

Groundnuts are a labor intensive cash crop usually planted close together in small plots. Since labor cost is high compared to sesame, farmers usually plant groundnuts in small separate stands to obtain the maximum production possible. Intercropping is sometimes viewed as detrimental to the potential output of this cash crop.

#### Intercropping Sorghum

Thirteen farmers in our sample grew sorghum in separate stands. Of these, 9 planted some other crop in their sorghum field. All nine of these farmers were from Umm Ramad, and all but one planted watermelon with his or her sorghum. These crops were usually planted in the same hole, which makes a lot of sense because these farmers own livestock, especially cattle, so fodder is an important consideration. Aside from being human food sources, sorghum stalks and watermelons are excellent sources of fodder. Once the sorghum heads have been cut and the large watermelons have been collected, the animals can be allowed to graze the fields. Thus, these intercropped sorghum fields serve the dual purpose of providing both human and animal food. This is an example of efficient use of limited resources.

#### Thinning

A considerable number of farmers in our sample indicated that they practiced crop thinning. Seventy-five percent of the 32 farmers interviewed had engaged in this activity.<sup>28</sup> In every case, thinning was done during the first weeding. Millet was the most frequently mentioned crop which was thinned (23 of 24, or 96%), followed by sesame (20 of 24, or 83%) and sorghum (12 of 24, or 50%).<sup>29</sup> Thinning for these farmers involves removing excess stems germinating from several seeds planted in the same hole. Some farmers could specify the number of stems they normally left after thinning for each crop, while others said they just removed excess stems with no specific number in mind.

Some major differences did exist between the three villages regarding thinning practices. In El Kharta, only 46 percent of the farmers interviewed practiced thinning (6 of 13). In contrast, all the farmers surveyed in El Geifil thinned their crops (5 of 5), and 93 percent of the farmers in Umm Ramad had engaged in this practice (13 of 14). Farmers in El Kharta said that they used to thin their crops in the past when their farms were smaller, but do not do so nowadays because the farms are larger and it would take too much time and effort to do it. Increased farm size does not seem to be a constraint for thinning in the other two villages.

#### Timing of Cropping Activities

An essential part of our farming systems survey involved eliciting information regarding the timing of cropping activities. With this in

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<sup>28</sup>The total was not 40 because not every farmer interviewed was asked this question.

<sup>29</sup>Groundnuts are not thinned because usually only 1-2 seeds are planted per hole.