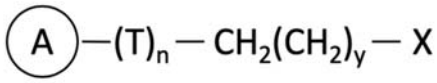
Claims:

1. An agricultural composition comprising ~~A~~ a ~~Compound~~ compound having the structure



or a salt thereof, wherein:

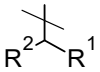
A is five, six or nine-membered ring comprising from 1 to 3 heteroatoms; wherein each of the heteroatoms is independently selected from the group consisting of N, S, and O; and wherein one or more of the carbon atoms of the ring are optionally substituted with R_3, R_4, R_6 and R_7; and wherein each of R_3, R_4, R_6 or R_7 is independently selected from and an electron withdrawing group (EWG) or an electron donating group (EDG); wherein when R_3, R_4, R_6 or R_7 is EDG, at least one carbon of the ring is substituted with EWG; and wherein the 1-3 heteroatoms of the ring are N or S, each independently is optionally substituted with R_3, R_4, R_6 and R_7;

T is selected from the group consisting of sulfonyl, ammonium, alkylamine; arylamine, phosphonium, nitro, cyano, dihalomethyl, acyl, formyl, haloformyls, carboxyl, alkoxycarbonyl, and aminocarbonyl;

n is 0 or 1;

y is 0 to 8;

X is



wherein R_1 is selected from the group consisting of is selected from the group consisting of carboxyl group, carbamoyl group, ester with saturated or non-saturated alcohols with straight,

branched, cyclic chain or aromatic chain, ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, carboxamide substituted with straight, branched, cyclic aliphatic chain, cyclic aromatic chain, ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, sulfonamide, and phosphoramide; and wherein R_2 is selected from the group consisting of optionally substituted primary amine, secondary amine, tertiary amine, carboxamide, sulfonamide, and phosphoramide, and at least one agriculturally acceptable carrier.

2. The ~~compound~~ agricultural composition of claim 1, wherein A is selected from the group consisting of pyrrole, pyrazole, imidazole, triazole, thiophene, dithiole, trithiole, thiazole, dithiazole, trithiazolidine, thiadiazole, dithiadiazole, thiatriazole, oxazole, furan, oxathiole, pyridine, pyridazine, pyrimidine, pyrazine, triazine, thiazine, dithiazine, thiadiazine, 2H-1,3,4,5-thiatriazine, dithiadiazine, pyrrolopyridine, pyrrolopyrimidine, pyrrolotriazine, thiopyranopyrrole, pyrrolothiazine, pyrrolodithiazine, and thienopyridine,

wherein said pyrazole comprises 1H-pyrazole,

wherein said dithiole comprises 2H-1,3-dithiole or 3H-1,2-dithiole,

wherein said pyrrole comprises 1H-pyrrole,

wherein said triazole comprises 2H-1,2,3-triazole or 1H-1,2,4-triazole,

wherein said thiazole comprises 1,3-thiazole,

wherein said thiadiazole comprises 1,2,5-thiadiazole or 1,2,4-thiadiazole, and

wherein said oxazole comprises 1,3-oxazole.

~~3. The compound of claim 2, wherein A is selected from the group consisting of thiophene, 1H-pyrazol, 2H-1,3-dithiole, 3H-1,2-dithiole, 1H-pyrrole, 2H-1,2,3-triazole, 1H-1,2,4-triazole, 1,3-thiazole, 1,2,5-thiadiazole, 1,2,4-thiadiazole, 1,3-oxazole, furan, and pyridine.~~

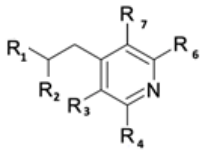
~~4~~3. The ~~compound~~ agricultural composition of ~~any one of claims 1 to 3~~claim 1 or 2, wherein EWG is selected from the group consisting of triflyl (trifluoromethanesulfonyl), trihalide, cyano, sulfonate, nitro, ammonium, quaternary amine, aldehyde, ketone, carboxylic acid, ester, amide, and halide.

~~5~~4. The ~~compound~~ agricultural composition of any one of claims 1 to ~~4~~3, wherein EDG is selected from the group consisting of phenoxide, tertiary amine, secondary amine, primary amine, ether, alkyl, phenyl and vinyl.

~~6~~5. The ~~compound~~ agricultural composition of any one of claims 1 to ~~5~~4, wherein R_2 is selected from the group consisting of primary, secondary and tertiary amine substituted with a group selected from hydrogen, an aliphatic compound with straight or branched chain, an aliphatic compound with non-aromatic ring, straight or branched-chain alcohol, alcohol with non-aromatic ring, carboxylic acid, phosphoric acid, phosphonic acid, terminal carbon of phosphonate, ethylene glycol, polyethylene glycol, propylene glycol, ~~and~~ polypropylene glycol, carboxamide with saturated or non-saturated straight, branched or cyclic chain, sulfonamide, and phosphoramide.

~~7. The compound of any one of claims 1 to 6, wherein R_2 is selected from the group consisting of carboxamide with saturated or non-saturated straight, branched or cyclic chain, sulfonamide, and phosphoramide.~~

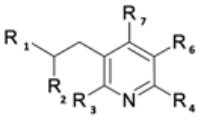
~~86~~. The ~~compound~~ agricultural composition of any one of claims 1 to ~~7~~5, having the structure selected from:



a)

wherein R_1 is COOH, $COOCH_3$, $COOC_2H_5$, $COOC_3H_7$; R_2 is NH_2; R_3 and R_7 are independently selected from H, CF_3, CCl_3, Cl, and F; and R_4 and R_6 are independently selected from H, Cl, and Br~~.~~;

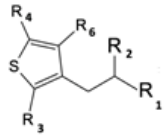
~~9. The compound of any one of claims 1 to 7, having the structure:~~



b)

wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, and $COOC_3H_7$; R_2 is NH_2; R_3 and R_4 are independently selected from H, Br and Cl; and R_6 and R_7 are independently selected from H, Cl, NO_2, CF_3, and CCl_3~~.~~;

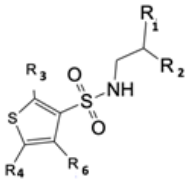
~~10. The compound of any one of claims 1 to 7, having the structure:~~



c)

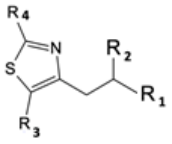
wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_4H_9$, $CONHCH_2COOH$, and $COO(CH_2)_3CH_3$; R_2 is selected from NH_2, $NHCOCH_3$, NHCO, and $NH(CH_2)_20(CH_2)_2)OH$; R_3 and R_4 are independently selected from H, Cl, Br, CN, CHF2 CF_3, CCl_3; and R_6 is H or CF_3~~.~~;

~~11. The compound of any one of claims 1 to 7, having the structure:~~



~~wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is NH_2; R_3 and R_4 are independently selected from H, Br, and Cl; and R_6 is selected from H, F, Cl, Br, CF_3, CCl_3.~~

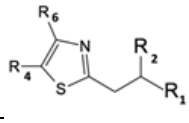
~~12. The compound of any one of claims 1 to 7, having the structure:~~



d)

wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; R_3 and R_4 are each independently selected from H, Br, Cl, and NH_2~~.~~;

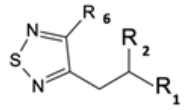
~~13. The compound of any one of claims 1 to 7, having the structure:~~



e)

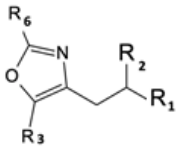
wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; R_4 and R_6 are each independently selected from H, Br, Cl, CF_3, CHF_2, and CCl_3~~.~~;

~~14. The compound of any one of claims 1 to 7, having the structure:~~

f) 

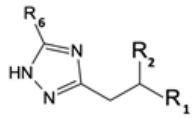
wherein R_1 is selected from the group consisting of COOH; R_2 is NH_2; and R_6 is H.

