



Introducing social behavior change to agricultural development

While many approaches have been developed to promote agricultural development over the past 50 years, success has been localized and not readily scaled. Almost all initiatives have involved the promotion of packages of technology, frequently involving a range of interdependent practices, with failure to perform all the activities often leading to disappointment. An exception was the Green Revolution when such practices were limited to four areas—variety, fertilizer, pesticide and irrigation—and, against a backdrop of widespread famine, were accompanied by intense government and donor interest in staple cereal crops. Research, extension and funding, including widespread subsidies, were mobilized. Such a situation is unlikely to recur in the present development environment.

To promote healthy behaviors, the health-related sectors have focused on identifying a few key factors involving simple changes in behavior that are easily understood, using simple messaging and developing methodologies to extend them. This social behavior change, or SBC,¹ approach, emphasizing social and behavioral, rather than technical, solutions has enabled them to achieve impact and scale. The sectors have now established a series of industry-wide best practices focusing on the promotion of behavior changes that are simple to roll out within a short time frame.

Just as some simple practices are applicable across the health sector in most countries, so too can some agricultural practices be applied widely across the sector. Basic principles, based on long-established scientific research, abound and yet are not practiced by many farmers. Adherence to these principles offers significant increases in productivity, along with greater resilience and reduced risk.

Over the past 7 years, in the Middle East and Central Asia, CRS has been committed to testing how the learnings from SBC in other sectors can be applied to impact people's lives at scale through agricultural behavior change.

Which behavior?

Fundamental to the SBC approach is the identification of behaviors broken down into component parts; e.g. handwashing with soap at five key times. Comparable behaviors had not been identified in the agricultural livelihoods sector—with its emphasis on packages of technology to achieve near-maximum productivity—and this proved very challenging for CRS project staff. Based on adult learning principles² and field experience over recent years, CRS developed criteria to aid selection of appropriate behaviors, while taking into account that our beneficiaries—the poor and vulnerable—have few spare resources, are risk averse, are concerned about meeting immediate needs, and do not have the luxury of long time frames. The criteria are that the chosen practice should be immediately relevant to people's priority concerns, simple, low-cost, low-risk, and capable of giving a measurable (30+ percent) increase in productivity.

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Five criteria to identify scalable practices

CRS has identified key criteria for identifying scalable practices:

- Immediately relevant to people's priority concerns
- Simple
- Low-cost
- Low-risk
- Capable of giving a measurable (30+ percent) increase in productivity

1. Food Security and Nutrition Network Social and Behavioral Change Task Force. 2013. *Designing for behavior change for agriculture, natural resource management, health and nutrition*. Washington, DC: Technical and Operational Performance Support (TOPS) Program.

2. Smith MK. 2002. *Malcolm Knowles, informal adult education, self-direction and andragogy*. The encyclopaedia of informal education.



Through trial and error, CRS has developed a simple methodology to identify possible behaviors. Building on a solid understanding of households' concerns and perceptions, the behaviors should address their priority stated needs, as people are more likely to change a behavior if it addresses a significant perceived need. This process depends on a sound assessment identifying the key barriers to livelihood security or other aspects of people's primary livelihoods, and must include both male and female household members, as they are usually involved in the planning of activities and in field operations. It requires an understanding of socio-cultural factors and pragmatic, technical experience.

It was found that while households could feel or express a need, technical experience was required to identify gaps in practices or outcomes that presented the potential for improvement.³

Figure 1: Potential gains and adherence of each behavior to the five criteria | Small ruminant production | Palestine

Behavior change	Behavior outcome	Overall income increase
Milk hygiene practices	10% increase in dairy income	+2%
Feeding during lactation	10% increase in milk yield	+2%
Market access for dairy	15% increase in dairy income	+4%
Rangeland management	10% increase in feed available	+5%
Access to vaccination	15% increase in lamb and milk production	+12%
Improved livestock shelter	15% increase in lamb survival	+15%
Feeding at mating	20% increase in conception	+15%
Water freely available	20% increase in lamb and milk production	+22%
Feeding in late pregnancy	30% increase in lambs born live	+25%

Depth of row indicates relative magnitude of potential gain

Criteria for behavior selection

- (1) Immediately relevant to people's priority concerns
- (2) Simple (3) Low-cost
- (4) Low-risk (5) Capable of giving a measurable (30+ percent) increase in productivity

- Fulfills most criteria
- Fulfills many criteria
- Involves a major constraint

For example, on the Palestinian West Bank, where livestock rearing is a major income source, almost all households were concerned with the cost of animal feed, much of which is imported from neighboring Israel. As CRS could not influence the import sector, we looked at a means to better use the feed available. To identify the most promising behaviors, CRS introduced a five-step process carried out in partnership with households, partner staff, researchers and extension services, among others. In this case, because most produce was sold, productivity was measured as cash income. In other cases, contribution to food security, or simply yield, have been used.

