

Water saving irrigation extension tools in Syria <Part 3>

Further to the discharge measurement kit, in this part, we would like to introduce a irrigation calendar which can tell the adequate irrigation water amount required.

In order to provide an optimal irrigation amount for crops, farmers need to know how much water is needed for different crops and how much irrigation water they need. However, many farmers and extension workers we visited for project activities told us that it is difficult to judge how much irrigation water is needed. Most of the farmers seemed to be deciding on irrigated water amounts based on their own experiences and what they might have heard from other neighboring farmers.

In Syria where water saving irrigation has become one of the important national challenges, irrigation research centers have been established specializing in irrigation in individual governorates. These centers actively conduct various experiments to establish the optimal amount of irrigation water for different crops for different types of irrigation. Although on a limited scale, they also invite farmers and extension workers, and introduce them to research results. However, most farmers still do not know how much irrigation is necessary. In our project, we investigated the reasons behind this, and came to the conclusion that the documents and explanations the researchers provide are more for specialists and are therefore too difficult for farmers to understand. Hence, information does not get passed on accurately. Therefore, the project developed the irrigation calendar as a means to communicate to farmers the adequate irrigation water amount based on the crop water requirement.

The irrigation calendar consists of two discs on top of each other, just like the constellation chart. By sliding the front disc and adjusting the bottom of the disc to a right planting or sowing month, and adjusting the top window to the applicable month, recommended irrigation timing and duration per time is shown. It shows one of three instructions - daily irrigation, every other day, or once in 4 days. On the back side, application conditions such as target area (governorate), crop type, irrigation method, are indicated. Recommended irrigation duration was estimated based on data from the irrigation research centers and using the crop water requirement as per the Penman-Monteith

Equation and irrigation intensity depending on different irrigation methods.

The irrigation calendar's theme is how simply (and interestingly!) it can be used. If we just write the same information on A4 paper, farmers may not see the content carefully and may simply throw it away. In order to introduce something new, taking the idea from the constellation chart, we made this a disk shape and sliding chart. Also, in order to ensure that everybody who uses this can read information accurately, we limited the information to a bare minimum – only the frequency of watering. When you ask Syrian farmers about irrigation regime, they usually respond like “every 10 days for 10 hours.” Therefore rather than indicating the “volume” of water, we decided to use “time”. The chart distribution was an integral part of the extension activities conducted by extension workers. They give the irrigation calendar, explaining to the farmers how to use the irrigation calendar and how much water and timing and duration of irrigation is appropriate for different crops.



Later on, extension workers asked the farmers about their impressions of the irrigation calendar. Many stated that they liked the simple system with only irrigation timing indicated. Some farmers voluntarily conducted an experiment comparing the yields from a plot cultivated using the irrigation calendar and another plot using the irrigation manners they had been always using. They confirmed that with the irrigation calendar, they could save water without compromising yields. The data we used in the irrigation calendar are collected from the research centers in Syria. The irrigation calendar was a memorable extension tool, which made us realize the importance of developing an optimal method for “communicating” existing information to farmers.

