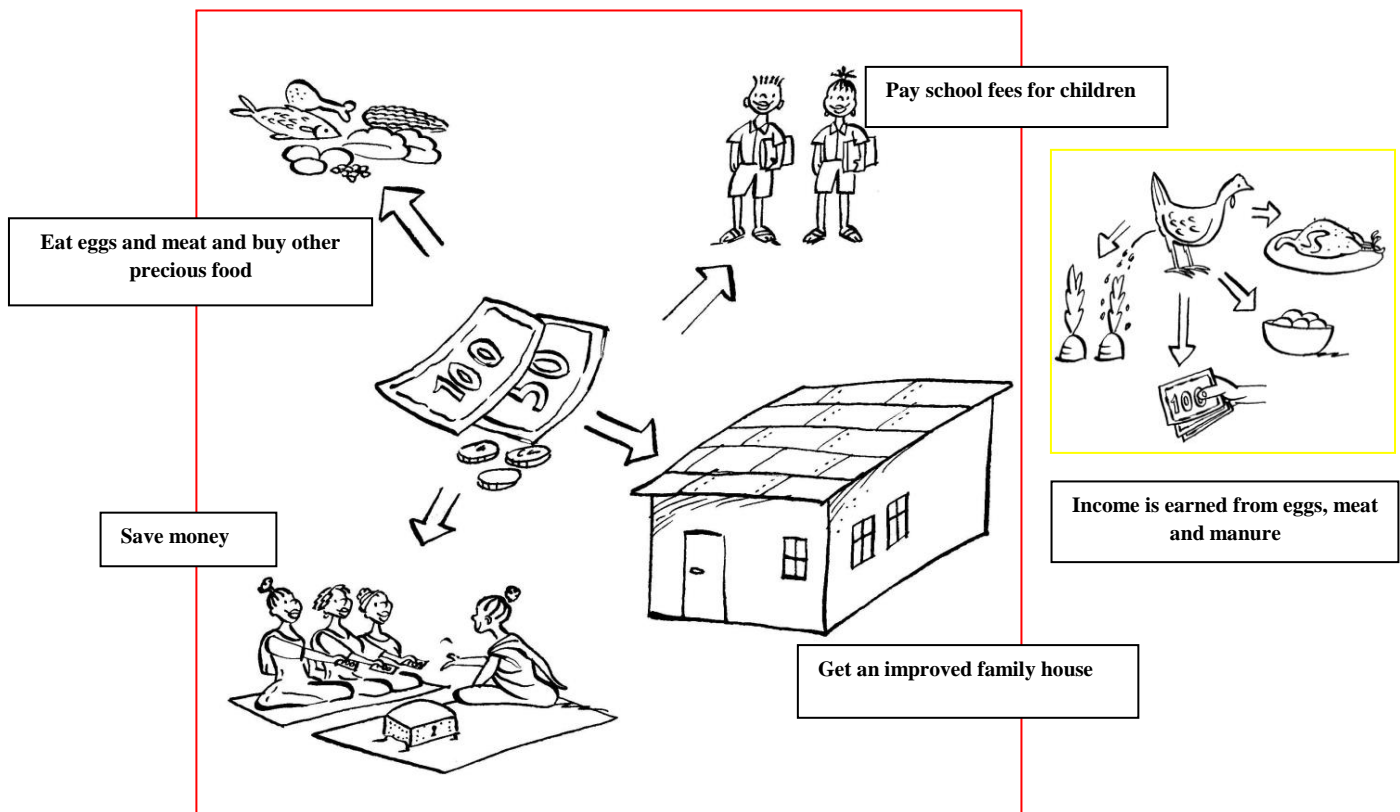


GUIDELINES FOR FAMILY LAYING HENS RAISE

1. Why raise laying hens at the family level in the village ?



2. **General Objective.** Improve the living standards of households at least the threshold of the absolute poverty line through improved food quality as well as the increase of overall income of each family.
3. **Specific Objective:** Develop a model of practice to raise laying hens adapted to each family in proportion to the number of people living in the family, the food situation; nutritional situation and the total annual household income.
4. **Choice of the hen breeds to raise.** Choose hens with a peak of eggs laying of 8 weeks from the first laying, those that can withstand heat with a long time of eggs laying (available in India).

