We Claim:

1. A mutagenized or recombinant BEP clade plant plastidic acetyl-Coenzyme A carboxylase (ACCase) nucleic acid encoding a BEP clade plant plastidic ACCase, the ACCase having one or more amino acid differences relative to a corresponding wild type BEP clade plant plastidic ACCase, at least one of said differences being the result of mutagenesis, wherein the ACCase, by virtue of containing said one or more amino acid differences, confers increased ACCase-inhibiting herbicide tolerance to a BEP clade plant in which it is expressed as compared to that of a corresponding wild-type BEP clade plant.
2. A nucleic acid as claimed in claim 1, wherein said BEP clade plant is a rice plant.
3. A nucleic acid as claimed in claims 1 or 2, wherein the nucleic acid is a mutagenized nucleic acid and the one or more amino acid differences are at amino acid positions corresponding to amino acid positions of the *Alopecurus myosuroides* (*Am*) plastidic ACCase, the differences being selected from:
    a. a non-wild-type amino acid at the position corresponding to position 1,781(*Am*);
    b. a non-wild-type amino acid at the position corresponding to position 1,999(*Am*);
    c. a non-wild-type amino acid at the position corresponding to position 2,027(*Am*);
    d. a non-wild-type amino acid at the position corresponding to position 2,041(*Am*);
    e. a non-wild-type amino acid at the position corresponding to position 2,096(*Am*);
    f. a non-wild-type amino acid at the position corresponding to position 1,785(*Am*);
    g. a non-wild-type amino acid at the position corresponding to position 1,786(*Am*);
    h. a non-wild-type amino acid at the position corresponding to position 1,811(*Am*);
    i. a non-wild-type amino acid at the position corresponding to position 2,049(*Am*);
    j. a non-wild-type amino acid at the position corresponding to position 2,074(*Am*);
    k. a non-wild-type amino acid at the position corresponding to position 2,080(*Am*);
    l. a non-wild-type amino acid at the position corresponding to position 2,075(*Am*);
    m. a non-wild-type amino acid at the position corresponding to position 2,078(*Am*);
    n. a non-wild-type amino acid at the position corresponding to position 2,088(*Am*);
    o. a non-wild-type amino acid at the position corresponding to position 2,098(*Am*);
    p. a non-wild-type amino acid at the position corresponding to position 2,039(*Am*);
    q. a non-wild-type amino acid at the position corresponding to position 2,059(*Am*);
    r. a non-wild-type amino acid at the position corresponding to position 2,080(*Am*);
    s. a non-wild-type amino acid at the position corresponding to position 2,095(*Am*); or

t. a non-wild-type amino acid at the position corresponding to position 1,824(*Am*).

4. A nucleic acid as claimed in any one of claims 1-3, wherein the nucleic acid is a mutagenized nucleic acid and the one or more amino acid differences are at amino acid positions corresponding to amino acid positions of the *Alopecurus myosuroides* (*Am*) plastidic ACCase, the differences being selected from:

a. a leucine, alanine, valine, or threonine substitution at the position corresponding to position 1,781(*Am*);

b. a glycine or cysteine substitution at the position corresponding to position 1,999(*Am*);

c. a cysteine or arginine substitution at the position corresponding to position 2,027(*Am*);

d. an asparagine or valine substitution at the position corresponding to position 2,041(*Am*);

e. an alanine or serine substitution at the position corresponding to position 2,096(*Am*);

f. a glycine substitution at the position corresponding to position 1,785(*Am*);

g. a proline substitution at the position corresponding to position 1,786(*Am*);

h. a asparagine substitution at the position corresponding to position 1,811(*Am*);

i. a leucine substitution at the position corresponding to position 2,074(*Am*);

j. a leucine, isoleucine, or methionine substitution; or duplication of valine; at the position corresponding to position 2,075(*Am*);

k. a glycine, lysine, or threonine substitution at the position corresponding to position 2,078(*Am*);

