

Water saving irrigation extension tools in Syria <Part 5>

In part 4 of this series, we introduced the irrigation notebook as a tool for farmers to understand the conditions of their farmlands. In this part we will discuss the digital irrigation note, which is the next version of the irrigation notebook. The digital irrigation note is an IT program which allows automatic computer compilation and calculation of the information and records that were entered in the irrigation notebooks. It can also conduct simple farm business analysis, generating graphs.

As discussed in the previous part of the series, it is essential for farmers to keep records in the irrigation notebooks, in order for them to achieve water saving irrigation in agriculture by themselves. However, daily recording in the irrigation notebooks is not necessarily easy for farmers to continue, as it is monotonous work and difficult to see the immediate benefits. Therefore trying to incentivize farmers to diligently record information in the irrigation notebooks was always our major challenge. Our conclusion was to encourage farmers to become genuinely interested in using the notebooks. For this we thought it would be important to let the farmers immediately know the progress achieved by using the notebooks. This led to the development of the digital irrigation note using computers.

The digital irrigation note is a program using spreadsheet software. By entering records from the irrigation notebook, it can automatically calculate irrigation water amounts and fertilizer amounts, and farmers can instantly check these in graphs. Moreover, by entering specifications such as crops, regions, and irrigation methods, the program can generate monthly recommended irrigation water amounts and the correct duration of irrigation. By inputting soil analysis results, fertilizer amounts recommended officially by the Syrian Ministry of Agriculture are automatically calculated. Furthermore, if you enter harvest amounts and production costs, benefit of the cultivation is generated

which is similar to the analyzing sheet in the irrigation notebook.

The ultimate aim of the digital irrigation note is for farmers themselves to use it. However few farmers had a personal computer and could use it in those days. Therefore, as an initial step, we decided to distribute the digital irrigation notes to extension workers for them to enter information from farmers' irrigation notebooks. Extension workers and farmers formed a pair and worked jointly on recording information in the notebooks. In this way, the extension workers could continuously monitor the conditions of the farms, and could provide appropriate advice to the farmers based on information from the digital irrigation notes including the duration of irrigation.

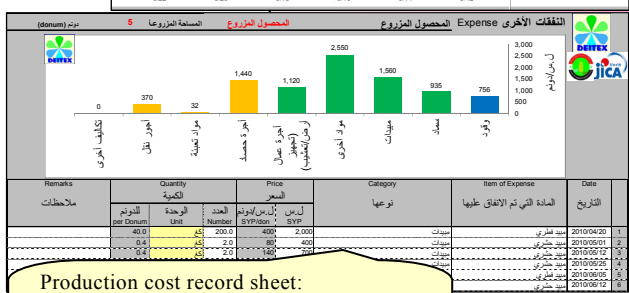
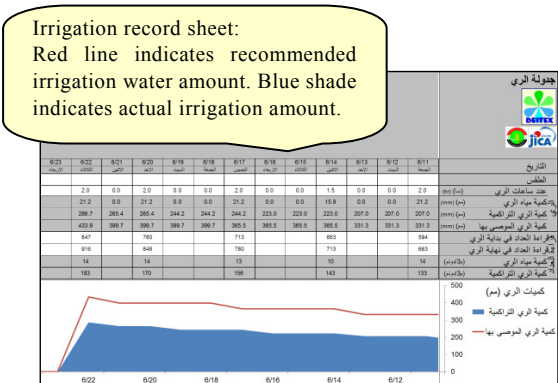
In the beginning, these activities only targeted our project's demonstration farmers. However it was a hopeful and fun project with some extension workers taking an initiative to expand the number of target farmers, and with some farmers coming forward asking to use the digital irrigation notes.



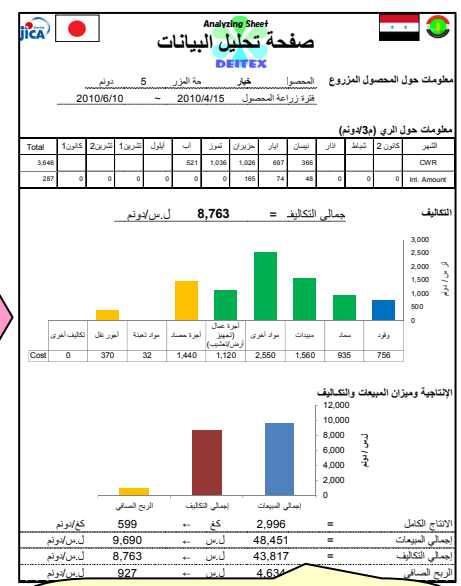
Providing guidance to extension workers on how to use the digital irrigation note



Explaining printed record results to farmers



Production cost record sheet:
Expenditure per item is shown in the bar graph.



Analyzing sheet:
Profits are calculated based on the harvest and production cost.