| Black strains | Red strains | White strains | Local strains |
|---|--|---|---|
| -Rustic, suitable production very interesting in difficult contexts; -Weight alive in week 18 1.850 kg, -Spawning about 260 | -Quiet, low consumption with a better valorisation in reform -Live weight at 20 weeks 1.530 kg, -Spawning about 295-305 eggs in 72 weeks -Weight of an egg: 61-62 g | -Low feed consumption but low production at the reform -Weight alive in the 17th week 1.430 kg -Spawning about 310 eggs in 72 weeks -Weight of an egg: 62-66 g | -Better suited for local conditions -Less susceptible to diseases -Less production of eggs and meat |

| | | | |
|--------------------------|--|--|--|
| eggs in 72 weeks | | | |
| Weight of an egg: 64-66g | | | |

5. Periods of the life of laying hens.

The weight of the laying hens to adulthood varies between 0.8 and 3 kg depending on the breed. The life of laying hens consists of two periods that are the breeding phase 1d 18 to 20 weeks and laying phase or production: 20-22 weeks 72-78 weeks (substitution age). The rearing phase is to produce young hens (pullets) healthy, well vaccinated. During this period you must obtain a bodyweight compatible with sexual maturity around 1550 gr at the start of laying for heavy strains and 1350 gr for light strains.

6. How to build housing for laying hens ?

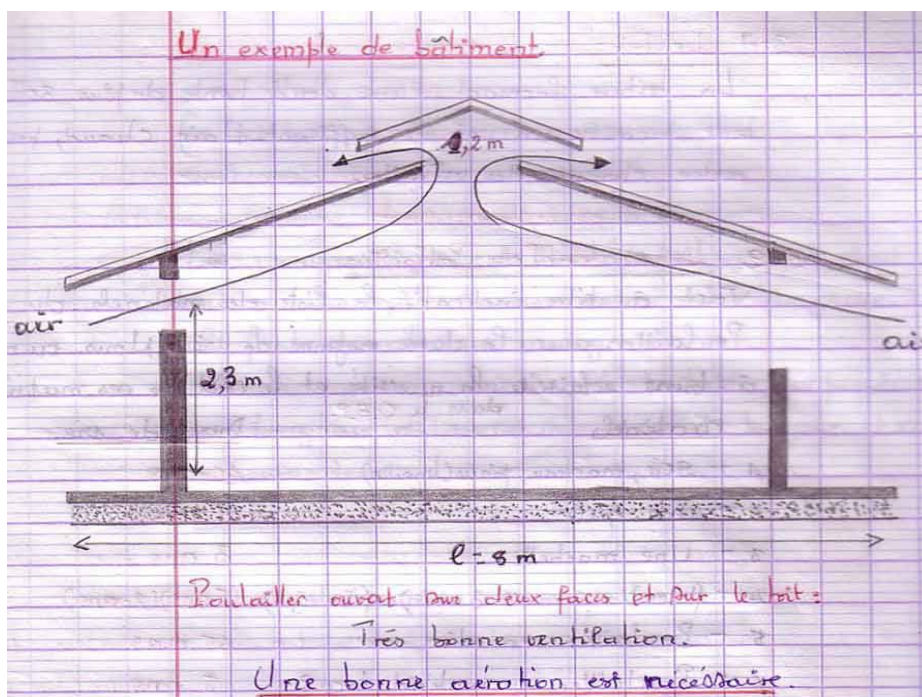
Un bâtiment doit être:

bien situé... étanche bien isolé... bien chauffé...
 bien ventilé... bien drainé... avec une bonne litière

ET QUE TOUT ÇA FONCTIONNE QUELQUES SOIENT LES CONDITIONS EXTERIEURES

et bien équipé:

- des régulations performantes
- un système d'alimentation efficace
- des abreuvoirs qui ne fuient pas
- un éclairage adapté
- etc...