l. a deletion of lysine at the position corresponding to position 2,080(*Am*);

m. a pheylalanine, glycine, histidine, lysine, leucine, arginine, serine, threonine, valine or tryptophan at the position corresponding to position 2,088(*Am*);

n. a histidine, threonine, or serine substitution at the position corresponding to position 2,088(*Am*);

o. a glycine or alanine substitution at the position corresponding to position 2,098(*Am*);

p. a glycine substitution at the position corresponding to position 2,039(*Am*);

q. a valine substitution at the position corresponding to position 2,059(*Am*);

r. a glutamic acid substitution at the position corresponding to position 2,080(*Am*);

s. a glutamic acid substitution at the position corresponding to position 2,095(*Am*); or

t. a proline substitution at the position corresponding to position 1,824(*Am*).

5. A nucleic acid as claimed in any one of claims 1-4, wherein the one or more amino acid differences are at amino acid positions corresponding to amino acid positions of the *Alopecurus myosuroides* (*Am*) plastidic ACCase, the differences being selected from:

a. a threonine substitution at the position corresponding to position 1,781(*Am*);

b. a non-wild-type amino acid at the position corresponding to position 1,785(*Am*);

c. a glycine substitution at the position corresponding to position 1,785(*Am*);

d. a non-wild-type amino acid at the position corresponding to position 1,786(*Am*);

e. a proline substitution at the position corresponding to position 1,786(*Am*);

f. a non-wild-type amino acid at the position corresponding to position 1,811(*Am*);

g. a asparagine substitution at the position corresponding to position 1,811(*Am*);

h. a non-wild-type amino acid at the position corresponding to position 2,049(*Am*);

i. a non-wild-type amino acid at the position corresponding to position 2,074(*Am*);

j. a leucine substitution at the position corresponding to position 2,074(*Am*);

k. a non-wild-type amino acid at the position corresponding to position 2,075(*Am*);

l. a leucine, isoleucine, or methionine substitution; or duplication of valine; at the position corresponding to position 2,075(*Am*);

m. a non-wild-type amino acid at the position corresponding to position 2,078(*Am*);

n. a lysine, or threonine substitution at the position corresponding to position 2,078(*Am*);

o. a non-wild-type amino acid at the position corresponding to position 2,080 (*Am*)

p. a deletion of lysine at the position corresponding to position 2,080(*Am*);

q. a non-wild-type amino acid at the position corresponding to position 2,088(*Am*);

r. a tryptophan at the position corresponding to position 2,088(*Am*);

s. a non-wild-type amino acid at the position corresponding to position 2,098(*Am*);

t. a glycine or alanine substitution at the position corresponding to position 2,098(*Am*);

u. a non-wild-type amino acid at the position corresponding to position 2,039(*Am*);

v. a glycine substitution at the position corresponding to position 2,039(*Am*);

w. a non-wild-type amino acid at the position corresponding to position 2,059(*Am*);

x. a valine substitution at the position corresponding to position 2,059(*Am*)

y. a non-wild-type amino acid at the position corresponding to position 2,080(*Am*);

z. a glutamic acid substitution at the position corresponding to position 2,080(*Am*);

aa. a non-wild-type amino acid at the position corresponding to position 2,095(*Am*);

bb. a glutamic acid substitution at the position corresponding to position 2,095(*Am*);

cc. a non-wild-type amino acid at the position corresponding to position 1,824(*Am*); or

dd. a proline substitution at the position corresponding to position 1,824(*Am*).

6. A nucleic acid as claimed in any one of claims 1-5, wherein the plastidic ACCase has two or more amino acid differences.

