



WR genes. For example, the overexpression of WR1 is documented to increase TAG accumulation in plants [11]. The overexpression of transcription factors in plants may or may not have down sides. For example, the overexpression of maize LEC1 in soybean seed increased seed oil by up to 48%, but it reduced plant growth. In contrast, the overexpression of maize WRI1 in maize seed resulted in an increase in maize seed oil without any side effect on its plant growth. This might be because the overexpression of WRI1 does not increase DGAT1 expression, but the overexpression of LEC1 increased the DGAT1 expression [1]. The overexpression of the LEC2 has resulted in accumulation of TAG in *Arabidopsis* leaf tissues [12,13]. It is also reported that LEC2 induces other transcription factors including FUS3 resulting in an increase in TAG biosynthesis in plant leaves. The overexpression of LEC2 transcription factor also has caused lipid accumulation in crop leaf tissues [14].

It is possible to increase TAG in crop vegetative tissues. For example, constitutive expression of LEC1 or LEC2 in *Arabidopsis* induced "seed-like structure" in plant green vegetative tissues, and transgenic *Arabidopsis* expressing LEC2 in their leaves showed transcripts of seed-specific mRNAs along with extra oil accumulation [1]. In a report by Andrianov et al. [5], the overexpression of *Arabidopsis* DGAT and LEC2 genes regulated by ribulose-biphosphate carboxylase small