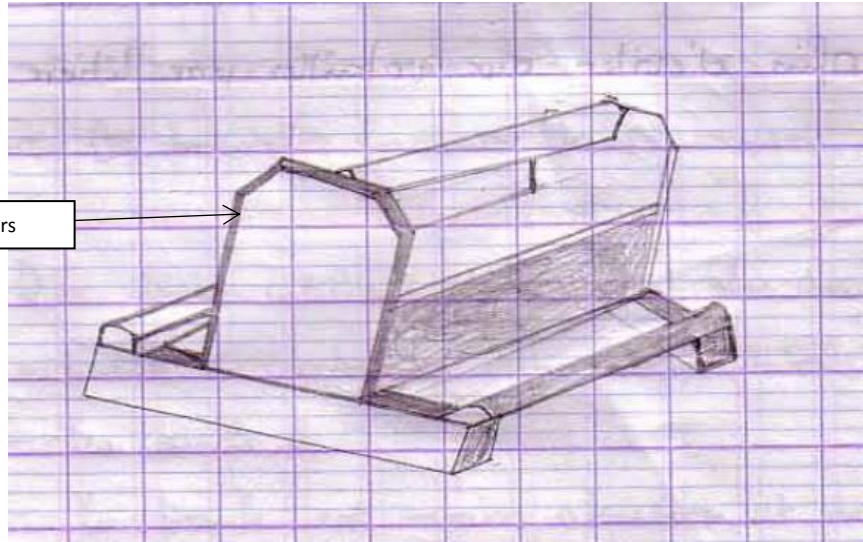
a) Buildings and building materials

- ✓ Separate adults housing from that for young (0-3 months)
- ✓ Building a chicken coop next to the main barn
- ✓ Optimize use of local materials
- ✓ Clay walls and plastered inside and outside
- ✓ Roofing in straw or other plant materials available on site
- ✓ Develop a wire fence or made of local materials

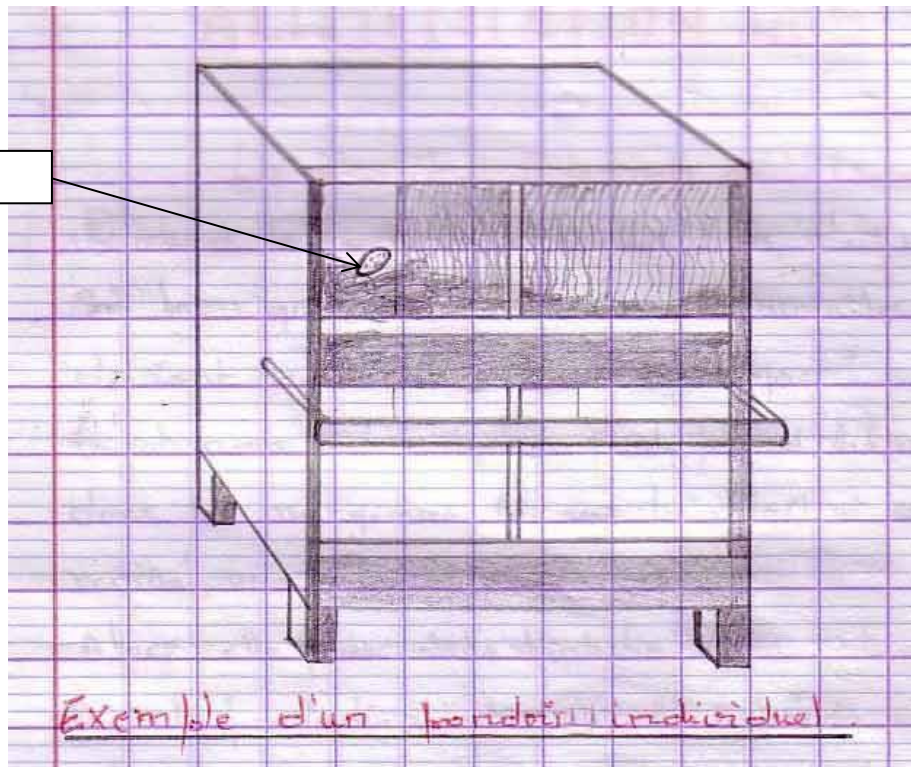
b) Arrange the raising room with inside the following elements:

