# Using A Spreadsheet To Simplify Bareroot Sowing Calculations

Spreadsheets are a great way of keeping lots of data in one place and a quick way of crunching numbers. The following example demonstrates how it can be used to perform sowing calculations. A Microsoft Excel spreadsheet is used in this demonstration, however there are other spreadsheets like Lotus 1-2-3 and Quattro-Pro that work similarly.

Step 1: Start off with a blank spreadsheet. On the first line, type the headings shown in the boxes in Figure I starting with "Lot ID". As you move from cell to cell with the tab key you will notice that the portions of the previous cell-have been written over. Don't worry; the information is just hidden from view.

Figure 1
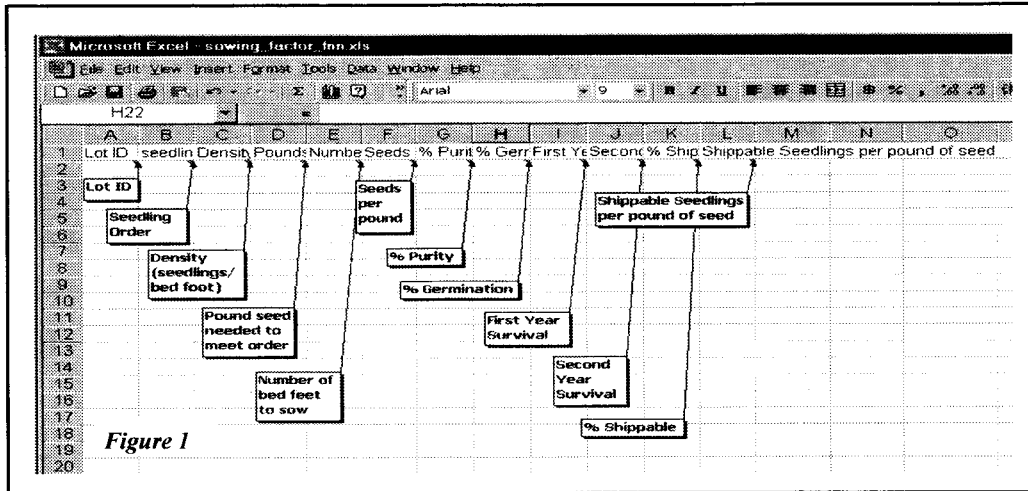
Step 2: Formatting the titles makes any spreadsheet easier to read. Highlight the filled cells by clicking on the first cell with the right mouse button and holding down as you move the curser to the last cell. Then click the left mouse button and a box will appear. Move your curser down to "Format Cells" and click. The "Format Cells" box will appear. Click the "alignment" tab at the top of the "Format Cells" box and change your screen so that it matches the "Text Alignment", "Orientation" and "Text control" shown in Figure 2. Then click "ok".
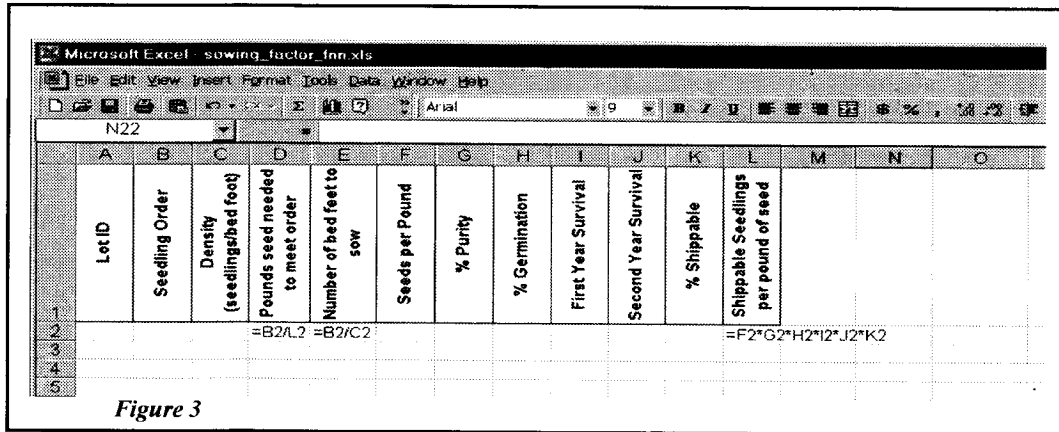

Figure 2
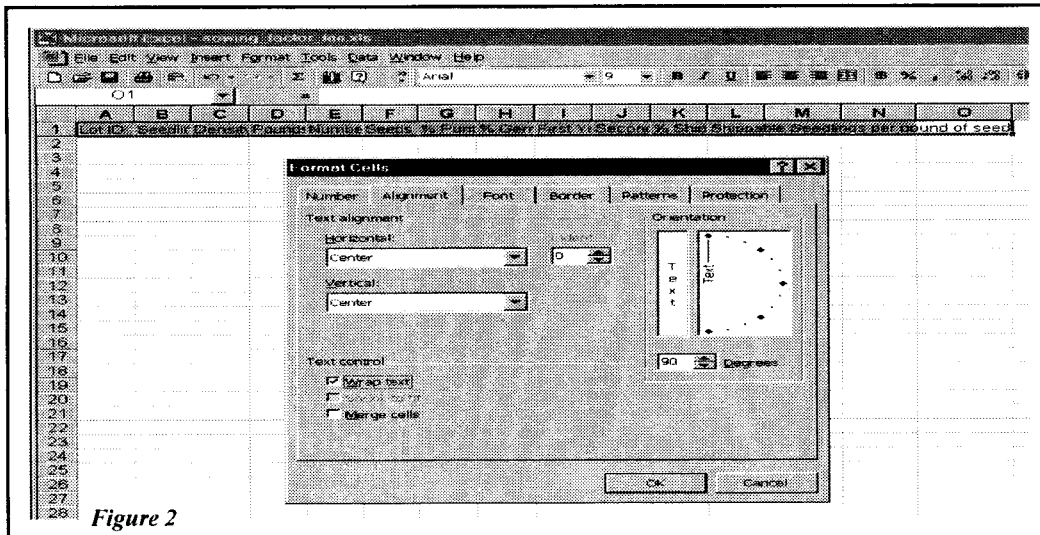
While you are in this box, you can click the "font" tab at the top of the box and change the font size, style, and color to your preference. Then move over to the "border" tab and create the border that you want. You will want to experiment with this.

