

GUIDELINES ON GOOD PRACTICES IN THE HOUSING, HANDLING AND SLAUGHTERING OF FROGS

1. The Singapore Food Agency (SFA) and Animal Veterinary Services (AVS) of the National Parks Board (NParks) have developed a set of guidelines on good practices for housing, handling and slaughtering of frogs in cooked food premises. The objectives of the guidelines are to ensure food safety, animal health and welfare standards are maintained.

General Housing Conditions

2. Frogs must be given sufficient space.
 - a. They should not be stacked on top of each other.
 - b. They should not be restrained using netting or strings.
 - c. Where applicable, they should be able to reach the water surface easily.
 - d. As an example, the maximum stocking density recommended for American bullfrogs is 88 frogs per square meter¹.
3. Frog enclosures must be regularly maintained. Water should be changed daily for frogs living in it; waste should be removed regularly throughout the day. Rusty cages and sharp corners should be repaired to prevent injuries to the animals.
4. As much as practical, stallholders should order only the number of frogs that will be slaughtered for the day.
5. Display only healthy frogs. The display should be located away from high traffic areas to minimise exposure to public viewing and stress to frogs.

Slaughtering and Processing

6. Ensure all frogs are slaughtered within 24 hours of their arrival at the stall. Otherwise, suitable feed should be provided for them.
7. Slaughter, by quick decapitation, should take place in a designated area, away from the public and meat cutting/packing/storage areas. Decapitation must be done cleanly with a sharp cleaver to cause expedient death.
8. Where stunning needs to be done, the stunning by blunt trauma must effectively render the frogs unconscious immediately. Alternatively, frogs may be immersed in ice slurry for 15 minutes for anaesthetic effects.
9. Frogs with serious injuries and/or with obvious diseases should be slaughtered as soon as possible for the animals' welfare. However, meat or organs with abnormalities should be discarded and not sold as food.

¹ Based on FAO Fisheries and Aquaculture Department, Cultured Aquatic Species Information Programme. *Rana Catesbeiana* – average yield of aquaculture systems are able to reach 22kg/m². Maximum stocking density recommended in this document is based on the average weight of each frog to be about 250g.

10. The frogs shall not be cut up while alive or conscious. Process meat and organs in clean areas designated for cutting/packing/storage.
11. As with all food retail outlets, food handlers should observe good hygiene practices (personal, operation and environmental) when handling raw meat as follows:
 - i. wash hands thoroughly with soap and water before and after handling raw meat.
 - ii. Clean cutting boards, countertops and utensils thoroughly after slaughter/processing, before and after preparation of raw meat
 - ii. Avoid cross-contamination. Store and handle raw meat separately from fruits/vegetables and ready-to-eat food.
 - iii. If gloves are used for handling cooked/ready-to-eat food, they should be changed regularly and removed when handling money.

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