- Nests
- Dusting container
- Feeders
- Drinkers,
- Perches

Example of a Single wood made feeders



Example of wood made Single nest



C) Standards for improved village poultry barns

- Surface (for 100 subjects): 5 m² for chicks between 0 and 4 weeks, 10 m² for adults between 5 and 8 weeks and, from 15 to 20 m² at 9 weeks
- Feeder (for 100 subjects): adults 6 feeders 15 cm long, Chicks possibility of using heating panels for the first 2 weeks.
- Drinkers (per 100 subjects): for adults 6 troughs of 5 liters each and, for chicks between 0 and 4 weeks
- Nests, adults: 1 to 3 hens by nest
- Perches for adults: length of 1m for 10 animals, rectangular section 2 cm x 4 cm



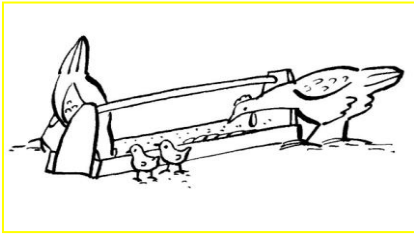
7. Feeding hens

Rationing techniques are multiple, the most practiced are the following:

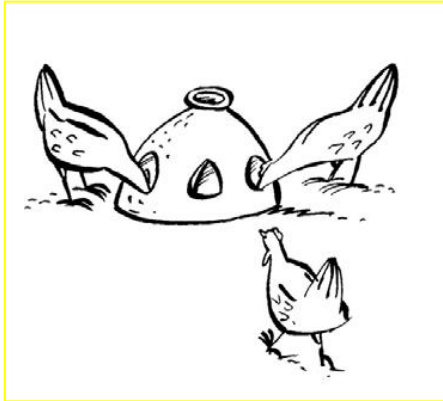
- The day to day: distribute ration once a day at fixed times (if the manger is closed)
- Skip a day: distribute the ration once every two days at fixed times; this method has more advantages than the first above because it improves the homogeneity of the lot and offers a labour saving.

| Energy and protein concentration in the diet of the hen | | |
|---|---------------------|--------------------|
| Rearing period | Energy (Kcal ME/Kg) | Crude Proteins (%) |
| Starting: from 1 day to 8 weeks | 2800-2850 | 18-20 |
| Growing ration: from 9 to 18 weeks | 2700-2750 | 15-16,5 |
| Hens in production: 20 to 72 weeks | 2700-2900 | 18-21 |

- Every day the barn, waterers and feeders are thoroughly cleaned and disinfected to reduce viral microbial pressure especially in cases of suspected viral way;
- Ensure good age-appropriate diet and for the type of production

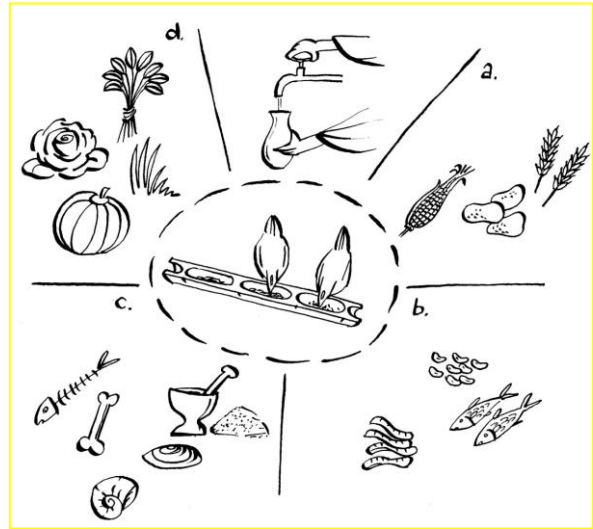


(i)



(ii)

Feeders and waterers can be made of wood (i) or clay (ii).



Types of food separated energy sources (a), protein (b), calcium (c), and vitamins (d). Always remember to give free access to clean water

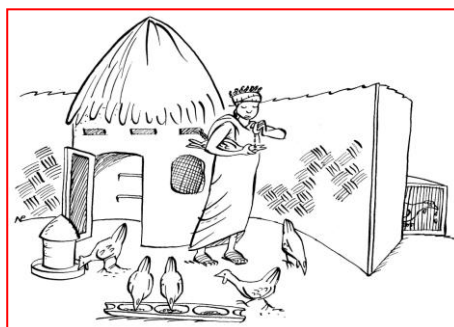
Below are given 3 images of different types of hen waterer that can be used.



