~~49. The method of claim 50, wherein said first *Brassica* parent plant further comprises a mutant allele at a FAD2 locus, said mutant allele comprising a nucleic acid encoding a FAD2 polypeptide having a lysine substituted for glycine in a His-Glu-Cys-Gly-His motif.~~

~~50~~. A method for making a *Brassica* plant, said method comprising

a) obtaining one or more first *Brassica* parent plants comprising mutant alleles at two or more different FATB loci, wherein each said mutant allele results in the production of a FATB polypeptide having reduced thioesterase activity relative to a corresponding wildtype FATB polypeptide;

b) obtaining one or more second *Brassica* parent plants comprising a mutant allele at a FATA2 locus, said mutant allele comprising a nucleic acid encoding a FATA2 polypeptide having a mutation in a region (SEQ ID NO:29) corresponding to amino acids 242 to 277 of the polypeptide;

c) crossing said one or more first *Brassica* parent plants and said one or more second *Brassica* parent plants; and

d) selecting, for one to five generations, for progeny plants having mutant alleles at two or more different FATB loci and a mutant allele at said FATA2 locus thereby obtaining said *Brassica* plant.

51. The method of claim ~~50~~, wherein said first *Brassica* parent plant comprises mutant alleles at four different FATB loci.

52. The method of claim 51, wherein said first *Brassica* parent plant further comprises a mutant allele at a FAD2 locus and mutant alleles at two different FAD3 loci, said FAD2 mutant allele comprising a nucleic acid encoding a FAD2 polypeptide having a lysine substituted for glutamic acid in a His-Glu-Cys-Gly-His motif, wherein one of said FAD3 mutant alleles comprises a nucleic acid encoding a FAD3A polypeptide having a cysteine substituted for arginine at position 275, and wherein one of said FAD3 mutant alleles comprises a fad3B nucleic acid sequence having a mutation in an exon-intron splice site recognition sequence.

53. Seeds of a *Brassica* plant comprising a mutant allele at a FATA2 locus, said mutant allele comprising a nucleic acid encoding a FATA2 polypeptide having a mutation in a region (SEQ ID NO:29) corresponding to amino acids 242 to 277 of the polypeptide, said seeds yielding an oil having an oleic acid content of 78% to 80%, a linoleic acid content of

49. A method for making a *Brassica* plant, said method comprising

a) obtaining one or more first *Brassica* parent plants comprising mutant alleles at two or more different FATB loci, wherein each said mutant allele results in the production of a FATB polypeptide having reduced thioesterase activity relative to a corresponding wildtype FATB polypeptide;

b) obtaining one or more second *Brassica* parent plants comprising a mutant allele at a FATA2 locus, said mutant allele comprising a nucleic acid encoding a FATA2 polypeptide having a mutation in a region (SEQ ID NO:29) corresponding to amino acids 242 to 277 of the polypeptide;

c) crossing said one or more first *Brassica* parent plants and said one or more second *Brassica* parent plants; and

d) selecting, for one to five generations, for progeny plants having mutant alleles at two or more different FATB loci and a mutant allele at said FATA2 locus thereby obtaining said *Brassica* plant.

50. The method of claim 49, wherein said first *Brassica* parent plant further comprises a mutant allele at a FAD2 locus, said mutant allele comprising a nucleic acid encoding a FAD2 polypeptide having a lysine substituted for glycine in a His-Glu-Cys-Gly-His motif.

51. The method of claim 49, wherein said first *Brassica* parent plant comprises mutant alleles at four different FATB loci.

52. The method of claim 51, wherein said first *Brassica* parent plant further comprises a mutant allele at a FAD2 locus and mutant alleles at two different FAD3 loci, said FAD2 mutant allele comprising a nucleic acid encoding a FAD2 polypeptide having a lysine substituted for glutamic acid in a His-Glu-Cys-Gly-His motif, wherein one of said FAD3 mutant alleles comprises a nucleic acid encoding a FAD3A polypeptide having a cysteine substituted for arginine at position 275, and wherein one of said FAD3 mutant alleles comprises a fad3B nucleic acid sequence having a mutation in an exon-intron splice site recognition sequence.

53. Seeds of a *Brassica* plant comprising a mutant allele at a FATA2 locus, said mutant allele comprising a nucleic acid encoding a FATA2 polypeptide having a mutation in a region (SEQ ID NO:29) corresponding to amino acids 242 to 277 of the polypeptide, said seeds yielding an oil having an oleic acid content of 78% to 80%, a linoleic acid content of