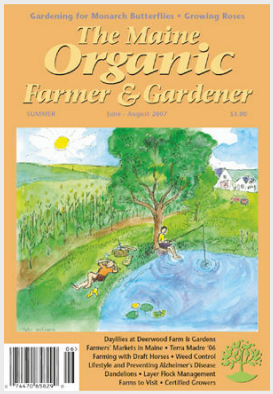
"Worms are the unsung heroes of our food chain. Their burrows allow oxygen and water to penetrate the soil, they add fertility and prevent flooding."

- Farming Today, BBC Radio



From the Farmhouse

Crop Planning Software for Small, Diversified Farms

by Clayton Carter

As you may have read in the article "From the Farmhouse: First Year Lesson's Learned" in the Dec. 2006-Feb. 2007 issue of this paper, we had a great deal of success during last year's growing season. Operating the farm at the site of the Common Ground Country Fair in Unity, we also had quite a few challenges. Some stemmed simply from our lack of experience, but many were rooted – we see now – in our lack of a coherent farm and crop plan. With no plan, our offerings at market, while always abundant, were generally erratic and of varying quality. Last fall, as I set about creating a crop plan for this year, I soon ran into problems that motivated me to take on a much greater task.

Experienced vegetable farmers all have crop plans that seem to take at least one of three forms: They're either all in their head, written on paper or recorded in a computer spreadsheet. Being a refugee from the world of computer programming, you might guess which tack I chose to attempt when I decided to create a crop plan. At first, my spreadsheet-based plan went really well; I could type in what I wanted to plant, and the computer would tell me when I would be likely to harvest; it could even tell me how many transplants I would need. I soon found, however, that my plan was becoming too detailed to be useable. Although it was very useful, it was difficult to look at the hundreds of lines of information in my spreadsheet and not feel overwhelmed. Considering that we'll plant over 300 varieties of over 40 crops this year, you can imagine how large and involved a plan of this nature could become. Spreadsheets are great at handling lots of calculations, but they fall short when it comes to managing or navigating information.

To wit: What if I wanted to see only my plan for tomatoes? I'd have to scroll through the whole list and look for tomatoes. Or what if I wanted to sort the plan by planting date? Possible, but involved: Select all of the rows, find the right menu, click on "sort," then select the columns to sort by. What if I sorted by the wrong column, or wanted to sort by a different column? Go through that process all over again. But what if I wanted to see only my storage plantings? What if, what if, what if...

Such hassles are the last things I want to deal with in the middle of July when I'm trying to remember how many storage carrots I had planned on planting or whether I need to get more seed for something or ... well, you get the picture.

"Enough!" I said. I can do better; we deserve better. To that end, I applied for and received funding from SARE, the Sustainable Agriculture Research and Education program of the USDA, for a project called "Crop Planning Software for Small, Diversified Farms." This project will address all the problems that I experienced (and more) by creating a dedicated software package for small farmers that will allow for creation, manipulation and navigation of detailed crop plans. It will allow farmers to easily sort and filter their plans (e.g., show me all crops matching "cabbage and storage" and sort that list by transplant date), and it will group common or large plantings together to keep the plan simple and uncluttered.

Another thing that irritates me about a spreadsheet plan is that, after taking the time to create the plan, one still has to transcribe it all to paper when ready to plant. This software will address that by allowing farmers to print daily or weekly planting lists for the field or greenhouse. Best of all, the software will be flexible enough to be scale-independent, making it useful for farmers and gardeners, and will be released as open source software, so it will be available free.

With apologies to all those late night infomercials: "But wait! There's more!!" While the scope of the initial software development will be limited, I think that the potential of this project is broad. One future possibility is automated, online seed ordering: Based on crop plans, the software could help farmers locate different seed sources and even submit orders over the Internet. Or what about labor budgeting? For each crop, farmers could enter the number of hours they spend on different tasks in the weeks following planting, and the software – based upon the crop plan – will help farmers see how their labor needs fluctuate over the growing season.

Another possibility would be "reverse crop planning": Farmers could say, for example, that they want 20 heads of lettuce per week for every week of the market season, and the software would figure and automatically schedule plantings for them. Someone even suggested that the software could offer a module to help farmers schedule plantings based on the biodynamic calendar!

I'm excited about this project and its potential to simplify at least some part of the lives of diversified farmers. The software is still very young but is developing rapidly. If you're interested in the project and would like to be kept informed as it grows, or if you'd like to help, email cropplanning@gmail.com. We will need help of all kinds: testing, project planning, database development, software development, Web site maintenance, maybe some graphic design, and even simple farm-, garden- and software-related advice.

About the author: Clayton Carter and his partner Kendra Michaud are MOFGA's Farmers-in-Residence in Unity, Maine. Link to Farmer-in-Residence Program. Before moving to Maine to farm and bake, they worked as software developers in the Boston area. Partial funding for the work reported here was provided by the USDA Sustainable Agriculture Research and Education (SARE) Program.