

Editorial

To Plant a Tree or to Grow Some Vegetables-Some Thought in Research

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I must confess that I'm an ardent gardener. Let's think about it, to plant something is really simple, the sun is a free gift from God, there are plenty of rich soils in the US, and water is plenty and inexpensive too. So I started to grow some vegetables since I moved to Mississippi State University more than a decade ago. Initially it was only on a really tiny patch to do an experiment, then I have newborn babies came into my life, and I have less and less of time to work in the yard... When we moved to Kentucky six years ago, I started to plant trees. I was very ambitious, and plant more than 15 trees in my backyard in the first year: Asian pears, Chinese chestnuts, pecans, persimmons, peaches, figs and jujube (Chinese date). I have carefully followed the instructions in the planting guide: dig a deep and wide hole to accommodate the roots, water them twice a week with plenty of water, make sure the soil is well drained... etc. However, after a few months, most of them died, and I've learned some good lessons: never spray chemicals in the first year, and most of them need more water than what is said in the book. For example, only one pear tree survived among the four I planted, and it is planted right besides the underground water drain pipe, where the sump pump in my basement will pump out the underground water periodically when the water level is high. The water pipe obviously was not sealed very well, and the small leakage in the pipeline helped that pear tree to survive. Now this tree bears fruits every year. What a blessing.

When I worked in the yard a few days ago, it came to me that doing research is quite similar to planting in many ways. We can choose to plant a tree, or we can choose to grow some vegetables. Both need a lot of labor and attention, while there surely is a difference as well. For trees, one needs to dig a much deeper and much wider hole up to a few feet, then water and fertilize it for a couple of years; it usually takes three to five years to produce fruits. For vegetables, many small and shallow holes of inches and many seeds are needed, and daily water is required, and a harvest is usually available in two to three months. Most vegetables cannot survive winter by nature, which means new plantings need to be done in spring times again.

These two kinds of plantings are comparable to two kinds of research done in biostatistics: growing vegetables is similar

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to many projects that we encounter daily, especially in our consulting services. We can jump on the projects quickly due to the fertilized ground of Biostatistics, we can do some data analysis, apply some well-known statistical methods to the new data, help physicians or clinical researchers to solve a problem, and often get a quick publication. Sometimes it could be funded by a government grant. The drawback is that usually we cannot go deeper due to many reasons, it maybe that the project itself has a limited scope, or we are limited by our knowledge in that field or we are simply don't have the nerve to dig deeper, etc. Hence, we keep on jumping from one project to another, doing such analysis again and again. Although we end up with a long publication or funding list, none of these really contributes much to the methodology in the field of Biostatistics, as we are either doing little improvement in methodology or just use existing ones. This activity is similar to planting vegetables; we have to plant it again when the season is over, it is short-lived and easily uprooted. On the other hand, planting trees is similar to do research in one of our major area. We have to dig deeper and wider, which means to read more papers, to have a deeper understanding of the area, and to develop our own methods. We have to be patient, because it may not lead to publications or funding immediately. However, once the root is firmly established, which means, once we are the leading experts in a new area, it can bear much more fruits (publications or funding) in the future, and many students and scholars will benefit from this tree.

Comparing these two outcomes, I'd prefer to plant trees, rather than growing vegetables. However, today's environment is especially harsh to nurture genuine research in Biostatistics. Biostatisticians are pushed to generate quick publications and are pushed to pursue government funding quickly. Often times, the publications are shot lived, and are barely being cited in the Biostatistics domain, and we are usually listed as co-investigator in the funding. I hope I would be more optimistic, but I doubt that this kind of soil (environment) can only lead to short-sightedness, and little breakthrough in our research area. We do hope that our journal Annals of Biometrics and Biostatistics will be an outlet for genuine research, leading to some big breakthrough in the Biostatistics and Biometrics area.