Claims

1. A method of increasing the abiotic environmental stress tolerance of a plant comprising the application of at least one cyclopropene in the plant irrigation water wherein said agrochemical has a physiological effect on the plant.

2. A method of improving the quality and/or yield and or vigour of a plant crop comprising the application of at least one cyclopropene in the plant irrigation water wherein said agrochemical has a physiological effect on the plant.

3. A method of reducing damage to a plant caused by one or more abiotic environmental stress factors, comprising the application of at least one cyclopropene in the plant irrigation water wherein said agrochemical has a physiological effect on the plant.

4. A method according to any one of claims 1 to 3 wherein the cyclopropene is 1-MCP.

5. A method according to any one of claims 1 to 4 which includes the simultaneous and/or sequential application of one or more further agrochemical compounds and/or plant nutrients and/or plant fertilizers.

6. A method according to claim 5 wherein the further agrochemical compound is a pesticide, such as a fungicide, herbicide, insecticide, bactericide, acaricide or nematicide.

7. A method according to any one of claims 1 to 6wherein the abiotic stress is drought, flood, excessive temperature, low temperature, frost, excess sunlight, insufficient sunlight, wind, inadequate soil nutrients, excessive soil salinity, air pollution, soil pollution or water pollution, or any combination thereof.

8. A method according to any one of claims 1 to 3 wherein the cyclopropene is 1-methylcyclopropene and the stress is drought, flood or excessive temperature.

9 A method according to any one of claims 1 to 8 wherein the irrigation is localised irrigation, spray irrigation, drip irrigation, bubbler irrigation, micro-sprinkler irrigation, sub-soil irrigation, seepage irrigation, surface irrigation, or manual irrigation, or any combination thereof.

10. A method according to any one of claims 1 to 9 wherein the plants are crops selected from soybean, maize, cotton, vegetables, banana, jatropha, ornamentals, and wheat.

11. A crop produced using a method according to any one of claims 1 to 10.

Claims

1. A method of increasing the abiotic environmental stress tolerance, reducing abiotic stress damage, or improving the quality and/or yield and/or vigor of a crop plant comprising the application of 1-methylcyclopropene in the plant irrigation water to the crop at a rate of 1 to 20g per hectare and wherein the concentration of 1-methylcyclopropene in the irrigation water is 100 to 250ppm.

2. A method according to claim 1 which includes the simultaneous and/or sequential application of one or more further agrochemical compounds and/or plant nutrients and/or plant fertilizers.

3. A method according to claim 2 wherein the further agrochemical compound is a pesticide, such as a fungicide, herbicide, insecticide, bactericide, acaricide or nematicide.

4. A method according to claim 1 wherein the abiotic stress is drought, flood, excessive temperature, low temperature, frost, excess sunlight, insufficient sunlight, wind, inadequate soil nutrients, excessive soil salinity, air pollution, soil pollution or water pollution, or any combination thereof.

5 A method according to claim 1 wherein the stress is drought, flood or excessive temperature.

6 A method according to claim 1 wherein the irrigation is localised irrigation, spray irrigation, drip irrigation, bubbler irrigation, micro-sprinkler irrigation, sub-soil irrigation, seepage irrigation, surface irrigation, or manual irrigation, or any combination thereof.

7. A method according to claim 1 wherein the plants are crops selected from soybean, maize, cotton, vegetables, banana, jatropha, ornamentals, and wheat.