All non-governmental organizations (NGOs) operating under the current humanitarian relief programs attempt to target their efforts at vulnerable households. However, in a growing number of cases it appears that relief efforts are reaching the better-than-average farmers, instead of the most vulnerable ones. This has called into question the criteria used to determine the vulnerability of a household.

In general, various NGOs use similar criteria to establish the vulnerability of a given household. These commonly include the following proxy variables:

- household headed by women
- household headed by a child
- presence of the elderly, widows and/or widowers
- presence of orphans or chronically ill persons
- limited cash income and no formal employment
- household with no cattle or limited assets
- household with high dependency ratio

It is important to notice, however, that this list does not directly measure the food security status of a household, which is a relatively difficult task. Instead, it is based on a series of assumptions. For example, there is an assumption that a household headed by a woman is more likely to have a food deficit. But there are a few female-headed households that are relatively well off. NGOs assume that the application of a series of indirect vulnerability criteria is an adequate substitute for the lack of a direct measure. The results from recent ICRISAT surveys indicate this is not necessarily true.

There is a need to assess the accuracy of these criteria during both urgent initial emergency responses, as well as longer term recovery programs. Time is often at a premium at the start of any emergency response. And typically NGOs seek assistance from village leaders to identify households using a range of vulnerability criteria reflecting donor and NGO preferences. However, more efficient targeting can be achieved if a simple, transparent set of guidelines can be agreed upon by the donors, the NGOs, the Government of Zimbabwe and local communities.

Who Are the Recipients of Relief Programs?

According to ICRISAT surveys in 2005 (Table 1), NGOs were only partly successful at applying the vulnerability criteria cited above. Female-headed households were undoubtedly more likely to receive

<table>
<thead>
<tr>
<th>Household characterization</th>
<th>Recipient</th>
<th>Non-recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female-headed (%)</td>
<td>40.4</td>
<td>17.6</td>
</tr>
<tr>
<td>Chronically ill (%)</td>
<td>48.9</td>
<td>42.8</td>
</tr>
<tr>
<td>Recent deaths (%)</td>
<td>23.9</td>
<td>14.4</td>
</tr>
<tr>
<td>Presence of orphans (%)</td>
<td>4.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Dependence ratio</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>School dropouts</td>
<td>27.7</td>
<td>24.7</td>
</tr>
<tr>
<td>Off-farm income (%)</td>
<td>24.9</td>
<td>22.9</td>
</tr>
<tr>
<td>Owning cattle</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>2004 Grain production (kg)</td>
<td>748.6</td>
<td>847.9</td>
</tr>
</tbody>
</table>

Source: ICRISAT/FAO monitoring surveys for 2004/05 input relief programs
inputs than those headed by males. Households with chronically ill adults (a proxy measure of the incidence of HIV/AIDS) were also more likely to receive agricultural inputs. Households with recent deaths, another proxy indicator of HIV/AIDS, were also more likely to receive inputs, as were households with orphans. Households with children who had dropped out of school (a proxy for household poverty) were marginally more likely to receive assistance. Unexpectedly, households with access to off-farm income were also likely to receive agricultural inputs.

However, these characteristics were not closely related to the seed and food security status of the households. The availability of planting seed closely correlates with the previous season’s harvest. Yet recipients of seed from NGOs harvested only 13% less than the non-recipients of relief input assistance. Farmers with cattle were less likely to receive inputs. But this relationship was neither as strong as expected, nor as consistent. By inference, at least some of the households receiving inputs were relatively well endowed.

**Vulnerability Effect on Food Production**

Results of the ICRISAT surveys enabled a check on the relationship between the various indicators of vulnerability and the estimated levels of total grain production. This tested both the food security status of most households, as well as the relative accuracy of the proxy measures of vulnerability commonly used. In practice, there should have been a more significant difference in the food security status of recipient and non-recipient households if NGOs had been successful in targeting seed and fertilizer to households with the largest production deficits in the previous season.

According to Figure 1, the proxy variables chosen to indicate vulnerability status do not accurately reflect the poverty or food insecurity status of the household. There is no statistical relationship between female-headedness and harvest levels. Similarly, there is no statistical relationship between various proxies for HIV/AIDS incidence such as the presence of orphans, or the sickness of an adult, and harvest levels. It is possible to find extremely poor and food insecure households with many orphans and no men. But the existence of such households does not justify the use of these proxies for food insecurity.

Cattle ownership offers a basic indicator of wealth. Whereas farmers commonly borrow or rent draft power, ownership improves the capacity of a farmer to plow and plant fields on a timely basis relative

![Figure 1. Relationship between vulnerability indicators and 2005 cereal production.](image)
to rainfall events. This is particularly important in drought-prone regions where rainfall tends to be highly variable. Households with draft power produced significantly more grain than those without draft access. In cases where farmers can access fertilizer, they are likely to increase crop productivity four times more than poor farmers with no draft access who do not use fertilizers (Figure 2).

Opportunities for Future Relief Program Targeting

1. Draft Power Access
A primary definition of vulnerability is food insecurity. This can be measured in terms of production levels during the previous season – perhaps offset by the possibility that a household has off farm income with which to purchase food. However, this variable is difficult to measure. The majority of households in semi-arid areas only rarely produce enough to meet their full annual requirements. And most have been conditioned to claim they do not have enough and need food aid. In this context, the best proxy variable for food security is ownership of draft power. This variable is easy to measure and has been consistently shown to correlate well with food security.

2. HIV/AIDS Affected Households
Further investigation is required on classification of vulnerability related to HIV/AIDS. There is need to better differentiate between poorer and wealthier households affected by HIV/AIDS and improve on effective targeting that avoids the assumption that all types of vulnerability are closely interlinked. Relief programs that target HIV/AIDS affected households may need to be separated from the general relief programs that target food insecure households.

3. Targeting Households for Conservation Farming
There is an ongoing debate about the labor demands required for households to fully implement conservation farming (basin tillage), and whether or not it is appropriate for the most vulnerable households, assuming that the definition of the most vulnerable is clear. Yet, 95% of all households have achieved considerable increases in grain yield (35–50%) from their conservation farming plots. The question that needs to be answered over the next two to three seasons is what total area will different households be willing to practice conservation farming on, as household labor resources will be the limiting factor.

Figure 2. Per capita cereal production in alternative production classes, 2005.
4. Gender Equity

It is argued by many that women are often left out of agricultural development programs. However, under the current Protracted Relief Program, ICRISAT monitoring suggests that the participation of women in the testing of conservation farming and micro-dosing is high. Women are encouraged to participate in training sessions and field days, and currently host at least 50% of the demonstrations in most areas in southern Zimbabwe.

The ICRISAT surveys reveal two major issues related to the targeting of vulnerable households. First, donors and NGOs need to consider what constitutes vulnerability in greater depth. The common assumption that most female-headed households, or most households with orphans, are particularly vulnerable is not always true. These are not necessarily the households experiencing the worst production shortfalls. In fact, there appears little relationship between such classes of farmers and the absolute level of food production achieved. Second, NGOs need to determine which proxy variables can be quickly and easily applied in the field. One difficulty with the long list of indicators currently used, is that it becomes easier for the field staff to meet the target numbers set by the headquarters. There is less of the tendency for field staff to visit the households in question and judge their situation firsthand. Field staff are also frequently forced to cut corners if only to cover the requisite number of villages demanded of them. The above analysis suggests the necessity for a further assessment of key asset endowment variables, including livestock ownership and previous crop production levels. It is also necessary to explore options of selective targeting not only for drought relief programs, but other programs for female farmers and HIV/AIDS affected households.