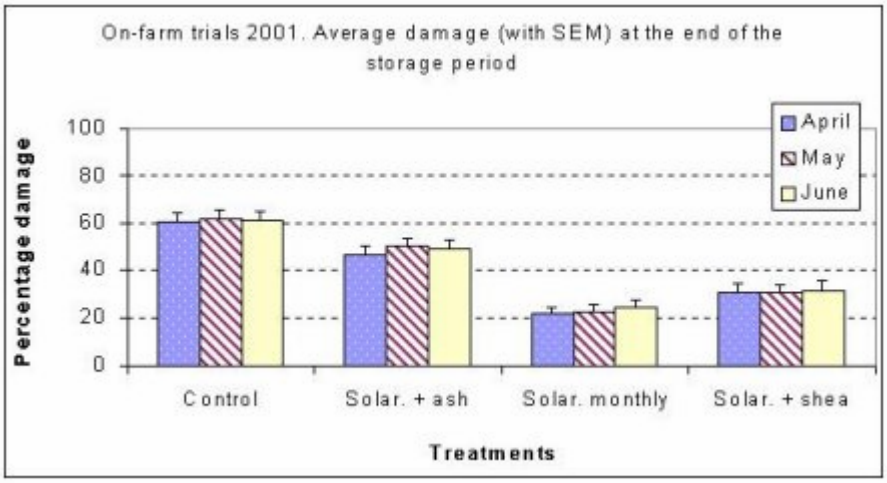
Summary of findings re farmers' trials (Ghana)

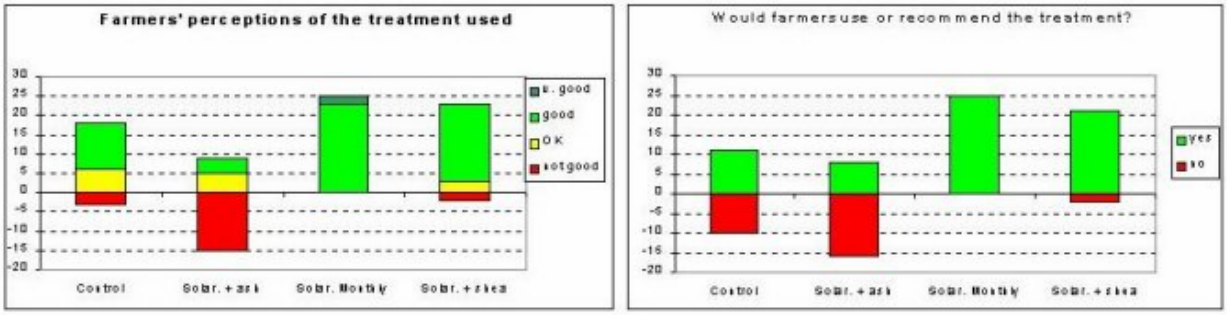
In the third year, 100 farmers from the 2 villages where the previous trials took place, Kpugi and Wantugu, in Gushegu district, Northern Region, ran the on-farm trials. The 3 best treatments from previous trials, and a non-treatment as control, were allocated randomly, and the farmers received training in the application of the treatments, from the project staff.

The trial started in November 2000, and lasted over the whole storage season, until July 2001. Percentage damage was recorded monthly from each farmer's cowpea. The average damage for each of the treatments at the end of the trial are shown on the following chart:



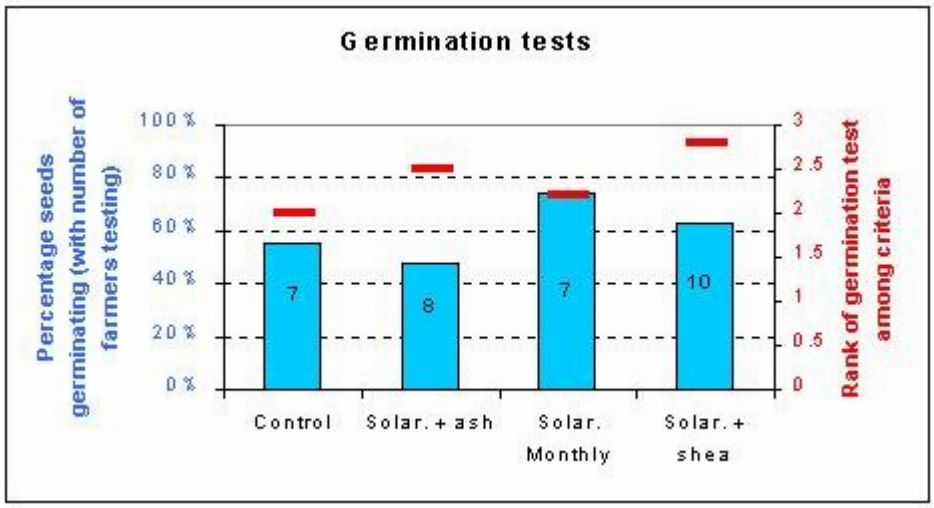
Average percentage damage (with SEM) at the end of the storage season

At the end of the trial, farmers' perceptions of the treatments were recorded using an individual questionnaire. The results of the questionnaire were then shared and discussed with the 2 communities. The charts below show the answers given to the questions: "What do you think of the treatment you have used?" and "Would you use the treatment again after the trial, or recommend it?"

