

"Opportunities of poultry breeding programmes for family production in developing countries: The bird for the poor"

1. What type of birds is required by the family poultry producers?

The bird must be able to brooding eggs and raising their chicks by naturally. So native chicken is a species suitable for small farmers. Because of their genetic diversity, no problems with genetic susceptibility, resistance to disease, tolerant environment. Parenting can be simple left to feed themselves at home (free range), the enhancement of food can be in the village such as bran, broken rice, vegetables, waste food scraps, fruit scraps, grass and do not need to use technology or medicine.

Thai native chicken had various feather colors and breed. But now to find the true breed of chicken these were more difficult everywhere. Because poultry farmers in Thailand to rural folk raising and breeding chickens with naturally method, without regard to separate breeds. In addition, the Thai native chickens have weaknesses such as rate of production growth and low egg production. Cause of low performance of native chicken from did not improve breed and distribution to farmers continued. Then in the year 2002, Department of Livestock Development (DLD) in collaboration with Thailand Research Fund (TRF) started to establish of 4 foundation stock of Thai native chickens such as Pradu-Hangdum, Lueng-Hangkhao, Dang and Chee. Aim to get a purebred chicken in Thailand that developed by scientific method as other standard breed of foreign countries and still dominant character for maternal ability. And there were characteristics of the breed both for qualitative traits and quantitative traits. When raising in the farm system found that body weight and egg production higher 30 % and 40 % than general native chicken, respectively (increasing the enhancement of production to commercial). And still to be a chicken that good for village condition such as brooding eggs, raising chicks ability,

resistance to disease and environmental management in the village. The production of chicks in the village condition higher 38 % than general native chicken.

2. What are the organizational structures for existing and future poultry breeding programmes?

In Thailand, Department of Livestock Development (DLD) is working to target small farmers for long-term sustainability, which must be made in the form of a network for the raising of native chicken. The network is divided into 2 systems - produced chicks in semi commercial farm system and produced chicks in the normal scavenging system.

The work involves cooperation with other agencies such as Thailand Research Fund supporting research and the universities doing research projects and with farmers while DLD has established a nucleus flock of native chicken for conservation and further development.

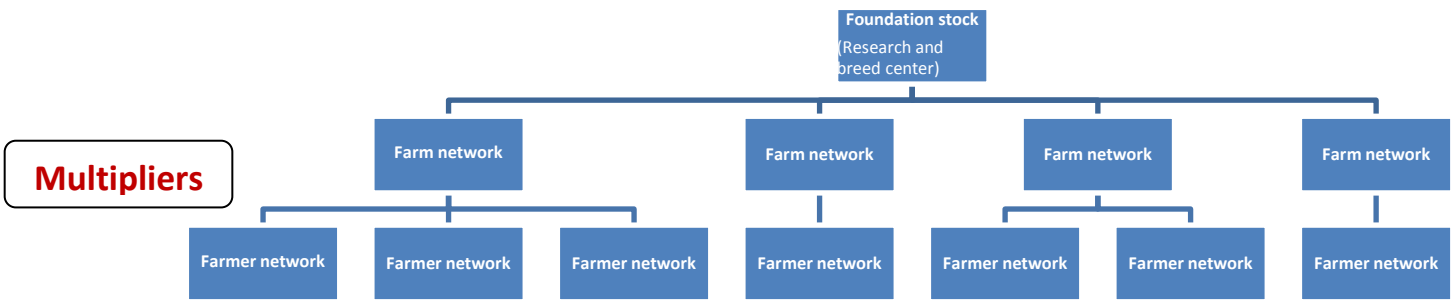
The basis of the development is that the breed must breed true (phenotypically), to improved chicken performance for direct economic traits but still keeping maternal and survival ability in village conditions. For the Pradu-Hangdum breed of native chicken, the DLD flock is in generation 10 having spent the first the ensuring breed type (with advice from the local farmer experts and uniformity is now more than 95 %. Color of egg shell was tinted. Economic traits when raising in semi-commercial farm condition include total number of eggs 147 ± 34 eggs/yr, body weight at market age at 12, 16 weeks for male and female were $1,357 \pm 108$, $1,902 \pm 151$ and $1,092 \pm 84$, $1,436 \pm 117$ gm, respectively. When raised in local scavenging conditions the Number of eggs and chicks are 42 ± 16 eggs/yr and 29 ± 14 birds/yr, respectively.

The Nucleus flock is of 70 males and 350 females per generation, that produced replacement 5,000 chicks/yr and selection is based on family selection and mated by avoid or less than for inbreeding of the flock.

3. What Strategies of multiplication and distribution networks can be adopted ?

The research and breeding center of DLD produced parent stock for the farm network which, in turn, can produce chicks for farmers who could buy chickens and chicks from both farm and farmer networks.

For example Chiangmai Livestock Research and Breeding Center produces 3,000 dams per year to four pure breed farms in a network and these could produce 270,000 chicks per year for further sale. It is necessary, in the near future, to analyze production costs of each level.

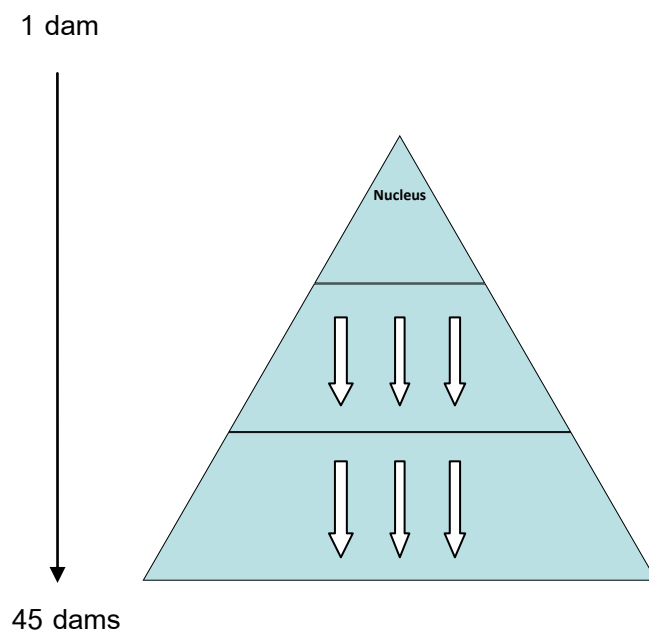


However the present structure which allows purchase from any level has limited dissemination possibilities and there is now some problems with supply from the nucleus since any farmer can request to purchase from that flock.

4. What marketing is appropriate for breeding stocks ?

To ensure that the demand can be met without further expansion of the nucleus, the research and breeding center must sell only to those farms in a network registered with DLD and DLD must set clear conditions and guidelines for farms in this network.

After the cost analysis proposed, the objective will be to develop a system of vertical multiplication rather than the existing horizontal situation and one which reflects the correct pricing for genetic merit of the different levels.



5. Conservation of existing genetic resources

There were at least 3 levels of native flocks such as nucleus at the research center, multiplier herds and small farmer. When there is a problem at any one level, there were other level for reserve.

Change or increasing the selling of chicken of small farmers, from selling to slaughter through selling for breeder.

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