7. A nucleic acid as claimed in any one of claims 1-6, wherein the amino acid differences are at a first amino acid position and a second amino acid position, said first and second positions corresponding to amino acid positions of the *Alopecurus myosuroides* (*Am*) plastidic ACCase, the differences being selected from;

   a. the first position being a leucine substitution at the position corresponding to position 1,781(*Am*), the second position being selected from:

      i. an asparagine substitution at the position corresponding to position 2,041(*Am*);

      ii. a cysteine substitution at the position corresponding to position 2,027(*Am*);

      iii. a leucine substitution at the position corresponding to position 2,075(*Am*);

      iv. an alanine or glycine substitution at the position corresponding to position 2,098(*Am*);

      v. a phenylalanine substitution at the position corresponding to position 1,864(*Am*);

      vi. a phenylalanine substitution at the position corresponding to position 2,049(*Am*); or

      vii. a duplication of valine at the position corresponding to position 2,075(*Am*);

      viii. a proline substitution at the position corresponding to position 1,824(*Am*);

      ix. a arginine substitution at the position corresponding to position 2,027(*Am*);

   b. the first position being a glycine substitution at the position corresponding to position 1,999(*Am*), the second position being selected from:

      i. a leucine substitution at the position corresponding to position 2,075(*Am*);

      ii. an alanine substitution at the position corresponding to position 2,098(*Am*);

iii. an isoleucine substitution at the position corresponding to position 2,049(*Am*);or

iv. a phenylalanine substitution at the position corresponding to position 1,864(*Am*);

c. the first position being a phenylalanine substitution at the position corresponding to position 2,088(*Am*), the second position being an alanine substitution at the position corresponding to position 2,098(*Am*);

d. the first position being a glycine substitution at the position corresponding to position 2,088(*Am*), the second position being a glycine substitution at the position corresponding to position 2,098(*Am*);

e. the first position being a histidine substitution at the position corresponding to position 2,088(*Am*), the second position being an alanine substitution at the position corresponding to position 2,098(*Am*);

f. the first position being a histidine substitution at the position corresponding to position 2,088(*Am*), the second position being a glycine substitution at the position corresponding to position 2,098(*Am*);

g. the first position being a lysine substitution at the position corresponding to position 2,088(*Am*), the second position being an alanine substitution at the position corresponding to position 2,098(*Am*);

h. the first position being a leucine substitution at the position corresponding to position 2,088(*Am*), the second position being an alanine substitution at the position corresponding to position 2,098(*Am*);

i. the first position being a leucine substitution at the position corresponding to position 2,088(*Am*), the second position being a glycine substitution at the position corresponding to position 2,098(*Am*);

j. the first position being a serine substitution at the position corresponding to position 2,088(*Am*), the second position being a glycine substitution at the position corresponding to position 2,098(*Am*);

k. the first position being a threonine substitution at the position corresponding to position 2,088(*Am*), the second position being an alanine substitution at the position corresponding to position 2,098(*Am*);

l. the first position being a threonine substitution at the position corresponding to position 2,088(*Am*), the second position being a glycine substitution at the position corresponding to position 2,098(*Am*);

m. the first position being a valine substitution at the position corresponding to position 2,088(*Am*), the second position being a glycine substitution at the position corresponding to position 2,098(*Am*);

n. the first position being a tryptophan substitution at the position corresponding to position 2,088(*Am*), the second position being a cysteine substitution at the position corresponding to position 2,098(*Am*);

o. the first position being a tryptophan substitution at the position corresponding to position 2,088(*Am*), the second position being a serine substitution at the position corresponding to position 2,098(*Am*);

p. the first position being an alanine substitution at the position corresponding to position 2,098(*Am*), the second position being a leucine substitution at the position corresponding to position 2,049(*Am*);

q. the first position being a phenylalanine substitution at the position corresponding to position 2,088(*Am*), the second position being an alanine substitution at the position corresponding to position 2,098(*Am*); or

r. the first position being a proline substitution at the position corresponding to position 1,824(*Am*), the second position being a glycine substitution at the position corresponding to position 2,078(*Am*).