~~15. The compound of any one of claims 1 to 7, having the structure:~~



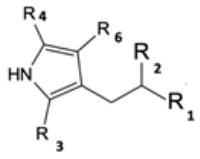
~~wherein R_1 is selected from the group consisting of OH; R_2 is NH_2; and R_3 and R_6 are both H.~~

~~16. The compound of any one of claims 1 to 7, having the structure:~~

g) 

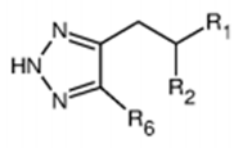
wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; and R_6 is selected from H, Br, Cl, CF_3, CCl_3, and NH_2~~.~~ ;

~~17. The compound of any one of claims 1 to 7, having the structure:~~



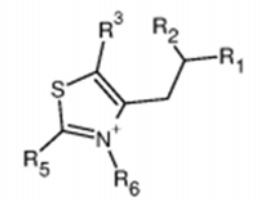
~~wherein R_1 is OH; R_2 is NH_2; and R_3, R_4 and R_6 are independently selected from H, Br, Cl, CF_3, CCl_3, and NH_2.~~

~~18. The compound of any one of claims 1 to 7, having the structure:~~

h) 

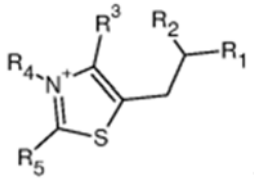
wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; and R_6 is selected from H, Br, Cl, CF_3, CCl_3, and NH_2~~.~~; and

~~19. The compound of any one of claims 1 to 7, having the structure:~~

i) 

wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; R_3 and R_5 are independently selected from H, Br, Cl, CF_3, CCl_3; and R_6 is selected from CH_3, OH and NH_2.

~~20. The compound of any one of claims 1 to 7, having the structure:~~



~~wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; R_3 and R_5 are independently selected from H, Br, Cl, CF_3, CCl_3; and R_4 is selected from CH_3, OH and NH_2.~~

~~21. An agricultural composition comprising the compound of any one of claims 1 to 20 and at least one agriculturally acceptable carrier.~~

~~22~~7. The agricultural composition of ~~claim 21~~any one of the preceding claims, further comprising at least one crop protection agent.

~~23~~8. The agricultural composition of claim ~~22~~7, wherein the at least one crop protection agent is selected from the group consisting of fungicide, insecticide, herbicide, and plant growth regulator.

~~24. The agricultural composition of claim 23, wherein the crop protection agent is herbicide.~~

~~25. The agricultural composition of claim 23, wherein the crop protection agent is plant growth regulator.~~

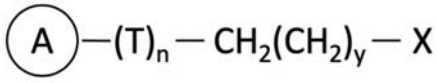
~~26~~9. The agricultural composition of claim ~~24~~7, wherein the at least one crop protection agent is selected from the group consisting of atrazine, terbuthylazine, (S)-metolachlor, metolachlor, terbutryn, simazine, dimethenamid, (S)-dimethenamid, flufenacet, acetochlor, alachlor, isoxaflutole, isoxachlortole, mesotrione, sulcotrione, metosulam, flumetsulam, pendimethalin, bromoxynil, bentazone, carfentrazone-ethyl, clomazone, nicosulfuron, rimsulfuron, halosulfuron-methyl, metribuzin, flumiclorac-pentyl, prosulfuron, primisulfuron-methyl, dicamba, fluthiacet-methyl, pyridate, 2,4-D, clopyralide, diflufenzopyr, fluroxypyr, MCPA, MCPB, mecoprop (MCPP), metobenzuron, thifensulfuron-methyl,

aclonifen, EPTC, glyphosate, glufosinate, sulfosate, cyanazine, propaquizafop, metamitron, pyramin, phenmedipham, desmedipham, ethofumesate, triasulfuron, chloridazon, 105enacil, triallate, fluazifop, sethoxydim, quizalofop, clopyralide, clethodim, oxasulfuron, acifluorfen, benazolin-ethyl, sulfentrazone, chlorimuron-ethyl, cloransulam-methyl, fomesafen, imazamox, imazaquin, imazethapyr, imazapyr, lactofen, fenoxaprop(P-ethyl), thidiazuron, tribufos, trifluralin, dimethachlor, napropamide, quinmerac, metazachlor, carbetamide, dimefuron, propyzamide, ethametsulfuron-methyl, tebutam, fluometuron, prometryn, norflurazon, pyrithiobac-sodium, MSMA, DSMA, diuron, flurochloridone, dithiopyr, thiazopyr, oxyfluorfen, ethalfluralin, clodinafop, amidosulfuron, diclofop-methyl, diflufenican, ethoxysulfuron, fentrazamide, flazasulfuron, florasulam, fluazolate, flucarbazone, flupyrsulfuron-methyl sodium, flurtamone, iodosulfuron, isoproturon, chlortoluron, chlorsulfuron, metsulfuron-methyl, sulfosulfuron, tribenuron-methyl, 2,4-DB, 2,4-DP, bifenox, flamprop-M, imazamethabenz-methyl, ioxynil, tralkoxydim, fluoroglycofen-ethyl, methabenzthiazuron, isoxaben, prosulfocarb, difenzoquat-metilsulfate, pretilachlor, cinosulfuron, fenclorim, bensulfuron-methyl, imazosulfuron, pyrazosulfuron-ethyl, azimsulfuron, esprocarb, mefenacet, molinate, propanil, pyrazolate, cyhalofop-butyl, bispyribac-sodium, pyriminobac-methyl, cafenstrole, oxadiargyl, oxadiazon, bromobutide, MY-100, dymron, NB 061, MK243, HW-52, AC 014, ametryn, hexazinone, asulam, azafenidin, tebuthiuron, ethametsulfuron-methyl, or a combination thereof.

~~27. A method of controlling undesired plant growth comprising applying to the locus of said undesired plant growth the agricultural composition of any one of claims 21 to 26.~~

~~28~~10. A method of controlling undesired plant growth, comprising applying to the locus of the undesired plant growth

a herbicidally effective amount of a compound having the structure



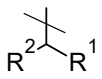
or a salt thereof, wherein:

A is five, six or nine-membered ring comprising one or more heteroatoms; wherein each of the heteroatoms is independently selected from the group consisting of N, S, and O; and wherein one or more of the carbon atoms of the ring is optionally substituted with R_3, R_4, R_6 and R_7; and wherein each of R_3, R_4, R_6 or R_7 is independently selected from and an electron withdrawing group (EWG) or an electron donating group (EDG); wherein when R_3, R_4, R_6 or R_7 is EDG, at least one carbon of the ring is substituted with EWG; and wherein, when one or more heteroatoms of the ring is N or S, each independently is optionally substituted with R_3, R_4, R_6 and R_7;

T is selected from the group consisting of sulfonyl, ammonium, alkylamine; arylamine, phosphonium, nitro, cyano, dihalomethyl, acyl, formyl, haloformyls, carboxyl, alkoxycarbonyl, and aminocarbonyl;

n is 0 or 1;
y is 0 to 8;

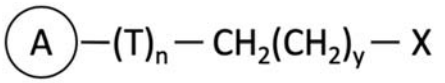
X is



wherein R_1 is selected from the group consisting of carboxyl group, carbamoyl group, ester with saturated or non-saturated alcohols straight, branched, cyclic chain or aromatic chain,

ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, carboxamide substituted with straight, branched, cyclic aliphatic chain, cyclic aromatic chain, ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, sulfonamide, and phosphoramide; and wherein R_2 is selected from the group consisting of optionally substituted primary amine, secondary amine, tertiary amine, carboxamide, sulfonamide, and phosphoramide.

