How to analyze 3D life table? (Offspring sex ratio dependent on female age)

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Department of Plant Production and Technologies, Faculty of Agricultural Sciences and Technologies, Niğde University, Turkey. Adjunct professor, National Chung Hsing University, Taiwan, Republic of China Visiting professor, Northwest A&F University, China Visiting professor, Fujian Agriculture and Forestry University, China If the number of offspring of different sexes (offspring sex ratio) varies with the mothers age, we have to use the 3D life table.



You have to prepare following 5 files before you can run 3D analysis:

- 1. Female life table raw data with developmental time of females and female offspring as daily fecundity.
- 2. Female life table raw data with developmental time of females and male offspring as daily fecundity.
- 3. Female life table raw data with developmental time of females and N-type offspring as daily fecundity.
- 4. Male life table raw data with developmental time of male individuals.
- 5. N-type life table raw data with developmental time of N-type individuals.

Run TWOSEX using A1

- 1. Analyze the **female life table** data with **female offspring** (In that file, the "user" should be "daughter". It is the second row.)
- 2. When you see the message "Do you want to see more options?", enter "Yes".
- When you see the message "Do you want to detect the effect of reduction in f(x,j) on population parameters...", you have to enter No.
- 4. When you see the message "Enter "Yes" for 3D analysis. "No" to write routine matrices.", enter "Yes".

Run TWOSEX using A1

- 1. Analyze the **female life table** data with **male offspring** (In that file, the "user" should be "son". It is the second row.)
- 2. When you see the message "Do you want to see more options?", enter "Yes".
- When you see the message "Do you want to detect the effect of reduction in f(x,j) on population parameters...", you have to enter No.
- 4. When you see the message "Enter "Yes" for 3D analysis. "No" to write routine matrices.", enter "Yes".

Run TWOSEX using A1

- 1. Analyze the **female life table** data with **N-type offspring** (In that file, the "user" should be "infertile". It is the second row.)
- 2. When you see the message "Do you want to see more options?", enter "Yes".
- 3. When you see the message "Do you want to detect the effect of reduction in f(x,j) on population parameters...", you have to enter No.
- 4. When you see the message "Enter "Yes" for 3D analysis. "No" to write routine matrices.", enter "Yes".

Run TWOSEX using A1

- 1. Analyze the **male life table** data (In that file, the "user" should be "son". It is the second row.)
- 2. When you see the message "Do you want to see more options?", enter "Yes".
- When you see the message "Do you want to detect the effect of reduction in f(x,j) on population parameters...", you have to enter No.
- 4. When you see the message "Enter "Yes" for 3D analysis. "No" to write routine matrices.", enter "Yes".

Run TWOSEX using A1

- 1. Analyze the **N-type life table** data (In that file, the "user" should be "infertile". It is the second row.)
- 2. When you see the message "Do you want to see more options?", enter "Yes".
- When you see the message "Do you want to detect the effect of reduction in f(x,j) on population parameters...", you have to enter No.
- 4. When you see the message "Enter "Yes" for 3D analysis. "No" to write routine matrices.", enter "Yes".

3D life table analysis

- 1. Run TWOSEX and click on "F. 3D life table". Follow the instruction to select **file no. 20** in each folder. To avoid searching your folders, I suggest you copy these 5 files to a new folder and add serial number "1, 2, ..., 5" to the file name. In this way, you can easily find the files in sequence. If there is no N-type offspring, you should select "No" when you see the message "Are there N-type offspring?"
- 2. If there is no error, you can find the result file "xxxx_20_3D_matrices for_Sex_F_ daughter-3D output.txt".



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