Step 3: Write the three basic equations just as they are sown in the appropriate cells in Figure 3.

"Pounds of seed needed to meet order" = "Seedling Order" (B2) divided by "Shippable seedlings per pound of seed" (L2). Type =B2/L2 in cell D2.

"Number of bed feet to sow" = "Seedling Order" (B2) divided by "Density" (C2). Type =B2/C2 in cell E2

"Shippable seedlings per pound of seed" = "Seeds per pound" (F2) times "% Purity" (G2) times "% Germination" (H2) times "First year survival" (I2) times "Second year survival" (J2) times "% Shippable" (K2). Type =F2*G2*H2*I2*J2*K2 in cell L2.

Figure 3

Step 4: Fill in the seed data as shown in Figure 4. As you fill in the values on the first line, you will notice that cells with equations are now calculated values.

Figure 4
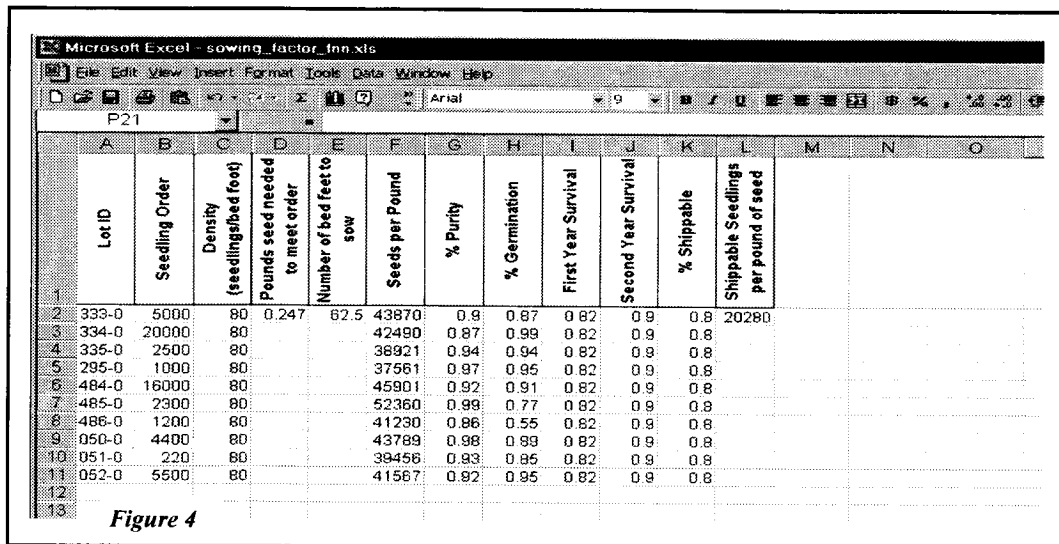
Step 5: To fill in the equations for the other cells in the columns, right click on cell L2 and bring the curser to the lower right side of the cell. The curser turns from an arrow into a cross. Hold down on the right mouse button as you pull down the curser to the bottom of the column. Let go and the calculation for the shippable seedlings per pound will appear for each row of data. Do the same for columns D and E. Format the table using the instructions in Step 2 and you have now created a table of sowing calculations shown in Figure 5.

Lot ID	Seedling Order	Density (seedlings/bed foot)	Pounds seed needed to meet order	Number of bed feet to sow	Seeds per Pound	% Purity	% Germination	First Year Survival	Second Year Survival	% Shippable	Shippable Seedlings per pound of seed
333-0	5000	80	0.247	62.5	43870	0.9	0.87	0.82	0.9	0.8	20280
334-0	20000	80	0.926	250	42490	0.87	0.99	0.82	0.9	0.8	21607
335-0	2500	80	0.123	31.25	38921	0.94	0.94	0.82	0.9	0.8	20304
295-0	1000	80	0.049	12.5	37561	0.97	0.95	0.82	0.9	0.8	20435
484-0	16000	80	0.705	200	45901	0.92	0.91	0.82	0.9	0.8	22688
485-0	2300	80	0.098	28.75	52360	0.99	0.77	0.82	0.9	0.8	23565
486-0	1200	80	0.104	15	41230	0.86	0.55	0.82	0.9	0.8	11514
050-0	4400	80	0.195	55	43789	0.98	0.89	0.82	0.9	0.8	22549
051-0	220	80	0.012	2.75	39456	0.93	0.85	0.82	0.9	0.8	18415
052-0	5500	80	0.256	68.75	41567	0.92	0.95	0.82	0.9	0.8	21449

Figure 5

With this procedure you have quickly calculated the pounds of seed to draw from each lot to meet the clients order and number of bed feet to sow for each lot. Try this with your own sowing requests or modify it to meet your own sowing formulas.