11. A method of controlling undesired plant growth, comprising applying to the locus of the undesired plant growth an agricultural composition comprising a compound having the structure



or a salt thereof, wherein:

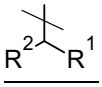
A is five, six or nine-membered ring comprising one or more heteroatoms; wherein each of the heteroatoms is independently selected from the group consisting of N, S, and O; and wherein one or more of the carbon atoms of the ring is optionally substituted with R_3, R_4, R_6 and R_7; and wherein each of R_3, R_4, R_6 or R_7 is independently selected from and an electron withdrawing group (EWG) or an electron donating group (EDG); wherein when R_3, R_4, R_6 or R_7 is EDG, at least one carbon of the ring is substituted with EWG; and wherein, when one or more heteroatoms of the ring is N or S, each independently is optionally substituted with R_3, R_4, R_6 and R_7;

T is selected from the group consisting of sulfonyl, ammonium, alkylamine; arylamine, phosphonium, nitro, cyano, dihalomethyl,

acyl, formyl, haloformyls, carboxyl, alkoxycarbonyl, and aminocarbonyl;

n is 0 or 1;
y is 0 to 8;

X is



wherein R_1 is selected from the group consisting of carboxyl group, carbamoyl group, ester with saturated or non-saturated alcohols straight, branched, cyclic chain or aromatic chain, ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, carboxamide substituted with straight, branched, cyclic aliphatic chain, cyclic aromatic chain, ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, sulfonamide, and phosphoramide; and wherein R_2 is selected from the group consisting of optionally substituted primary amine, secondary amine, tertiary amine, carboxamide, sulfonamide, and phosphoramide.

~~29~~12. The method of claim 28, wherein A is selected from the group consisting of pyrrole, pyrazole, imidazole, triazole, thiophene, dithiole, trithiole, thiazole, dithiazole, trithiazolidine, thiadiazole, dithiadiazole, thiatriazole, oxazole, furan, oxathiole, pyridine, pyridazine, pyrimidine, pyrazine, triazine, thiazine, dithiazine, thiadiazine, 2H-1,3,4,5-thiatriazine, dithiadiazine, pyrrolopyridine, pyrrolopyrimidine, pyrrolotriazine, thiopyranopyrrole, pyrrolothiazine, pyrrolodithiazine, and thienopyridine;

wherein said dithiole comprises 2H-1,3-dithiole or 3H-1,2-dithiole,

wherein said pyrrole comprises 1H-pyrrole,

wherein said triazole comprises 2H-1,2,3-triazole or 1H-1,2,4-triazole,

wherein said thiazole comprises 1,3-thiazole,

wherein said thiadiazole comprises 1,2,5-thiadiazole or 1,2,4-thiadiazole, and

wherein said oxazole comprises 1,3-oxazole.

~~30. The method of claim 28 or 29, wherein A is selected from the group consisting of thiophene, 2H-1,3-dithiole, 3H-1,2-dithiole, 1H-pyrrole, 2H-1,2,3-triazole, 1H-1,2,4-triazole, 1,3-thiazole, 1,2,5-thiadiazole, 1,2,4-thiadiazole, 1,3-oxazole, furan, and pyridine.~~

~~31~~13. The method of ~~any one of claims 28 to 30~~claim 11 or 12, wherein EWG is selected from the group consisting of triflyl (trifluoromethanesulfonyl), trihalide, cyano, sulfonate, nitro, ammonium, quaternary amine, aldehyde, ketone, carboxylic acid, ester, amide, and halide.

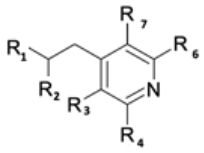
~~32~~14. The method of any one of claims ~~28 to 31~~11 to 13, wherein EDG is selected from the group consisting of phenoxide, tertiary amine, secondary amine, primary amine, ether, alkyl, phenyl and vinyl.

~~33~~15. The method of any one of claims ~~28 to 32~~11 to 14, wherein R_2 is selected from the group consisting of primary, secondary and tertiary amine substituted with a group selected from hydrogen, an aliphatic compound with straight or branched chain, an aliphatic compound with non-aromatic ring, straight or branched-chain alcohol, alcohol with non-aromatic ring, phosphoric acid, phosphonic acid, terminal carbon of phosphonate, ethylene glycol, polyethylene glycol, propylene glycol, ~~and~~ polypropylene glycol, carboxamide with saturated or

non-saturated straight, branched or cyclic chain, sulfonamide, and phosphoramide.

~~34. The method of any one of claims 28 to 33, wherein R_2 is selected from the group consisting of carboxamide with saturated or non-saturated straight, branched or cyclic chain, sulfonamide, and phosphoramide.~~

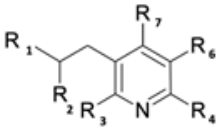
~~35~~16. The method of any one of claims ~~28~~ 11 to ~~34~~ 15 comprising applying to the locus of the undesired plant growth an agricultural composition comprising ~~a herbicidally effective amount of~~ a compound having the structure selected from:



a)

wherein R_1 is COOH, $COOCH_3$, $COOC_2H_5$, $COOC_3H_7$; R_2 is NH_2; R_3 and R_7 are independently selected from H, CF_3, CCl_3, Cl, and F; and R_4 and R_6 are independently selected from H, Cl, and Br~~.~~;

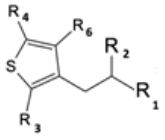
~~36. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure~~



b)

wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, and $COOC_3H_7$; R_2 is NH_2; R_3 and R_4 are independently selected from H, Br and Cl; and R_6 and R_7 are independently selected from H, Cl, NO_2, CF_3, and CCl_3~~.~~;

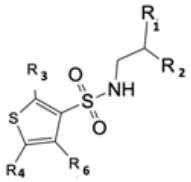
~~37. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure~~



c)

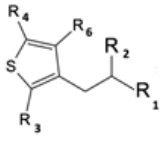
wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_4H_9$, $CONHCH_2COOH$, and $COO(CH_2)_3CH_3$; R_2 is selected from NH_2, $NHCOCH_3$, NHCO, and $NH(CH_2)_20(CH_2)_2)OH$; R_3 and R4 are independently selected from H, Cl, Br, CN, CHF2 CF_3, CCl_3;and R_6 is H or CF_3~~.~~;

~~38. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure:~~



~~wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is NH_2; R_3 and R_4 are independently selected from H, Br, and Cl; and R_6 is selected from H, F, Cl, Br, CF_3, CCl_3.~~

~~39. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure:~~



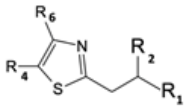
d)

wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, $NHCOCH_3$, or

$NHCOC_2H_5$; R_3 and R_4 are each independently selected from H, Br, Cl, and NH_2.;

~~40. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure:~~

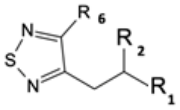
e)



wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; R_4 and R_6 are each independently selected from H, Br, Cl, CF_3, CHF_2, and CCl_3.;

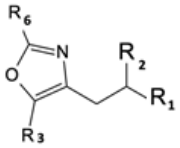
~~41. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure:~~

f)



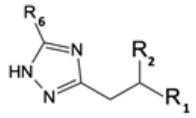
wherein R_1 is COOH; R_2 is NH_2; and R_6 is H.;

~~42. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure:~~



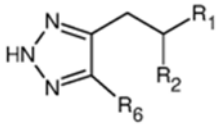
~~wherein R_1 is OH; R_2 is NH_2; and R_3 and R_6 are both H.~~

~~43. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure:~~

g) 

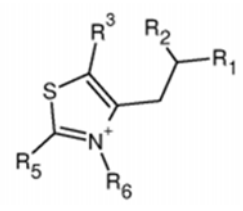
wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; and R_6 is selected from H, Br, Cl, CF_3, CCl_3, and NH_2.

~~44. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure:~~

h) 

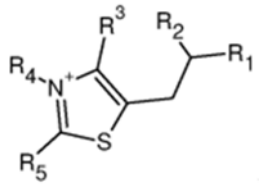
wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; and R_6 is selected from H, Br, Cl, CF_3, CCl_3, and NH_2~~.~~; and

~~45. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure~~

i) 

wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; R_3 and R_5 are independently selected from H, Br, Cl, CF_3, CCl_3; and R_6 is selected from CH_3, OH and NH_2.

