

## Crop breeding achievements for increase crop productivity

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All crops we are growing today are the results of active plant breeding or unrealized farmer activities. There have been many reviews reporting the substantial achievements of our main crops. In this presentation, I am going to concentrate on three main topics:

- (i) Yield increase on crops widely grown in dry rainfed Mediterranean areas in West Asia and North Africa, namely barley, durum wheat, bread wheat, lentil, and chickpea. This increase was achieved by breeders of the International Center for Agricultural Research in the Dry Areas (ICARDA) in close cooperation with national breeders. Routes to increase productivity by these breeders over the past decades will be reviewed. Usefulness of the international nurseries will be illustrated.
- (ii) Boron toxicity is a wide spread problem in these dry, rainfed areas. Yield achievement that has been achieved by breeding boron-toxicity tolerant varieties will be discussed.
- (iii) The high-elevation Bekaa Valley is the main agricultural area in Lebanon. Unlike most of the other areas in West Asia and North Africa, it has a cool Mediterranean climate. My breeding activities and minimal achievements, especially those on safflower, will be briefly explained.