- CRS technical staff identified all the processes that affect the efficiency of feed utilization and presented these as a table (Figure 1, column 1).
- CRS technical staff and outside experts quantified the benefits and impact on productivity if a process was improved, and adjusted the depth of each row to represent the magnitude of the expected outcome. This step required a literature review and consultation with experts in-country and in neighboring countries.
- The sections were shaded according to the five criteria to aid selection—immediately relevant to people's priority concerns, simple, low-cost, low-risk, and capable of giving a measurable (30+ percent) increase in productivity—using three colors to depict whether they fulfilled most of the criteria, many of the criteria, or involved a major constraint. This was subjective, and a scoring system, from 1 to 5, for each criterion enabled one or two behaviors to stand out.
- Using this methodology, it was shown that reallocation of quality feed to ewes in late pregnancy would give a significant increase in productivity, due to the birth of larger, healthier and more robust lambs, and a reduction in lamb deaths. This would be simple and low-risk, involving a minimal increase in cost or labor, and produce results within a single breeding season.
- The options were discussed with households to identify the most appropriate. Discussions were often held separately for men and women to allow freer discussion and a clearer understanding of potential implications for gender roles and responsibilities, and control over resources. This involved a balance of conclusions drawn from expert experience and normative practices with community-identified priorities and solutions. In all cases to date and across the different circumstances, communities chose the most promising behavior identified using this tool.

3. Catholic Relief Services. 2015. *ProPack I*. Chapter 4. CRS: Baltimore.

4. Rogers E. 1962. *Diffusion of innovations*. Free Press: London and New York.

Who should be targeted

Rogers (1962)⁴ developed a simple theory of how a behavior is progressively adopted within a society for which the behavior is applicable (Figure 2). The process is driven by a small group of innovators and early adopters who modify and adapt the behavior to local conditions. This may take many years for complex agricultural practices. Following them is the majority of the community who have been observing the early efforts and who become convinced that the behaviors are appropriate for them. Bringing up the rear is a small conservative group that needs reassurance of success before trying the behavior. Three conclusions can be reached from the figure:

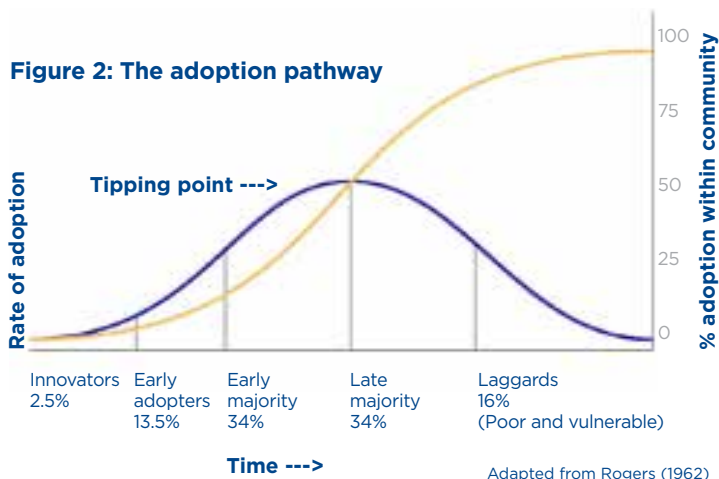
- Simple practices that require less farmer modification will be adopted faster by the whole community.
- To drive the process, innovators and early adopters need to be included in the targeting.
- The poor and vulnerable are usually more conservative and thus targeting only this group, which would then not be able to observe the results of others, will not work or severely delay adoption.

Thus, interventions should target all households within a community rather than just a selected group, although extra attention may be given to the poor and vulnerable, to ensure their active participation from the beginning.

Delivering the message

Adults learn through practical experience and discussion (Figure 3), and these must form the basis of the training methodology. CRS has found that field staff often resort to lecturing, so hands-on training and experience in facilitating discussion-oriented trainings within a limited time is essential. Follow-up is required to discuss issues at “catalytic moments” as households try to implement the behaviors, because errors leading to failure can adversely influence other community members. Similarly, field staff must have sufficient technical information to be able to confidently respond to questions.

Reflection sessions with training participants have clearly indicated that trainings should be short—less than one hour—to minimize disruption to daily household routines. This was particularly mentioned by women. Similarly, many respondents asked that the number of sessions be kept to a minimum, and were against bi-weekly or monthly meetings. Instead, they preferred demonstrations and gatherings at key moments. Women, in particular, appreciated identical trainings being given to a man and a woman from each household. This was felt to facilitate household discussion and decision-making.