~~46. The method of any one of claims 28 to 34 comprising applying to the locus of the undesired plant growth a herbicidally effective amount of a compound having the structure:~~



~~wherein R_1 is selected from COOH, $COOCH_3$, $COOC_2H_5$, $COOC_5H_{11}$, and $COO(CH_2)_2(CH_2)_2CH_3$; R_2 is selected from NH_2, NHCOCH3, or $NHCOC_2H_5$; R_3 and R_5 are independently selected from H, Br, Cl, CF_3, CCl_3; and R_4 is selected from CH_3, OH and NH_2.~~

~~47~~17. The method of any one of claims ~~28~~ 11 to ~~46~~16, further comprising applying to the locus of the undesired plant growth at least one crop protection agent.

~~48~~18. The method of claim ~~47~~17, wherein the at least one crop protection agent is selected from the group consisting of herbicides, fungicides, insecticides and plant growth regulators.

~~49. The method of claim 48, wherein the crop protection agent is herbicide.~~

~~50~~19. The method of claim 49, wherein the crop protection agent is amino acid synthesis inhibitor herbicide selected from the group consisting of sulfonylurea herbicide, imidazolinone herbicide, sulfonamide herbicide and amino acid derivatives, or a combination thereof.

~~51. The method of claim 50, wherein the amino acid synthesis inhibitor herbicide is selected form the group consisting of sulfonylurea herbicide, imidazolinone herbicide, sulfonamide herbicide and amino acid derivatives, or a combination thereof.~~

~~52. The method of claim 51, wherein the amino acid synthesis inhibitor herbicide is selected form the group consisting of imazamox, imazapic, imazethapyr, imazaquin, imazapyr and imazamethabenz, or a combination thereof.~~

~~53. The method of claim 51, wherein the amino acid synthesis inhibitor herbicide is selected form the group consisting of Chlorimuron, Primisulfuron, Thifensulfuron, Triasulfuron, Nicosulfuron, Metsulfuron, Tribenuron, Rimsulfuron and Triflusulfuron or a combination thereof.~~

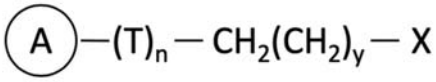
~~54. The method of claim 51, wherein the amino acid synthesis inhibitor herbicide is glyphosate.~~

~~55~~20. The method of claim ~~50~~17, wherein the at least one crop protection agent is a plant growth regulator selected from the group consisting of dicamba, 2,4-D, clopyralid and fluroxypyr.

~~56. The method of claim 57, wherein the plant growth regulator is selected from the group consisting of dicamba, 2,4-D, clopyralid and fluroxypyr.~~

~~57~~21. A method of controlling undesired plant growth comprising applying to the locus of the undesired plant growth:

a. A first herbicide having the structure



or a salt thereof, wherein:

A is five, six or nine-membered ring comprising one or more heteroatoms; wherein each of the heteroatoms is independently selected from the group consisting of N, S, and O; and wherein one or more of the carbon atoms of the ring is optionally

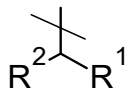
substituted with R_3, R_4, R_6 and R_7; and wherein each of R_3, R_4, R_6 or R_7 is independently selected from and an electron withdrawing group (EWG) or an electron donating group (EDG); wherein when R_3, R_4, R_6 or R_7 is EDG, at least one carbon of the ring is substituted with EWG; and wherein, when one or more heteroatoms of the ring is N or S, each independently is optionally substituted with R_3, R_4, R_6 and R_7;

T is selected from the group consisting of sulfonyl, ammonium, alkylamine; arylamine, phosphonium, nitro, cyano, dihalomethyl, acyl, formyl, haloformyls, carboxyl, alkoxycarbonyl, and aminocarbonyl;

n is 0 or 1;

y is 0 to 8;

X is



wherein R_1 is selected from the group consisting of carboxyl group, carbamoyl group, ester with saturated or non-saturated alcohols straight, branched, cyclic chain or aromatic chain, ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, carboxamide substituted with straight, branched, cyclic aliphatic chain, cyclic aromatic chain, ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, sulfonamide, and phosphoramide; and wherein R_2 is selected from the group consisting of optionally substituted primary amine, secondary amine, tertiary amine, carboxamide, sulfonamide, and phosphoramide; and

b. A second herbicide, to effectively control the undesired plant growth.

~~58~~22. The method of claim ~~57~~21, wherein the second herbicide is amino acid synthesis inhibitor herbicide selected from the

group consisting of sulfonylurea herbicide, imidazolinone herbicide, sulfonamide herbicide amino acid derivative, imazamox, imazapic, imazethapyr, imazaquin, imazapyr, imazamethabenz, Chlorimuron, Primisulfuron, Thifensulfuron, Triasulfuron, Nicosulfuron, Metsulfuron, Tribenuron, Rimsulfuron, Triflusulfuron and Glyphosate.

~~59. The method of claim 58, wherein the second herbicide is selected from the group consisting of sulfonylurea herbicide, imidazolinone herbicide, sulfonamide herbicide and amino acid derivative.~~

~~60. The method of claim 57 to 59, wherein the second herbicide is selected from the group consisting of imazamox, imazapic, imazethapyr, imazaquin, imazapyr, imazamethabenz, Chlorimuron, Primisulfuron, Thifensulfuron, Triasulfuron, Nicosulfuron, Metsulfuron, Tribenuron, Rimsulfuron, Triflusulfuron and Glyphosate.~~

~~61~~23. The method of ~~any one of claims 57 to 59~~claim 21, wherein the second herbicide is selected from the group consisting of atrazine, terbuthylazine, (S)-metolachlor, metolachlor, terbutryn, simazine, dimethenamid, (S)-dimethenamid, flufenacet, acetochlor, alachlor, isoxaflutole, isoxachlortole, mesotrione, sulcotrione, metosulam, flumetsulam, pendimethalin, bromoxynil, bentazone, carfentrazone-ethyl, clomazone, nicosulfuron, rimsulfuron, halosulfuron-methyl, metribuzin, flumiclorac-pentyl, prosulfuron, primisulfuron-methyl, dicamba, fluthiacet-methyl, pyridate, 2,4-D, clopyralide, diflufenzopyr, fluroxypyr, MCPA, MCPB, mecoprop (MCPP), metobenzuron, thifensulfuron-methyl, aclonifen, EPTC, glyphosate, glufosinate, sulfosate, cyanazine, propaquizafop, metamitron, pyramin, phenmedipham, desmedipham, ethofumesate, triasulfuron, chloridazon, 117enacil, triallate, fluazifop, sethoxydim, quizalofop, clopyralide, clethodim,

oxasulfuron, acifluorfen, benazolin-ethyl, sulfentrazone, chlorimuron-ethyl, cloransulam-methyl, fomesafen, imazamox, imazaquin, imazethapyr, imazapyr, lactofen, fenoxaprop(P-ethyl), thidiazuron, tribufos, trifluralin, dimethachlor, napropamide, quinmerac, metazachlor, carbetamide, dimefuron, propyzamide, ethametsulfuron-methyl, tebutam, fluometuron, prometryn, norflurazon, pyrithiobac-sodium, MSMA, DSMA, diuron, flurochloridone, dithiopyr, thiazopyr, oxyfluorfen, ethalfluralin, clodinafop, amidosulfuron, diclofop-methyl, diflufenican, ethoxysulfuron, fentrazamide, flazasulfuron, florasulam, fluazolate, flucarbazone, flupyrsulfuron-methyl sodium, flurtamone, iodosulfuron, isoproturon, chlortoluron, chlorsulfuron, metsulfuron-methyl, sulfosulfuron, tribenuron-methyl, 2,4-DB, 2,4-DP, bifenox, flamprop-M, imazamethabenz-methyl, ioxynil, tralkoxydim, fluoroglycofen-ethyl, methabenzthiazuron, isoxaben, prosulfocarb, difenzoquat-metilsulfate, pretilachlor, cinosulfuron, fenclorim, bensulfuron-methyl, imazosulfuron, pyrazosulfuron-ethyl, azimsulfuron, esprocarb, mefenacet, molinate, propanil, pyrazolate, cyhalofop-butyl, bispyribac-sodium, pyriminobac-methyl, cafenstrole, oxadiargyl, oxadiazon, bromobutide, MY-100, dymron, NB 061, MK243, HW-52, AC 014, ametryn, hexazinone, asulam, azafenidin, tebuthiuron, and ethametsulfuron-methyl.