8. The nucleic acid as claimed in any of claims 1-7, wherein the mutagenized or recombinant ACCase is not transgenic.

9. The nucleic acid as claimed in any one claims 1 to 8, wherein said ACCase is encoded by a genomic nucleic acid, and comprises as its amino acid sequence a modified SEQ ID NO:2, wherein the modified sequences comprise said modification(s).

10. A nucleic acid as claimed in any one of claims 1 to 9, wherein:

    a. said plant is a rice plant of any one of lines OsHPHI2, OsARWI1, OsARWI3, OsARWI8, or OsHPHN1, a representative sample of seed of each line having been deposited with American Type Culture Collection (ATCC) under Patent Deposit Designation Number PTA-10267, PTA-10568, PTA-10569, PTA-10570, or PTA-10571, respectively; or is a mutant, recombinant, or genetically engineered derivative of a plant of any one of lines OsHPHI2, OsARWI1, OsARWI3, OsARWI8, or OsHPHN1, a representative sample of seed of each line having been deposited with American Type Culture Collection (ATCC) under Patent Deposit Designation Number PTA-10267, PTA-10568, PTA-10569, PTA-10570, or PTA-10571, respectively; or is a plant which is the progeny of any of these plants; and

    b. said plant has the ACCase-inhibiting herbicide tolerance characteristics of a plant of any one of lines OsHPHI2, OsARWI1, OsARWI3, OsARWI8, or OsHPHN1, a representative sample of seed of each line having been deposited with American Type Culture Collection (ATCC) under Patent Deposit Designation Number PTA-10267, PTA-10568, PTA-10569, PTA-10570, or PTA-10571, respectively.

11. A plant cell comprising the nucleic acid described in any one of claims 1 to 10.

12. A plant part comprising the nucleic acid described in any one of claims 1 to 10.

13. A product prepared from the plant cell or part of claims 11 or 12 wherein, the product is a consumer product, an industrial product, or veterinary product.

14. Use of nucleic acid molecule as claimed in any of one of claims 1-10 as a selectable marker.

15. Use of a nucleic acid molecule as claimed in any one of claims 1-10 in a method for detecting the presence of the nucleic acid in a plant cell, plant part, or plant cell.

16. Use of a nucleic acid molecule as claimed in any one of claims 1-10 in a method for producing a transgenic plant cell said method comprising:

    a. introducing the nucleic acid into a plant cell; and

b. contacting the plant cell with an ACCase inhibitor to identify the transformed plant cell, wherein the transformed plant cell exhibits increased ACCase-inhibiting herbicide tolerance in which the nucleic acid is expressed as compared to that of a corresponding wild-type plant cell.

17. A method for controlling weeds comprising:

a. providing a plant comprising the nucleic acid described in any one of claims 1-10; and

b. contacting weeds in the vicinity thereof with an effective amount of an herbicidal composition comprising an ACCase-inhibiting herbicide to inhibit growth of said weeds.

18. The method as claimed in claim 17, wherein said herbicidal composition comprises an aryloxyphenoxypropanoate or cyclohexanedione herbicide, or a combination thereof.

19. The method as claimed in claim 18, wherein said herbicidal composition comprises quizalofop, or a salt or ester thereof.

20. The method as claimed in claim 18, wherein said herbicidal composition comprises alloxydim, butroxydim, clethodim, cloproxydim, cycloxydim, sethoxydim, tepraloxydim, tralkoxydim, chlorazifop, clodinafop, clofop, diclofop, fenoxaprop, fenoxaprop-P, fenthiaprop, fluazifop, fluazifop-P, haloxyfop, haloxyfop-P, isoxapyrifop, propaquizafop, quizalofop, quizalofop-P, trifop, pinoxaden, or a salt or an ester thereof, or a combination thereof.

Dated this 23rd day of March 2012.

Preeti Sharma
of **KAN AND KRISHME**
Agent for the Applicant

To,
The Controller of Patents
The Patent Office, Delhi