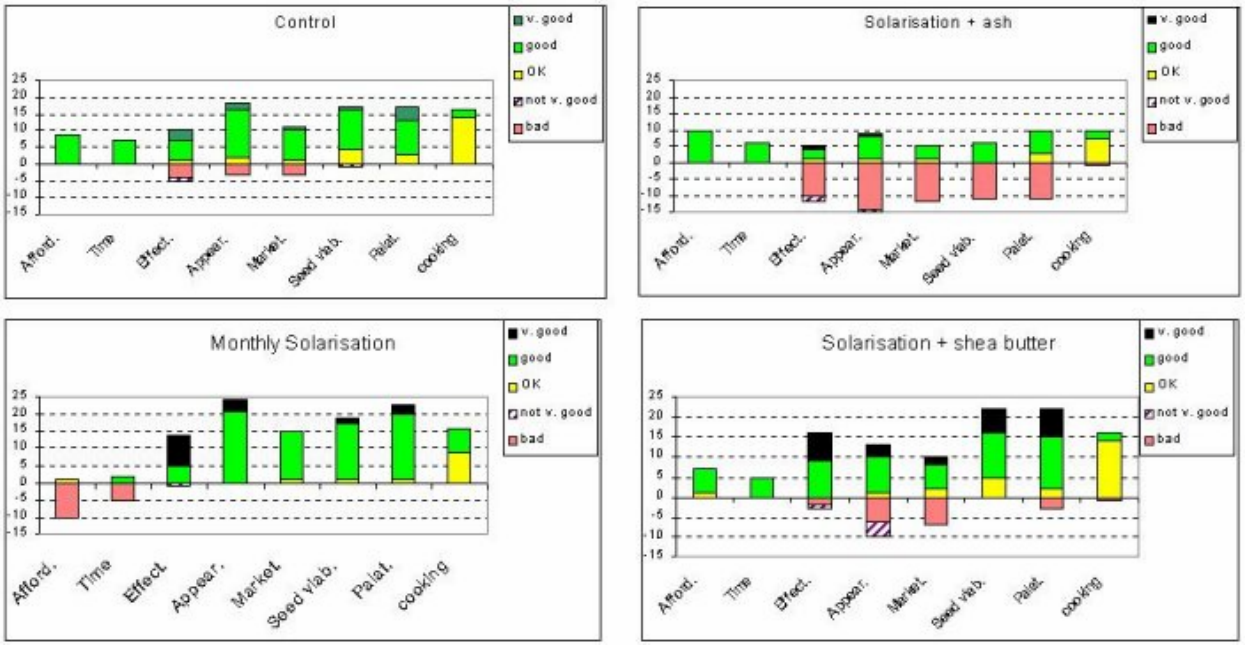


Above the horizontal axis, positive answers, below, negative answers (number of answers).

Farmers were invited to test their cowpea for germination, at the end of the trial. The results were positive, as shown below:



For each of the treatments and the control, farmers specified which criteria (in positive or negative) they used to judge the value of the treatment they had applied. The criteria used were: affordability of the materials, time involved, effectiveness, appearance of the cowpea, marketability, seed viability, palatability and cooking time:



The results from the questionnaires were:

- solarisation repeated monthly is the best treatment, its only drawbacks were perceived to be its cost, and for some respondents, the time involved.
- solarisation followed by admixture of shea nut butter is also good but not for marketing purposes; the seed viability was liked.

- solarisation followed by admixture of ash was rejected, on almost all accounts.

These results were shared with the communities, and their conclusions were:

Solarisation repeated monthly is a very good treatment. Most farmers want to use it to protect their cowpea. The 2 perceived drawbacks were discussed and women said that the time involved would not be a hindrance, as they can keep an eye on the cowpea during solarisation whilst doing other household duties like cooking, washing etc.

The cost was discussed in terms of a cost-benefit analysis: the profit to be made by selling cowpea in June or July, when it is scarce and therefore expensive is at least 100% of the lowest price at harvest. It was found that an investment of 15% of the expected profit would secure the material necessary for solarisation, and all farmers agreed that this was a very worthwhile investment.

In both villages, farmers decided to purchase the materials themselves to treat their cowpea for the next storage season, and requested that project staff would come back to the villages to provide advice if necessary.

Solarisation at harvest followed by admixture of shea nut butter is a good treatment, but because of the appearance of the cowpea, it cannot be used for marketing. Farmers said that the treatment was however very good for seeds, as the germination was high in their tests, and some even liked the taste of the cowpea (shea nut butter is also traditionally used for cooking). The conclusion was that for treating small quantities of cowpea that will not be sold, this treatment is good.

Solarisation at harvest followed by admixture of ash was rejected, as it did not protect the cowpea.