~~62~~24. The method of any one of claims ~~57~~ 21 to ~~61~~ 23 further comprising applying a third herbicide or a plant growth regulator.

~~63. A composition for controlling undesired plant growth comprising a mixture of:~~

~~a. a compound of any one of claims 1 to 22;~~

~~b. at least one herbicide selected from the group consisting of atrazine, terbuthylazine, (S)-metolachlor, metolachlor, terbutryn, simazine, dimethenamid, (S)-~~

dimethenamid, flufenacet, acetochlor, alachlor, isoxaflutole, isoxachlortole, mesotrione, sulcotrione, metosulam, flumetsulam, pendimethalin, bromoxynil, bentazone, carfentrazone-ethyl, clomazone, nicosulfuron, rimsulfuron, halosulfuron-methyl, metribuzin, flumiclorac-pentyl, prosulfuron, primisulfuron-methyl, dicamba, fluthiacet-methyl, pyridate, 2,4-D, clopyralide, diflufenzopyr, fluroxypyr, MCPA, MCPB, mecoprop (MCPP), metobenzuron, thifensulfuron-methyl, aclonifen, EPTC, glyphosate, glufosinate, sulfosate, cyanazine, propaquizafop, metamitron, pyramin, phenmedipham, desmedipham, ethofumesate, triasulfuron, chloridazon, 119enacil, triallate, fluazifop, sethoxydim, quizalofop, clopyralide, clethodim, oxasulfuron, acifluorfen, benazolin-ethyl, sulfentrazone, chlorimuron-ethyl, cloransulam-methyl, fomesafen, imazamox, imazaquin, imazethapyr, imazapyr, lactofen, fenoxaprop(P-ethyl), thidiazuron, tribufos, trifluralin, dimethachlor, napropamide, quinmerac, metazachlor, carbetamide, dimefuron, propyzamide, ethametsulfuron-methyl, tebutam, fluometuron, prometryn, norflurazon, pyrithiobac-sodium, MSMA, DSMA, diuron, flurochloridone, dithiopyr, thiazopyr, oxyfluorfen, ethalfluralin, clodinafop, amidosulfuron, diclofop-methyl, diflufenican, ethoxysulfuron, fentrazamide, flazasulfuron, florasulam, fluazolate, flucarbazone, flupyrsulfuron-methyl sodium, flurtamone, iodosulfuron, isoproturon, chlortoluron, chlorsulfuron, metsulfuron-methyl, sulfosulfuron, tribenuron-methyl, 2,4-DB, 2,4-DP, bifenox, flamprop-M, imazamethabenz-methyl, ioxynil, tralkoxydim, fluoroglycofen-ethyl, methabenzthiazuron, isoxaben, prosulfocarb, difenzoquat-metilsulfate, pretilachlor, cinosulfuron, fenclorim, bensulfuron-methyl, imazosulfuron, pyrazosulfuron-ethyl, azimsulfuron, esprocarb, mefenacet, molinate, propanil, pyrazolate, cyhalofop-butyl, bispyribac-sodium, pyriminobac-methyl, cafenstrole, oxadiargyl, oxadiazon, bromobutide, MY-100, dymron, NB 061, MK243, HW-52, AC 014, ametryn, hexazinone,

~~asulam, azafenidin, tebuthiuron, ethametsulfuron-methyl, or a combination thereof; and~~

~~c. at least one agriculturally acceptable carrier.~~

~~64. A composition for controlling undesired plant growth comprising a mixture of:~~

~~a. a compound of any one of claims 1 to 22;~~

~~b. at least one plant growth regulator; and~~

~~c. at least one agriculturally acceptable carrier.~~

~~65~~25. The agricultural composition of claim 1 comprising ~~A~~ the compound selected from the group consisting of 2-amino-3-(thiophen-2-yl)propanoic acid; 2-amino-3-(thiophen-3-yl)propanoic acid; 2-amino-3-[(thiophene-3-sulfonyl)amino]propanoic acid; 2-amino-3-[(4-fluorothiophene-3-sulfonyl)amino]propanoic acid; methyl 2-amino-3-[(thiophene-3-sulfonyl)amino]propanoate; pentyl 2-amino-3-[(thiophene-3-sulfonyl)amino]propanoate; 3-(5-cyano-3-thienyl)alanine; 2-amino-3-[4-(trifluoromethyl)thiophen-2-yl]propanoic acid; 3-amino-3-(4-bromothiophen-3-yl)propanoic acid; 2-amino-3-(2,4,5-trimethylthiophen-3-yl)propanoic acid; butyl 2-amino-3-(thiophen-3-yl)propanoate; 2-amino-3-[(2,5-dichlorothiophene-3-sulfonyl)amino]propanoic acid; 2-amino-3-[(2,5-dichloro-4-methylthiophene-3-sulfonyl)amino]propanoic acid; 2-amino-3-(2-chlorothiophen-3-yl)propanoic acid; 2-amino-3-(2,5-dichlorothiophen-3-yl)propanoic acid; 2-amino-3-(5-chlorothiophen-3-yl)propanoic acid; 2-amino-3-(2,5-dihydro-1,3-thiazol-4-yl)propanoic acid; 2-amino-3-(1,3-thiazol-5-yl)propanoic acid; 2-amino-3-{[2,5-dichloro-4-(trifluoromethyl)thiophene-3-sulfonyl]amino}propanoic acid; 2-amino-3-(2-amino-1,3-thiazol-4-yl)propanoic acid; methyl 2-amino-3-[(2,5-dichlorothiophene-3-sulfonyl)amino]propanoate; ethyl 2-amino-3-[(2,5-dichlorothiophene-3-sulfonyl)amino]propanoate;2-propoxyethyl-2-amino-3-[(2,5-

