5. Some farmers build cisterns in their villages to sell water to other farm families. They rely on local village trucks or Government trucks to haul water from other locations to fill the cisterns. (Water is hauled from places like Khor Tugget, El-Obeid, Ban Gedid, and Bano).

6. Some farmers use their camels or donkeys to haul water from other places back to their own villages.

7. Many farmers migrate to urban areas or mechanized farming schemes where water and employment are more plentiful. They usually obtain nonskilled occupations and work until the rainy season when water is once again available in the village.

8. Farmers owning livestock, especially cattle, take them to distant watering points every few days. One serious consequence of this pattern is that fodder becomes a serious problem because animal movements are restricted to within a certain radius of watering points. Another strategy which farmers use is to migrate with their herds to the south where fodder and water are more plentiful.

9. Some farmers depend heavily on watermelon as a source of water where water shortages are critical. One of the main reasons they plant watermelon in their sesame fields is to provide laborers a source of water. Other farmers build up large supplies of watermelons and consume these throughout the dry season to avoid paying high water costs. In addition, watermelons are also fed to animals as a source of fodder and water.

Recommendations

1. Water access is a very delicate issue which has important environmental implications. Careful regional planning is necessary to ensure the optimal distribution of watering points. Increasing the availability of water to the rural areas may help alleviate some of the pressures on urban resources which result from yearly rural-urban migrations during the dry season. However, care must be taken to ensure that increased access to water does not lead to inappropriate animal husbandry practices which could endanger the region to desert encroachment. One possible way of approaching the problem would be to restrict some watering points only to human consumption. Other watering points would be accessible to animals and should be established in conjunction with the introduction of appropriate range management practices. A coordinated water program such as this is essential to maintain a good ecological balance in the region.

Other Constraints

A. Credit

It is chiefly through borrowing—often at high rates of interest—that poorer farmers are able to resolve cash flow problems and