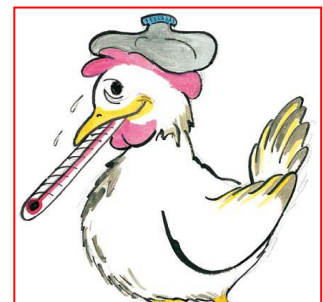
8. Hens Health



Bad maintenance makes sick chickens



Good maintenance makes healthy chickens



In any way, please contact the veterinary technician for vaccines and other health care

| N° | Main diseases | Symptoms | Prophylaxis |
|----|--|---|---|
| 1 | Marek's disease: virus due to the herpes virus, often affects chicks of some weeks | Emaciation, lameness, paralysis, retraction of the fingers, stiff neck, digestive disorder, pupil deformation, discoloration of the eye and blindness | Vaccinate after hatching: Apply a fine mist vaccine Marek HVT / Rispens + strong Rispens at hatcheries, or soak the beaks of chicks at receiving time |
| 2 | New castle disease or "pseudo fowl pest": disease caused by a virus, paramyxovirus, the virus has a high resistance in the external environment | Brutal sepsis, high fever, lack of appetite and thirst, ruffled feathers and round back. Respiratory, digestive and nervous disorder, fall hen and high mortality | Vaccination fine mist from hatching Review after 2 or 4 weeks Introduce water to drink or instil in the eye or in narins |
| 3 | Gumboro: Viral disease caused by a picornavirus. Very resistant in the environment Affects chickens of 3 to 6 weeks | Greenish watery diarrhea, prostration, anorexia, growth retardation, mortality | Vaccination on day 1 and return the 7th and 11th day Give plenty to drink, Perform disinfection |
| 4 | Infectious bronchitis Viral disease caused by coronavirus | Respiratory disorder, cough, dyspnea rate, mortality of 5-20%. For chickens: lesion of the genital tract causes sterility For hens: eggs deformed drop chicken, delayed spawning. | Vaccination on day 1 review after 4-6 weeks, then at 10 weeks and 16 20semaines. Strict isolation of the flock. Respect of single band conduction |
| 5 | Fowlpox Viral disease caused by poxvirus | Eruptive modular lesions papular-visiculo-pustular on the head, anorexia, sudden death | Vaccination at 1 st month and review after 8-12 weeks. Disinfection of the building |
| 6 | Cholera Bacterial disease caused by <i>Pasteurella multocida</i> virus | Respiratory disorders: cough and gasp sneezing, septicemia, diarrhea with wet gray feces, (yellow or green), paralysis and flaccidity of the joints of the wings and legs, stiff neck, | Vaccination at 7th 11th week |
| 7 | Avian influenza Disease caused by a virus H5N | Very high mortality of poultry (more than half) in 1 to 2 days High decline in the general condition | Keep poultry in an enclosed area Use a footbath at the entrance of your operation. Call veterinary or livestock technicians in case of death for autopsy. Do not touch or eat sick poultry |

Example of immunization calendar of future laying hens

| Age | Diseases | Mode of administration of the vaccine |
|-----------------------|-------------------------------------|---------------------------------------|
| Day 1 at the hatchery | Marek | Injection |
| D1-3 | Infectious bronchitis | DW – ED – IN - Neb |
| D5 | Pseudo pest | J7 DW – ED– IN - Neb |
| D15 | Gumboro | DW – ED |
| D21 | Pseudo pest | DW – ED – IN - Neb |
| D22-24 | Gumboro | DW –ED |
| Week 6 | Pseudo pest | Injection |
| Week 8 | Infectious bronchitis | DW – ED – IN - Neb |
| Week 12 | fowlpox | Transfixion (Wing membrane) |
| Week 13 | Encephalomyelitis | DW |
| Week 17 | Pseudo pest + Infectious Bronchitis | Injection |

Legend

DW =Drinking water IN = intranasal

ED= Eye drops Neb = Nebulization