dichlorothiophene-3-sulfonyl)amino]propanoate; [2-(carboxyamino)-3-ethoxy-3-oxopropyl](2,5-dichlorothiophene-3-sulfonyl)carbamic acid; 2-amino-3-(2,5-dichloro-1,3-thiazol-4-yl)propanoic acid; 2-amino-3-(5-chloro-1,3-thiazol-4-yl)propanoic acid; 2-amino-3-(1,2,5-thiadiazol-3-yl)propanoic acid; 2-amino-3-(1,2,4-thiadiazol-5-yl)propanoic acid; 2-amino-3-(furan-3-yl)propanoic acid; 2-amino-3-(1,3-oxazol-4-yl)propanoic acid; 2-formamido-3-(thiophen-3-yl)propanoic acid; methyl 2-amino-3-(thiophen-3-yl)propanoate; ethyl 2-amino-3-(thiophen-3-yl)propanoate; [2-amino-3-(thiophen-3-yl)propanamido]acetic acid; 2-amino-N-[2-(2-hydroxyethoxy)ethyl]-3-(thiophen-3-yl)propenamide; ethyl 2-butanamido-3-(dichloro-1,3-thiazol-4-yl)propanoate; 2-butoxyethyl 2-acetamido-3-(2,5-dichloro-1,3-thiazol-4-yl)propanoate; 2-amino-3-(2,5-dibromothiophen-3-yl)propanoic acid; 2-amino-3-(5-nitrothiophen-3-yl)propanoic acid; butyl 3-(dichloro-1,3-thiazol-4-yl)-2-acetamidopropanoate; 2-ethoxyethyl 3-(dichloro-1,3-thiazol-4-yl)-2-acetamidopropanoate; 2-amino-3-[5-(trifluoromethyl)thiophen-3-yl]propanoic acid; (2S)-2-amino-3-(3,5-dioxo-1,2,4-oxadiazolidin-2-yl)propanoic acid; 2-amino-3-[(2,5-dibromothiophene-3-sulfonyl)amino]propanoic acid; 2-amino-3-(5-chloro-2-methylthiophen-3-yl)propanoic acid; 2-amino-3-(2-bromothiophen-3-yl)propanoic acid; 2-amino-3-(1,1-dioxo-1l6-thiolan-3-yl)propanoic acid; 2-amino-3-(thiolan-3-yl)propanoic acid; [2-amino-2-(thiophen-3-yl)ethyl]phosphonic acid; 2-amino-3-(2,5-dimethyl-1,1-dioxo-1H-1l6-thiophen-3-yl)propanoic acid; 3-(2,5-dioxo-2,5-dihydrothiophen-3-yl)-2-(phosphonoamino)propanoic acid; 2-amino-3-[4-(trifluoromethyl)thiophen-3-yl]propanoic acid; ethyl 2-acetamido-3-(2,5-dichloro-1,3-thiazol-4-yl)propanoate; methyl 2-amino-3-(2,5-dichlorothiophen-3-yl)propanoate; ethyl 2-amino-3-(2,5-dichlorothiophen-3-yl)propanoate; 2-(2-methoxyethoxy)ethyl-2-amino-3-(thiophen-3-yl)propanoate; ethyl

2-acetamido-3-(thiophen-3-yl)propanoate; ethyl 3-(2,5-dichlorothiophen-3-yl)-2-acetamidopropanoate; ethyl 3-(2,5-dichlorofuran-3-yl)-2-acetamidopropanoate; propyl 2-amino-3-(2,5-dichlorofuran-3-yl)propanoate; 4-(2-acetamido-3-ethoxy-3-oxopropyl)-3-methyl-1,3-thiazol-3-ium chloride; 2-(2-ethoxyethoxy)ethyl 3-(2,5-dichlorothiophen-3-yl)-2-acetamidopropanoate; pentyl 2-acetamido-3-(1,3,4-oxadiazol-2-yl)propanoate; ethyl-2-amino-3-[(2,5-dibromothiophene-3-sulfonyl)amino]propanoate; butyl 3-(5-chloro-1,2,4-thiadiazol-3-yl)-2-acetamidopropanoate; 2-amino-3-(1H-indazol-3-yl)propanoic acid hydrochloride[HCl]; 2-amino-3-(pyridazin-4-yl)propanoic acid; 2-amino-3-(pyridin-4-yl)propanoic acid; 2-amino-3-(pyridin-3-yl)propanoic acid dihydrochloride 3-(5-Hydroxy-3-pyridinyl)alanine; 2-amino-3-(5-methylpyridin-3-yl)propanoic acid; 2-amino-3-(4-aminopyridin-2-yl)propanoic acid; 2-amino-3-(2-aminopyridin-4-yl)propanoic acid; 2-amino-3-(6-aminopyridin-2-yl)propanoic acid; 2-amino-3-(5-aminopyridin-3-yl)propanoic acid; 2-amino-3-(5-sulfanylpyridin-3-yl)propanoic acid; 2-amino-3-(2-sulfanylpyridin-4-yl)propanoic acid; 2-amino-3-(pyrimidin-5-yl)propanoic acid; 2-amino-3-(4-amino-6-chloropyrimidin-2-yl)propanoic acid; 2-amino-3-(pyrimidin-2-yl)propanoic acid dihydrochloride; 2-amino-3-(4-hydroxypyrimidin-2-yl)propanoic acid; 2-amino-3-(2,4-dioxo-1,2,3,4-tetrahydropyrimidin-5-yl)propanoic acid; 2-amino-3-(pyrazin-2-yl)propanoic acid; 2-amino-3-(5-chloropyridin-3-yl)propanoic acid; 2-amino-3-(2,5-dichloropyridin-3-yl)propanoic acid; 2-amino-3-(pyrimidin-4-yl)propanoic acid; 2-amino-3-(5-fluoropyridin-3-yl)propanoic acid; 2-amino-3-(6-chloropyridin-3-yl)propanoic acid; 2-amino-3-(2,6-dichloropyridin-4-yl)propanoic acid; 2-amino-3-(3,5-dichloropyridin-4-yl)propanoic acid; 2-amino-3-(3,5-difluoropyridin-4-yl)propanoic acid; 2-amino-3-[2-(dimethylamino)pyridin-4-yl]propanoic acid; 2-amino-3-(2-bromopyridin-4-yl)propanoic acid; 2-amino-3-(5,6-

dibromopyridin-3-yl)propanoic acid; 2-amino-3-(2,6-dibromopyridin-4-yl)propanoic acid; 2-amino-3-(2,3-dibromopyridin-4-yl)propanoic acid; 2-amino-3-[5-(trifluoromethyl)123yridine-3-yl]propanoic acid; 2-amino-3-(5,6-dichloropyridin-3-yl)propanoic acid; 2-amino-3-(2-oxo-1,2-dihydropyridin-4-yl)propanoic acid; 2-amino-3-[4-(dimethylamino)pyridin-3-yl]propanoic acid; 2-amino-3-(2-oxo-1,2-dihydropyridin-3-yl)propanoic acid; 2-amino-3-(6-oxo-1,6-dihydropyrimidin-4-yl)propanoic acid; 2-amino-3-(6-oxo-1,6-dihydropyrimidin-5-yl)propanoic acid; 2-amino-3-(6-oxo-1,6-dihydropyridin-3-yl)propanoic acid; 2-amino-3-(2,6-dioxo-1,2,3,6-tetrahydropyrimidin-4-yl)propanoic acid; 2-amino-3-(6-oxo-2-sulfanyl-1,6-dihydropyrimidin-4-yl)propanoic acid; propyl 2-amino-3-(2-bromopyridin-4-yl)propanoate; 2-amino-3-(2-bromo-3,5-difluoropyridin-4-yl)propanoic acid; propyl 2-amino-3-(2-bromo-3,5-difluoropyridin-4-yl)propanoate; 2-amino-3-[(2-bromopyridine-4-sulfonyl)amino]propanoic acid; propyl 2-amino-3-[(2-bromopyridine-4-sulfonyl)amino]propanoate; ethyl 2-amino-3-(5,6-dibromopyridin-3-yl)propanoate; ethyl 2-amino-3-(2,3-dibromopyridin-4-yl)propanoate acid; 2-amino-3-[2-chloro-5-(trifluoromethyl)pyridin-3-yl]propanoic acid; 2-amino-3-(2-amino-6-oxo-1,6-dihydropyrimidin-5-yl)propanoic acid; 2-amino-3-(6-hydroxy-5-nitropyridin-3-yl)propanoic acid; methyl 2-amino-3-(2-bromopyridin-4-yl)propanoate; 3-(2-amino-2-carboxyethyl)-1-methylpyridin-1-ium; 3-(2-amino-2-carboxyethyl)-1-hydroxypyridin-1-ium; 2-amino-3-(4-amino-6-hydroxy-2-methylpyrimidin-5-yl)propanoic acid; methyl 2-amino-3-(2,6-dibromopyridin-4-yl)propanoate; ethyl 3-(6-bromopyridin-3-yl)-2-acetamidopropanoate; methyl 3-(6-bromopyridin-3-yl)-2-acetamidopropanoate; ethyl-2-acetamido-3-(2-methoxypyrimidin-4-yl)propanoate; 2-(2-methoxyethoxy)ethyl 2-amino-3-(6-bromopyridin-3-yl)propanoate; 2-(2-ethoxyethoxy)ethyl 2-amino-3-(6-bromopyridin-3-yl)propanoate; 5-(2-amino-2-carboxyethyl)-1-methylpyrimidin-1-ium; 2-amino-3-[2-

