk and shell are in full blaze.) Grind the**



**carbonized coconut material into a powder and mix it thoroughly with 1 liter of clean water. Drench the affected animal with 1 cup of the mixture, 3 times a day for 2 days. (Cambodia. 1, 2, 3, 4)**

**- Carbonize and grind rice (see above). Mix five teaspoons of the powder and one teaspoon of honey in 1/2 liter of clean water. Drench the affected animal 3 times a day 1/2 liter each time) for 3-5 days.(Cambodia, Thailand. 1, 2, 3, 4)**

### **For dehydration**

**- Prepare an oral rehydration treatment by dissolving 1 teaspoon of salt and 3 teaspoons of sugar in 1 liter of clean water. Give 1/2 liter as a drench, 3 times a day for 3-5 days.(Widely practiced throughout Asia. 1, 2, 3, 4)**

**- Dissolve 3 handfuls of unrefined brown sugar and 5 teaspoons of salt in the water from 3 young coconuts. Drench 3 times a day until the animal is cured. (Cambodia. Philippines, Thailand. 1. 2. 3. 4)**

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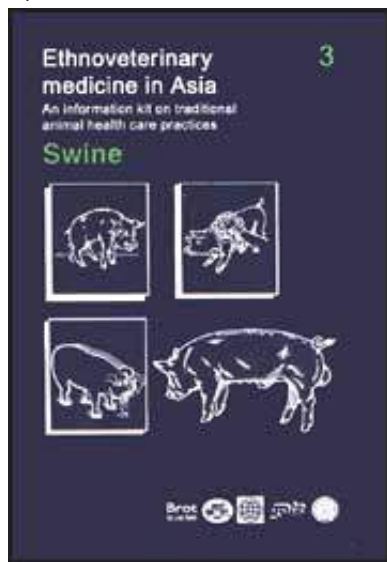
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## Constipation



## **Constipation**

### **Symptoms**

- **Animal has difficulty defecating.**
- **Feces are hard, dry, brittle and occasionally streaked with fresh blood.**
- **Lack of appetite.**

### **Causes**

- **Diet contains either no fiber or too much fiber.**
- **Lack of exercise.**
- **Pain in the anus**
- **Excessive calcium in the diet (too much bone meal, eggshells, limestone, shells, etc., in the feed).**
- **Injury or fracture in the pelvis or hindquarters.**

### **Prevention**

- **Provide drinking water at all times, especially during the hot season.**

- **Provide sufficient space for animal to exercise.**
- **Provide fresh, green vegetables daily.**
- **Avoid stress to the animal**

## **Treatment**

**For simple constipation, any of the following treatments may be used.**

- **Split a ripe tamarind (*Tamarindus indica*) pod in half. Remove the pulp and seeds. Roll up the pod and insert into the anus as a suppository (part will stick out of the anus). Repeat every 6 hours for 2-3 days or until the animal becomes unconstipated.(Cambodia, Thailand. 1, 2, 3, 4)**
- **Feed 2-3 small bundles of fresh leaves of sweet potato (*Ipomoea batatas*) or *Amaranthus gracilis* or *Amaranthus spinosus* or swamp cabbage (*Ipomoea aquatica*) 2-3 times a day for 3 days.(Cambodia, Philippines, Thailand. 1, 2, 3, 4, 5)**
- **Drench 1 tablespoon of castor oil (*Ricinus communis*) 2 times a day for 1-3 days. Drench 1 cup of water after the castor oil drench. Also, soybean oil or sesame oil can be used. (Cambodia, Thailand. 1, 2, 3, 4)**
- **Prepare a decoction of one ripe papaya (*Carica papaya*) fruit and 1 liter of water. Drench 2 times a day until the pig recovers. (Cambodia. 1, 2, 3, 4)**
- **Shape a small piece of mild bar soap into a small suppository. Dip it into water and insert into the anus. Repeat treatment 12 hours later, if necessary.(Cambodia. 1, 2, 3, 4, 5)**

