

DESIGNING FIELD TRIALS TO INTRODUCE SATO TO HOUSEHOLDS

SAMPLE INSTRUCTIONS FOR A 4-WEEK FIELD TRIAL OF THE SATO SLAB

1. Introduction and Objectives

The objective of this protocol is to obtain feedback on the user experience with the SATO Slab, to inform future expansion or scale up of activities. The SATO Slab was initially designed for humanitarian markets, and this field trial aims to learn if the SATO Slab would be accepted in a household setting. In addition to consumer feedback, we want to gather feedback from installers about their experience with the installation of the product in a household setting.

The field trials are planned to run for 4 weeks. We suggest gathering feedback from at least 5 households, if possible with your budget/resources, to gather meaningful insights.

If you're comparing the SATO product with other solutions, please do not allow participants to see comparators before they have had the opportunity to use the assigned product for the planned duration of the field trial. At this point in the study they should only be shown the version assigned to their particular setting or households.

2. Households

2.1 Selection of Testing Areas (e.g., districts, villages, etc.)

At least 3 weeks prior to the start of installations, partner should select appropriate areas for field trials. A couple parameters you may consider in your selection:

- Coverage of pit latrines at least 50% of households.
- Reasonable level of water availability. Participants must be comfortable with the possibility of using up to an additional 1 liter of water per person per day to flush/clean the toilet.
- Population density of at least 150 per square kilometer.
- Reasonable proximity to markets where other manufactured household goods / hardware are available.

2.2 Household Selection

At least 2 weeks prior to the start of installation, partner should select appropriate households within each target district for field trials. Selected households should meet the following criteria:

- Households should own an existing, family latrine of mud / wood / concrete construction.
- Check for latrine size. Interior floor space must be at least 1200mm (length) by 800mm (width)
- Latrine is not shared with neighbors – used and cared for by household family

Household should have an interest in improving their latrine.

Household income should enable purchase products in the \$40 to \$70 price range.

Subjects should cover a relatively wide area and be spaced apart from other households in the field trial so that opinions of one user do not influence others.

Participants should not be family members or close friends of other households in the trials.

Participants should be located sufficiently close to markets where plastic household products can be purchased.

2.3 Household Pre-Installation Interview (on the day of installation)

Before installation of the field trial product, each household should be interviewed regarding their existing situation and latrine. They should not be shown images or actual samples of the trial product before asking and documenting this first set of questions:

- Basic demographic information on the family:
- Number of people in household
- Ages
- Sources of income?
- What is your source of water?
- How far?
- How much does it cost?
- How long ago did you get your latrine?
- Who uses the latrine?
- Who is responsible for cleaning your latrine?
- Who built your latrine?
- What did it cost you to construct the latrine?
- Where did you purchase the supplies needed?
- Did you consider purchasing any products to improve your latrine, such as a plastic slab, ceramic pan, concrete slab, etc.?
- How long do you expect this latrine to last?
- Have you ever emptied it? If so, how? Who does it?
- What do you think of it? Likes, dislikes?
- If you could improve it, what would you like to do?
- How would you describe the ideal toilet?
- Would you prefer a sitting or squatting toilet? Why?

- How much money would you spend for this ideal toilet?
- Would you prefer a seated toilet or squatting toilet? Why?
- Have you had any problems with your latrine? What were they?
- When you have extra income, how do you spend it? What would you buy if you had an extra \$20 USD?
- What is the last thing you purchased for your home? How much money did you spend on it?

After documenting the above information, the field trial participants should be shown the product that will be installed and asked to discuss the following:

- Collect all initial impressions and comments.
- How do they assume it should be used?
- What would be the benefits?
- What would be the disadvantages, if any?
- How would you install it? Does it look easy to install or difficult? Would you install yourself (i.e. a family member) or hire a handyman?
- How much would you expect to have to pay someone to install it?
- If you wanted to buy such a product, where would you go?
- How much do you think it would cost?
- How much would you be willing to pay?

2.4 Installation

When interviews are complete, a joint team (partner, LIXIL, local/national official, mason(s)) should proceed to retrofit the household latrine with the new product.