(trifluoromethyl)pyridin-4-yl]propanoic acid hydrochloride[HCl]; ethyl 3-[(2-bromopyridin-4-yl)oxy]-2-acetamidopropanoate; ethyl 2-acetamido-3-(pyridin-4-yloxy)propanoate; 2-amino-4-(1H-pyrrol-3-yl)butanoic acid; 2-amino-3-(1H-pyrrol-2-yl)propanoic acid; 2-amino-3-(1H-pyrrol-3-yl)propanoic acid; 2-amino-3-(4H-1,2,4-triazol-3-yl)propanoic acid; (2S)-2-hydroxy-3-(1H-imidazol-4-yl)propanoic acid; ethyl 2-{[(benzyloxy)carbonyl]amino}-3-(1H-1,2,4-triazol-3-yl)propanoate; 2-amino-3-(4-methyl-4H-1,2,4-triazol-3-yl)propanoic acid; 2-amino-3-(1-methyl-1H-1,2,4-triazol-5-yl)propanoic acid dihydrochloride; 2-amino-3-(1-methyl-1H-1,2,3-triazol-4-yl)propanoic acid hydrochloride; 2-amino-3-(2-methyl-2H-1,2,3,4-tetrazol-5-yl)propanoic acid hydrochloride; 2-amino-3-(dimethyl-4H-1,2,4-triazol-3-yl)propanoic acid hydrochloride; (2S)-2-amino-3-[5-(trifluoromethyl)-1H-pyrazol-4-yl]propanoic acid; and 2-(2-butoxyethoxy)ethyl 2-amino-3-(2H-1,2,3-triazol-4-yl)propanoate, or an agriculturally acceptable salt thereof.

~~66. An agricultural composition comprising the compound of claim 65 and at least one agriculturally acceptable carrier.~~

~~67. A method of controlling undesired plant growth comprising applying to the locus of said undesired plant growth a herbicidally effective amount of the compound of claim 65.~~

~~68. A method of controlling undesired plant growth comprising applying to the locus of said undesired plant growth a herbicidally effective amount of the agricultural composition of claim 66.~~

26. A method of controlling undesired plant growth comprising applying to the locus of the undesired plant growth a compound or a salt thereof, selected from the group consisting of: 2-amino-3-(thiophen-2-yl)propanoic acid; 2-amino-3-(thiophen-3-yl)propanoic acid; 2-amino-3-[(thiophene-3-

sulfonyl)amino]propanoic acid; 2-amino-3-[(4-fluorothiophene-3-sulfonyl)amino]propanoic acid; methyl 2-amino-3-[(thiophene-3-sulfonyl)amino]propanoate; pentyl 2-amino-3-[(thiophene-3-sulfonyl)amino]propanoate; 3-(5-cyano-3-thienyl)alanine; 2-amino-3-[4-(trifluoromethyl)thiophen-2-yl]propanoic acid; 3-amino-3-(4-bromothiophen-3-yl)propanoic acid; 2-amino-3-(2,4,5-trimethylthiophen-3-yl)propanoic acid; butyl 2-amino-3-(thiophen-3-yl)propanoate; 2-amino-3-[(2,5-dichlorothiophene-3-sulfonyl)amino]propanoic acid; 2-amino-3-[(2,5-dichloro-4-methylthiophene-3-sulfonyl)amino]propanoic acid; 2-amino-3-(2-chlorothiophen-3-yl)propanoic acid; 2-amino-3-(2,5-dichlorothiophen-3-yl)propanoic acid; 2-amino-3-(5-chlorothiophen-3-yl)propanoic acid; 2-amino-3-(2,5-dihydro-1,3-thiazol-4-yl)propanoic acid; 2-amino-3-(1,3-thiazol-5-yl)propanoic acid; 2-amino-3-{[2,5-dichloro-4-(trifluoromethyl)thiophene-3-sulfonyl]amino}propanoic acid; 2-amino-3-(2-amino-1,3-thiazol-4-yl)propanoic acid; methyl 2-amino-3-[(2,5-dichlorothiophene-3-sulfonyl)amino]propanoate; ethyl 2-amino-3-[(2,5-dichlorothiophene-3-sulfonyl)amino]propanoate;2-propoxyethyl-2-amino-3-[(2,5-dichlorothiophene-3-sulfonyl)amino]propanoate; [2-(carboxyamino)-3-ethoxy-3-oxopropyl](2,5-dichlorothiophene-3-sulfonyl)carbamic acid; 2-amino-3-(2,5-dichloro-1,3-thiazol-4-yl)propanoic acid; 2-amino-3-(5-chloro-1,3-thiazol-4-yl)propanoic acid; 2-amino-3-(1,2,5-thiadiazol-3-yl)propanoic acid; 2-amino-3-(1,2,4-thiadiazol-5-yl)propanoic acid; 2-amino-3-(furan-3-yl)propanoic acid; 2-amino-3-(1,3-oxazol-4-yl)propanoic acid; 2-formamido-3-(thiophen-3-yl)propanoic acid; methyl 2-amino-3-(thiophen-3-yl)propanoate; ethyl 2-amino-3-(thiophen-3-yl)propanoate; [2-amino-3-(thiophen-3-yl)propanamido]acetic acid; 2-amino-N-[2-(2-hydroxyethoxy)ethyl]-3-(thiophen-3-yl)propenamide; ethyl 2-butanamido-3-(dichloro-1,3-thiazol-4-yl)propanoate; 2-butoxyethyl 2-acetamido-3-(2,5-dichloro-1,3-thiazol-4-

yl)propanoate; 2-amino-3-(2,5-dibromothiophen-3-yl)propanoic acid; 2-amino-3-(5-nitrothiophen-3-yl)propanoic acid; butyl 3-(dichloro-1,3-thiazol-4-yl)-2-acetamidopropanoate; 2-ethoxyethyl 3-(dichloro-1,3-thiazol-4-yl)-2-acetamidopropanoate; 2-amino-3-[5-(trifluoromethyl)thiophen-3-yl]propanoic acid; (2S)-2-amino-3-(3,5-dioxo-1,2,4-oxadiazolidin-2-yl)propanoic acid; 2-amino-3-[(2,5-dibromothiophene-3-sulfonyl)amino]propanoic acid; 2-amino-3-(5-chloro-2-methylthiophen-3-yl)propanoic acid; 2-amino-3-(2-bromothiophen-3-yl)propanoic acid; 2-amino-3-(1,1-dioxo-1l6-thiolan-3-yl)propanoic acid; 2-amino-3-(thiolan-3-yl)propanoic acid; [2-amino-2-(thiophen-3-yl)ethyl]phosphonic acid; 2-amino-3-(2,5-dimethyl-1,1-dioxo-1H-1l6-thiophen-3-yl)propanoic acid; 3-(2,5-dioxo-2,5-dihydrothiophen-3-yl)-2-(phosphonoamino)propanoic acid; 2-amino-3-[4-(trifluoromethyl)thiophen-3-yl]propanoic acid; ethyl 2-acetamido-3-(2,5-dichloro-1,3-thiazol-4-yl)propanoate; methyl 2-amino-3-(2,5-dichlorothiophen-3-yl)propanoate; ethyl 2-amino-3-(2,5-dichlorothiophen-3-yl)propanoate; 2-(2-methoxyethoxy)ethyl-2-amino-3-(thiophen-3-yl)propanoate; ethyl 2-acetamido-3-(thiophen-3-yl)propanoate; ethyl 3-(2,5-dichlorothiophen-3-yl)-2-acetamidopropanoate; ethyl 3-(2,5-dichlorofuran-3-yl)-2-acetamidopropanoate; propyl 2-amino-3-(2,5-dichlorofuran-3-yl)propanoate; 4-(2-acetamido-3-ethoxy-3-oxopropyl)-3-methyl-1,3-thiazol-3-ium chloride; 2-(2-ethoxyethoxy)ethyl 3-(2,5-dichlorothiophen-3-yl)-2-acetamidopropanoate; pentyl 2-acetamido-3-(1,3,4-oxadiazol-2-yl)propanoate; ethyl-2-amino-3-[(2,5-dibromothiophene-3-sulfonyl)amino]propanoate; butyl 3-(5-chloro-1,2,4-thiadiazol-3-yl)-2-acetamidopropanoate; 2-amino-3-(1H-indazol-3-yl)propanoic acid hydrochloride[HCl]; 2-amino-3-(pyridazin-4-yl)propanoic acid; 2-amino-3-(pyridin-4-yl)propanoic acid; 2-amino-3-(pyridin-3-yl)propanoic acid dihydrochloride 3-(5-Hydroxy-3-pyridinyl)alanine; 2-amino-3-(5-methylpyridin-3-