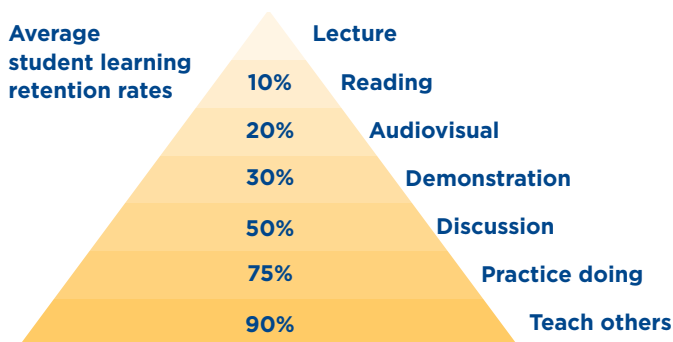


Messaging in practice

Based on feedback, accepted theory and health sector best practices, CRS has developed a flexible, focused approach incorporating the following features:

- No more than three trainings or sessions to be given within a year for any one set of behaviors, usually as an introductory explanation and two trainings just prior to two catalytic moments: when visual differences can be clearly seen and when outcomes can be discussed.
- Trainings are open to the whole community.
- Trainings include a man and a woman from each household.
- Each behavior should correspond to a maximum of three key messages.
- Trainings should be no longer than an hour.
- Trainings should be focused on discussion and practice.
- Demonstrations should accompany trainings wherever possible.
- Follow-up and accompaniment by project staff must be planned and focus on key moments to address farmers’ issues in a timely manner.
- Community-wide assessments of the demonstrations should be held at catalytic moments: twice in the production cycle when the effects of the behavior change are most visible, e.g., for potato-planting practices, six weeks after planting when the difference in vegetative cover is greatest, and at harvest when yields and quality may be compared.

Figure 3: The learning pyramid



Source: National Training Laboratories, Bethel, Maine

Outcomes

The outcomes of five interventions are described in the accompanying briefs. These cover a range of agricultural situations: geographic, subsistence or cash-crop farmers, crop establishment, irrigated crops, livestock feeding and shelter, and crop storage. In all cases, an increase in productivity—measured as yield, income or food security—of at least 30 percent was achieved within a 12-month period, clearly demonstrating the flexibility and robustness of the approach.

Productivity outcomes of the varied demonstrations were close to those estimated in the behavior identification process, indicating that the behavior-selection criteria are sufficiently robust to address diverse constraints. Widespread adoption within the targeted communities indicates that the selection criteria successfully address important social and behavioral issues in addition to production or income characteristics; the training approach is appropriate; and the SBC methodology fits well with informal farmer learning methods.

Scaling

The goal of the approach was to have an impact on people's lives at scale. CRS now has the requisite evidence to do so. The simple messaging is well suited to both traditional messaging media, such as posters, leaflets and radio slots, as well as ICT platforms, such as text messages or short videos. These opportunities will now be pursued.

Lessons learned

A wealth of knowledge and experience was generated. Key lessons learned from across all projects include:

- In all cases, technical expertise was required to identify the potential behaviors, but was supported by local insights, field observations and discussion with farmers at different times of the year to add context.
- Consultation with men and women during each field visit was necessary to validate and understand their respective perspectives.
- Field staff were generally unaware of adult learning principles and methods, and preferred to use a lecture format for trainings. Prior training and mentoring in facilitating discussion and demonstration is key to success.
- The higher the cost to them of changing a behavior, the longer participants observed neighbors before trying the practice themselves.



Overview of briefs

- Productivity increases of at least 30 percent are readily achievable within 12 months (All briefs)
- Consideration must be given to labor input (Brief 4)
- The approach reduces farmers' risk exposure when trialling new practices (Briefs 1, 3 and 5)
- Getting the basic husbandry practices right builds a sound platform upon which to build resilience to various stresses, especially drought (Briefs 1 and 5)
- Provision of simple key messages and associated behaviors allows households to adapt the behaviors (Brief 4)
- Trainings should be open to all community members (All)
- Involvement of a man and woman from each household improves household discussion and decision-making (Briefs 1 and 2)
- Demonstrations are desired by households and function best when discussions are held at catalytic moments (All)
- Follow-up at catalytic moments when households put their new learning into practice for the first time is essential to prevent mistakes and encourage adoption (Brief 2)
- Households select behaviors that give quickly significant, observable results (Brief 4)
- A high rate of success with the first interventions leads to farmer enthusiasm to try other simple behaviors (Brief 2)
- When multiple behaviors are presented as a package, households will select only a few. Thus, behaviors should be independent of each other (Brief 4)
- Households that had not participated in the trainings understood the behaviors from neighbors and were practicing them (Briefs 3 and 5)
- There was a high replication rate within target villages, while the replication between villages seemed slower (Brief 2)
- Doer/non-doer analysis enables accurate outcome assessment (Briefs 1, 2 and 5)