Important - The SATO Slab requires at the very minimum, 100mm support along each short end of the slab (when supported as such, the weight capacity is rated at 150kg). For this trial, we anticipate the installations to be retrofit to existing latrines as described in section 2.2.

For retrofit installations:

1. Take photos of the existing latrine. Capture images of the general structure and condition, flooring type, size of opening, etc.
 - a. Check if there is a seal in the toilet, e.g. P-Trap water seal, mechanical seal, etc. Document with pictures.
 - b. Check if the pit is direct or offset. If other treatment systems are used, e.g. septic tanks, document.
2. Remove four iron pegs taped underneath the slab.
3. Assemble the slab and pan using enclosed six screws.
4. Attach flap door to pan.
5. Get a feel for the size of pan and door protruding on the underside of slab.

6. Check the size on of the latrine hole in the floor.
 - a. If the hole size is too small for the pan and door to be inserted and for the door to move freely, enlarge the hole using tools appropriate for the floor material (machete, etc.)
 - b. If the hole size is adequate for the pan and door to fit inside comfortably and for the door to move freely, proceed to next step.
7. Carefully lower the slab to the floor, aligning the pan and door in the latrine hole.
8. Check that the slab sits flat and level on the floor without any rocking.
 - a. If you sense any movement in the slab, lift slab off the floor and level existing floor within the outline of the slab
 - b. If no movement/rocking is detected, proceed to next step.
9. Attach slab to floor.
 - a. If mud floor, drive the four iron pegs through the four holes in the corners of the slab, and secure the perimeter of the slab by packing mud or cement.
 - b. If wood floor, find suitable screw long enough to secure through the four holes in the corners of the slab, and/or applying cement around the perimeter of slab
 - c. If cement floor apply cement around the perimeter of slab to secure to floor.
10. New latrine construction: The SATO Slab was designed to be installed in new construction latrines. In the case of new construction, follow the instructions in the installation manual. Clean the area of the finished installation. Take photos to document installation.

When installation is complete, instruct the homeowner / participant on the intended use of the product. Demonstrate use of PET water bottle for minimizing water usage requirements. Collect any immediate feedback from participant.

2.5 Short-term Check-ups

Check-in with all households within 2 weeks of installation to collect high-level feedback and probe for any serious issues. In-depth interviews are not necessary at this time. It is only a check to verify that there are no major problems with the product or installation.

2.6 Final Interviews

Return to all households within two weeks of the trial closure date. Conduct a full closing interview including the following observations and questions:

- Observe condition of latrine: Is it clean? Is there water in the door? Does the product appear to be in good working order? Any damage visible? Have improvements been made to the shelter since installation?
- Ask the homeowner to demonstrate how they „flush“ the toilet after use? How much water are they using? How are they applying it? What type of vessel is used?
- How much water do you need per use? Long call vs. short call?
- How much water is the family using per day in total?

- How much water per person per day do you think the toilet uses?
- Is the amount of water the new toilet needs acceptable to you?
- Do the benefits outweigh the extra use of water?
- Has everyone in the family been using the latrine every day? How many people?
- What do you like about the product?
- Have you ever had any problems with it? Is there anything you do not like about the product?
- What could be improved?
- Do you like the color? What other color would you like?
- How was cleaning the slab?
- How stable was the slab during use?
- Did you feel any bounciness of the slab during use? If yes, rate from 1 (little bouncy) to 5 (very bouncy)
- Did you feel any slipperiness of the slab during use? If yes, rate from 1 (little slippery) to 5 (very slippery)
- Have your neighbors seen it? What do they think?
- If you wanted to buy such a product, where would you go? To which market?
- How much do you think it would cost?
- How much would you be willing to pay for it?
- If the product were available for \$20, would you buy it? Do you think many of your neighbors would buy it? Why?
- If the product were available for \$40, would you buy it? Do you think many of your neighbors would buy it? Why?
- If we were to offer to buy it back right now for \$60, would you sell it? Why?
- If we were to offer to buy it back right now for \$80, would you sell it? Why?
- For what price would you sell it to your neighbor?

After the questions, observe the slab and note:

- Do you see any substantial damage on the slab?
- Do you see any discoloration of the slab?
- Is the door movement free?

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