yl)propanoic acid; 2-amino-3-(4-aminopyridin-2-yl)propanoic acid; 2-amino-3-(2-aminopyridin-4-yl)propanoic acid; 2-amino-3-(6-aminopyridin-2-yl)propanoic acid; 2-amino-3-(5-aminopyridin-3-yl)propanoic acid; 2-amino-3-(5-sulfanylpyridin-3-yl)propanoic acid; 2-amino-3-(2-sulfanylpyridin-4-yl)propanoic acid; 2-amino-3-(pyrimidin-5-yl)propanoic acid; 2-amino-3-(4-amino-6-chloropyrimidin-2-yl)propanoic acid; 2-amino-3-(pyrimidin-2-yl)propanoic acid dihydrochloride; 2-amino-3-(4-hydroxypyrimidin-2-yl)propanoic acid; 2-amino-3-(2,4-dioxo-1,2,3,4-tetrahydropyrimidin-5-yl)propanoic acid; 2-amino-3-(pyrazin-2-yl)propanoic acid; 2-amino-3-(5-chloropyridin-3-yl)propanoic acid; 2-amino-3-(2,5-dichloropyridin-3-yl)propanoic acid; 2-amino-3-(pyrimidin-4-yl)propanoic acid; 2-amino-3-(5-fluoropyridin-3-yl)propanoic acid; 2-amino-3-(6-chloropyridin-3-yl)propanoic acid; 2-amino-3-(2,6-dichloropyridin-4-yl)propanoic acid; 2-amino-3-(3,5-dichloropyridin-4-yl)propanoic acid; 2-amino-3-(3,5-difluoropyridin-4-yl)propanoic acid; 2-amino-3-[2-(dimethylamino)pyridin-4-yl]propanoic acid; 2-amino-3-(2-bromopyridin-4-yl)propanoic acid; 2-amino-3-(5,6-dibromopyridin-3-yl)propanoic acid; 2-amino-3-(2,6-dibromopyridin-4-yl)propanoic acid; 2-amino-3-(2,3-dibromopyridin-4-yl)propanoic acid; 2-amino-3-[5-(trifluoromethyl)127yridine-3-yl]propanoic acid; 2-amino-3-(5,6-dichloropyridin-3-yl)propanoic acid; 2-amino-3-(2-oxo-1,2-dihydropyridin-4-yl)propanoic acid; 2-amino-3-[4-(dimethylamino)pyridin-3-yl]propanoic acid; 2-amino-3-(2-oxo-1,2-dihydropyridin-3-yl)propanoic acid; 2-amino-3-(6-oxo-1,6-dihydropyrimidin-4-yl)propanoic acid; 2-amino-3-(6-oxo-1,6-dihydropyrimidin-5-yl)propanoic acid; 2-amino-3-(6-oxo-1,6-dihydropyridin-3-yl)propanoic acid; 2-amino-3-(2,6-dioxo-1,2,3,6-tetrahydropyrimidin-4-yl)propanoic acid; 2-amino-3-(6-oxo-2-sulfanyl-1,6-dihydropyrimidin-4-yl)propanoic acid; propyl 2-amino-3-(2-bromopyridin-4-yl)propanoate; 2-amino-3-(2-bromo-

3,5-difluoropyridin-4-yl)propanoic acid; propyl 2-amino-3-(2-bromo-3,5-difluoropyridin-4-yl)propanoate; 2-amino-3-[(2-bromopyridine-4-sulfonyl)amino]propanoic acid; propyl 2-amino-3-[(2-bromopyridine-4-sulfonyl)amino]propanoate; ethyl 2-amino-3-(5,6-dibromopyridin-3-yl)propanoate; ethyl 2-amino-3-(2,3-dibromopyridin-4-yl)propanoate acid; 2-amino-3-[2-chloro-5-(trifluoromethyl)pyridin-3-yl]propanoic acid; 2-amino-3-(2-amino-6-oxo-1,6-dihydropyrimidin-5-yl)propanoic acid; 2-amino-3-(6-hydroxy-5-nitropyridin-3-yl)propanoic acid; methyl 2-amino-3-(2-bromopyridin-4-yl)propanoate; 3-(2-amino-2-carboxyethyl)-1-methylpyridin-1-ium; 3-(2-amino-2-carboxyethyl)-1-hydroxypyridin-1-ium; 2-amino-3-(4-amino-6-hydroxy-2-methylpyrimidin-5-yl)propanoic acid; methyl 2-amino-3-(2,6-dibromopyridin-4-yl)propanoate; ethyl 3-(6-bromopyridin-3-yl)-2-acetamidopropanoate; methyl 3-(6-bromopyridin-3-yl)-2-acetamidopropanoate; ethyl-2-acetamido-3-(2-methoxypyrimidin-4-yl)propanoate; 2-(2-methoxyethoxy)ethyl 2-amino-3-(6-bromopyridin-3-yl)propanoate; 2-(2-ethoxyethoxy)ethyl 2-amino-3-(6-bromopyridin-3-yl)propanoate; 5-(2-amino-2-carboxyethyl)-1-methylpyrimidin-1-ium; 2-amino-3-[2-(trifluoromethyl)pyridin-4-yl]propanoic acid hydrochloride[HCl]; ethyl 3-[(2-bromopyridin-4-yl)oxy]-2-acetamidopropanoate; ethyl 2-acetamido-3-(pyridin-4-yloxy)propanoate; 2-amino-4-(1H-pyrrol-3-yl)butanoic acid; 2-amino-3-(1H-pyrrol-2-yl)propanoic acid; 2-amino-3-(1H-pyrrol-3-yl)propanoic acid; 2-amino-3-(4H-1,2,4-triazol-3-yl)propanoic acid; (2S)-2-hydroxy-3-(1H-imidazol-4-yl)propanoic acid; ethyl 2-{[(benzyloxy)carbonyl]amino}-3-(1H-1,2,4-triazol-3-yl)propanoate; 2-amino-3-(4-methyl-4H-1,2,4-triazol-3-yl)propanoic acid; 2-amino-3-(1-methyl-1H-1,2,4-triazol-5-yl)propanoic acid dihydrochloride; 2-amino-3-(1-methyl-1H-1,2,3-triazol-4-yl)propanoic acid hydrochloride; 2-amino-3-(2-methyl-2H-1,2,3,4-tetrazol-5-yl)propanoic acid hydrochloride; 2-amino-3-(dimethyl-4H-1,2,4-triazol-3-yl)propanoic acid

hydrochloride; (2S)-2-amino-3-[5-(trifluoromethyl)-1H-pyrazol-4-yl]propanoic acid; and 2-(2-butoxyethoxy)ethyl 2-amino-3-(2H-1,2,3-triazol-4-yl)propanoate.