



Standard Operating Procedure **Human Approach Test (HAT) – Tie Stall**

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Description/objective

The Human Approach Test (HAT) evaluates animals' behavioural responses to the progressive approach and proximity of an unfamiliar human in a controlled setting. It assesses animals' acceptance of human presence within their comfort zone, approach–avoidance tendencies, fearfulness and human affinity. This test is adaptable to various environments and all age classes. *The test procedure described in this SOP is performed in a tie-stall environment and is designed to test a single animal.*

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Terminology

Unfamiliar Human	A person who is unknown to the test animals and has never had close contact with them. This individual should wear clothing that is clearly distinguishable from the uniforms or coveralls routinely worn by farm staff. Ideally, the observer should wear a hooded coverall that maintains a recognizable human silhouette while ensuring that the face remains fully visible.
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Requirements

✓ Personnel (n = 2):

Personnel	Number	Role
Testing assistant	1	Unfamiliar human responsible for performing the standardized approach sequence.
Trained observer	1	Responsible for conducting live observations and ensuring that the focal animals are standing.

✓ Materials Needed:

- Coverall for unfamiliar human
- Personal Protective Equipment (PPE)
- Data sheet/ethogram
- Pen/pencil
- Stopwatch
- Whiteboard
- Dry erased marker

General information

- **Location:** Tie-stall environment with a minimum distance of 200 cm between the manger wall and the wall in front of the stall.
- **Lighting and noise conditions:** To perform a reliable and reproducible test all potential distractions must be avoided, as such the presence of non-essential personnel and any unnecessary noise during testing is strictly prohibited.
- **Test order preparation:** After testing an individual animal, do not immediately proceed to test any animals that were adjacent to or facing the subjects during their test. These

neighboring animals must be given at least 30 minutes of recovery time to ensure to return to a neutral state. To maximize efficiency, a predetermined testing order should be established that skips these immediate neighbours.

- **Animal preparation:** Test animal(s) and their neighbours must be standing for this test to reduce the risk of injury, and they must be standing for a minimum of 1 minute before the test to ensure they are calm and have completed any elimination behaviours (e.g., defecation and/or urination).
- **Live observation:** This test is designed for live scoring of animals' responses to the approach of an unfamiliar human. The trained observer must be trained by a trained observer for all possible scores in Table 1 prior to testing.

Procedure

1. A trained observer ensures that the focal animal(s) is/are standing.
2. Once the focal animal(s) are standing, the trained observer initiates a 1-minute waiting period and moves to the test position at least two stalls away from the test animal.
 - If focal animal lies down during the 1-minute wait period, the trained observer must encourage the animal to stand and initiate another 1-minute waiting period before beginning the test.

NOTE: The testing assistant must not have had any previous contact with the animals and cannot assist the trained observer with the steps mentioned above.

3. After the 1-minute waiting period, the testing assistant moves to the starting position approximately 2 meters in front of the focal animal, standing with their arms at their sides and head facing the animal.
 - If the animal is not looking at the testing assistant—for example, if it is eating—the testing assistant must capture the animal's attention by gently clapping or snapping their fingers to redirect its focus.
4. Once the animal's focus is on the testing assistant, the testing assistant signals the trained observer that the test has started by briefly raising both arms and then lowering them to their thighs.

5. Once the signal is given by the testing assistant, the trained observer starts a timer and records the animal's behaviour by assigning a score for each stage of the test (see Table 1) and by noting the latency of first contact with the human, defined as the time it takes for the animal to touch the human.

6. The testing assistant moves towards the animal following the five test stages (Figure 1):

Stage 1: The testing assistant stands still for 5 seconds, positioned 2 meters in front of the animal.

Stage 2: After 5 seconds, the testing assistant takes one step forward and remains standing for another 5 seconds.

Stage 3: The testing assistant takes a second step forward towards the animal and again remains still for 5 seconds.

Stage 4: The testing assistant extends one arm in front of the animal at approximately eye level (choosing the left or right arm depending on the animal's head position) and holds this position for 5 seconds.

Stage 5: Lastly, the testing assistant swings their raised arm in a slow but deliberate motion towards the animal's head and try to grasp the chain as close to the collar as possible. The testing assistant maintains this position for 5 seconds before releasing the chain and stepping back. If the animal struggles (i.e., vigorously attempts to pull away), the testing assistant must release the chain immediately and step back, ending the test regardless of whether the 5 seconds have elapsed.

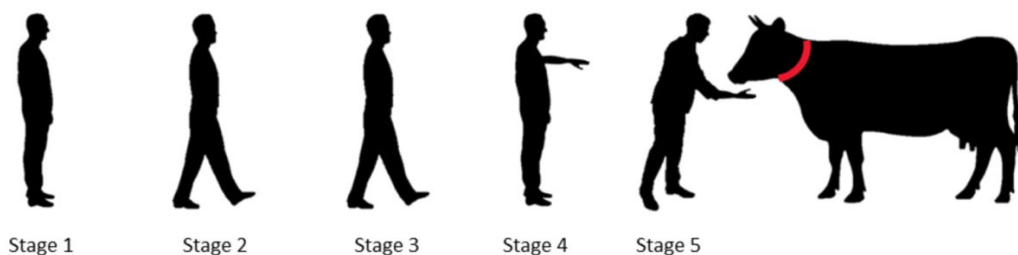


Figure 1 Diagram illustrating relative postures and movements at each stage of the test.

NOTE: If at any stage during the test the animal exhibits aggressive behaviour or poses potential risks to testing assistant, the trained observer should immediately declare "end test" before the scheduled conclusion. In such cases, no scores are assigned to this animal for the remaining stages, and "N/A" is recorded in all corresponding data cells.

7. Repeat the test for each animal two more times with at least 5 minutes gap between tests for the same animal.

Table 1. Measures recorded and scores given to cow's reactions on each step of the human approach sequence.

Score	-3	-2	-1	0	1	2	3
Definition	Steps back more than 2 steps, chain stretched to max (and/or hidden head)	Steps back (1 or 2 steps) / struggles (for the last stage only)	Turns head back or away	Looks at the person	Approaches the person without touching, sniffs	Approaches and touches the person	Tries to lick/catch the person with the mouth (clothing or hand with the tongue or the lips).

Safety Note

All personnel should stand with proper distance from test animal to stay safe and not distract them.
All personnel should remain calm and avoid sudden movements to prevent startling the animals.

AI ASSISTANCE DISCLOSURE

Microsoft 365 Copilot, an AI-based writing and editing tool was used to support language refinement, structural clarity, and consistency of technical descriptions.

CREDIT AUTHORSHIP CONTRIBUTION STATEMENT

WELL-E Authorship Governance policy, adapted from the Contributor Roles Taxonomy (CRediT) proposed by Brand et al. (2015).

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* WELL-E authors and co-authors, who take accountability for the manuscript, must contribute to each stage of the paper. These stages are conceptualization/design, data analysis, and writing & editing.