**3. Extra-early maturing chickpea and lentil varieties**

**Activities:** Evaluation early and extra-early chickpea lines for grain yield and other adaptive traits in Ethiopia

**Objective :**

1. To identify high yielding early maturing chickpea lines.

2. To identify chickpea lines that fits double cropping system.

3. To identify lines that escape terminal drought and disease

**M&M:**

Fifteen early and extra early maturing chickpea lines including the standard checks (‘Ejere’ and ‘Minjar’) were evaluated for earliness at Debre Zeit during 2014 off season, 2014 main season, 2015 main season and 2016 main season. (The first 6 lines were repeated for 3 seasons (2014 off season, 2014 main season and 2015 main season. while the others were replaced by line 7 and line 8 which were included in the trial since 2015 main season. Line 9-13 are included in the trial starting from 2016 main season). The treatments were laid on Randomized Complete Block Design (RCBD) with three replications. The gross plot size was 4.8m2(4mx1.2m) accommodating 4 rows of 4m length. The seeds were sown using spacing of 30cm between rows and 10cm between plants. Harvesting was done from two central rows of each plot (2.4m2). All data (DFF= days to first flowering, DFFF= days to 50% flowering, DFP= days to first podding, DEP= days to end of podding, DM= days to maturity, MP = Maturity Period (DM-DFF), NBR= Number of primary branches, FPH= First pod height, PPP = Number of pods per plant, SPP = Number of seeds per plant, HSW = Hundred seed weight, YLD= grain yield/ha, BYLD= biomass yield/ha, HI= harvest index were taken and subjected to statistical analysis, except for 2016 main season trial. List of chickpea lines evaluated for earliness are indicated in the graph with their relative performances in yield and maturity periods.

However, the yield responses of the genotype set could not be consistent in responses. Maturity date ranged between 101-111, and the yield of the standard check, Ejere was still outsmarting. On the other hand, those materials supposed to be clustered under super early sets(below 90 days of maturity) could not maintain while they are in Ethiopian Ecology. Hence, they clustered under early maturing group.

**Next step**: The main focus in phenological breeding is to attain early maturing and high yielding composed genotypes. Hence, the effort would be contributing with aggregating resources of more number to come up with competent varieties of farmers preferences.