WHAT IS CLAIMED IS:

1. A method of increasing seed oil accumulation in Jatropha comprising reducing~~modulating~~ the activity of a patatin-domain triacylglycerol lipase encoded by a *sugar-dependent-1 (SDP1)* gene in a Jatropha plant to cause an increased seed oil accumulation, wherein the reduction in activity is mediated by RNAi or VIGS, and wherein the reduction in *SDP1* expression levels is at least 20-fold compared to wild type.

~~2. The method of claim 1, wherein the modulation is reducing the activity of the lipase.~~

~~3. The method of claim 1 or 2, wherein the lipase is encoded by a *sugar-dependent-1 (SDP1)* gene.~~

2~~4~~. The method of claim 1~~3~~, wherein the lipase has the amino acid sequence set forth in SEQ ID NO:2.

3~~5~~. The method of claim 2~~4~~, wherein the lipase is encoded by a nucleic acid having a nucleotide sequence set forth in SEQ ID NO:1, or nucleotides 874-3450 of SEQ ID NO:1, or nucleotides 874-3447 of SEQ ID NO:1.

~~6. The method of any one of claims 1-6, wherein the reduction in activity of the lipase is mediated by RNAi or VIGS.~~

4~~7~~. The method of any one of claims 1-3~~6~~, wherein the activity of the lipase is reduced~~modulated~~ in seeds of the Jatropha plant.

5~~8~~. The method of claim 4~~7~~, wherein the reduction in activity~~modulation~~ in Jatropha seeds is accomplished using a Jatropha seed specific promoter.

6~~9~~. The method of claim 5~~8~~, wherein the Jatropha seed specific promoter is a Jatropha *curcas SDP1* promoter.

7~~10~~. The method of claim 6~~9~~, wherein the Jatropha *curcas SDP1* promoter has the nucleotide sequence set forth in nucleotides 1-722 of SEQ ID NO:1 or promoter functional fragment thereof.

8~~11~~. The method of any one of claims 1-7~~10~~, wherein the seed oil accumulation is increased by about 13% to about 30%.

9~~12~~. The method of any one of claims 1~~6~~-7~~10~~, wherein the RNAi is mediated by a nucleic acid comprising the nucleotide sequence set forth in SEQ ID NO:3.

10~~3~~. An isolated nucleic acid comprising nucleotides 3161-3533 of SEQ ID NO:1, wherein the nucleic acid, when used in RNAi, reduces expression of the *sugar-dependent 1* (*SDP1*) gene.

11~~4~~. The isolated nucleic acid of claim 10~~3~~, wherein the nucleic acid comprises nucleotides 3161-3528 of SEQ ID NO:1.

12~~5~~. The isolated nucleic acid of claim 10~~3~~ or 11~~4~~ which further comprises a plant operable promoter operably linked to the nucleic acid.

13~~6~~. The isolated nucleic acid of claim 12~~5~~, wherein the promoter is a seed specific promoter.

14~~7~~. The isolated nucleic acid of claim 13~~6~~, wherein the seed specific promoter is a Jatropha *curcas SDP1* promoter.

15~~8~~. The isolated nucleic acid of claim 1~~7~~4, wherein the Jatropha *curcas SDP1* promoter comprises nucleotides 1-722 of SEQ ID NO:1.

16~~9~~. An isolated nucleic acid that when used in RNAi reduces expression of the *sugar-dependent 1* (*SDP1*) gene, wherein the nucleic acid comprises the nucleotide sequence set forth in SEQ ID NO:3.

17~~20~~. A nucleic acid construct or a vector comprising the isolated nucleic acid of any one of claims 10~~3~~-16~~9~~.

18<u>21</u>. A transgenic plant cell or transgenic plant having the isolated nucleic acid of any one of claims 1<u>0</u>~~3~~-1<u>6</u>~~9~~ stably integrated in its genome.

19<u>22</u>. A method of making a transgenic plant cell comprising introducing the isolated nucleic acid of any one of claims 1<u>0</u>~~3~~-1<u>6</u>~~9~~ into a plant cell and selecting a transgenic plant cell in which the isolated nucleic acid is stably integrated in its genome.

2<u>0</u>~~3~~. A method of making a transgenic plant comprising introducing the isolated nucleic acid of any one of claims 1<u>0</u>~~3~~-1<u>6</u>~~9~~ into a plant cell, selecting a transgenic plant cell in which the isolated nucleic acid is stably integrated in its genome and regenerating a transgenic plant from the selected transgenic plant cell.

2<u>1</u>~~4~~. An isolated nucleic acid encoding a protein comprising the amino acid sequence set forth in SEQ ID NO:2.

2<u>2</u>~~5~~. The isolated nucleic acid of claim 2<u>1</u>~~4~~ which comprises the nucleotide sequence set forth in SEQ ID NO:1, or nucleotides 874-3450 of SEQ ID NO:1 or nucleotides 874-3447 of SEQ ID NO:1.

2<u>3</u>~~6~~. The isolated nucleic acid of claim 2<u>1</u>~~4~~ or 2<u>2</u>~~5~~ which further comprises a plant operable promoter operably linked to the nucleic acid.

2<u>4</u>~~7~~. The isolated nucleic acid of claim 2<u>3</u>~~6~~, wherein the promoter is a heterologous seed specific promoter.