

Title (en)  
METHODS FOR IMPROVING GROWTH AND CROP PRODUCTIVITY OF PLANTS BY ADJUSTING PLANT HORMONE LEVELS, RATIOS AND/OR CO-FACTORS

Title (de)  
VERFAHREN ZUR VERBESSERUNG DES WACHSTUMS UND DES ERTRAGS VON PFLANZEN DURCH REGELUNG DER PFLANZLICHEN HORMONSPiegel, - VERHÄLTNISSE UND/ODER -COFAKTOREN

Title (fr)  
METHODES PROPRES A AMELIORER LA CROISSANCE DES PLANTES ET LES RENDEMENTS DES CULTURES PAR AJUSTEMENT DES NIVEAUX, RATIOS ET COFACTEURS HORMONAUX

Publication  
**EP 1667520 A4 20100519 (EN)**

Application  
**EP 04786531 A 20040818**

Priority

- US 2004026851 W 20040818
- US 49715003 P 20030822
- US 67770803 A 20031002
- US 54948604 P 20040302

Abstract (en)  
[origin: WO2005021715A2] In agriculture when temperature and moisture deviate from the norm two things happen, plant growth suffers and disease flourishes. The Stoller model for plant growth states that proper hormone balance is necessary for optimum growth and performance. When growth conditions deviate from the norm, hormone balance is altered and plant growth suffers. This invention presents evidence to support this model and explain the relationship between hormone levels and plant growth. A clear understanding of this relationship will facilitate crop treatments aimed to eliminate these problems. Although we cannot control the climate, we can control the damage caused by environmental stresses by manipulating the levels and/or ratio of plant hormones in the different plant tissues. By adjusting the levels and/or ratios of hormones, particularly auxin and cytokinins in the root tissue, we can assist the plant in overcoming or compensating for this environmental stress.

IPC 8 full level  
**A01N 37/10** (2006.01); **A01N 39/04** (2006.01); **A01N 43/38** (2006.01); **A01N 43/40** (2006.01); **A01N 61/00** (2006.01); **A01P 21/00** (2006.01)

IPC 8 main group level  
**C12N** (2006.01)

CPC (source: EP KR)  
**A01N 25/22** (2013.01 - KR); **A01N 37/10** (2013.01 - EP); **A01N 37/42** (2013.01 - KR); **A01N 39/04** (2013.01 - EP); **A01N 43/38** (2013.01 - EP KR); **A01N 43/40** (2013.01 - EP); **A01N 43/90** (2013.01 - KR); **A01N 45/00** (2013.01 - KR); **A01N 59/14** (2013.01 - KR); **A01N 61/00** (2013.01 - EP); **A01N 2300/00** (2013.01 - KR)

Citation (search report)

- [X] US 6361999 B1 20020326 - LIN JHY-JHU [US], et al
- [X] ROMANOV G A ET AL: "Effect of indole-3-acetic acid and kinetin on tuberisation parameters of different cultivars and transgenic lines of potato in vitro", PLANT GROWTH REGULATION, vol. 32, no. 2-3, November 2000 (2000-11-01), pages 245 - 251, XP002574155, ISSN: 0167-6903
- [I] DATABASE BIOSIS [online] BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; March 2003 (2003-03-01), KIRILLOVA I G ET AL: "Effects of Ambiol and 2-chlorethylphosphonic acid on the content of phytohormones in potato leaves and tubers.", XP002574156, Database accession no. PREV200300348140
- [I] DATABASE WPI Week 199949, Derwent World Patents Index; AN 1999-580537, XP002574157
- [I] COENEN C ET AL: "Auxin-cytokinin interactions in higher plants: old problems and new tools", TRENDS IN PLANT SCIENCE, ELSEVIER SCIENCE, OXFORD, GB, vol. 2, no. 9, 1 September 1997 (1997-09-01), pages 351 - 356, XP004791290, ISSN: 1360-1385 & PRIKLADNAYA BIOKHIIMIYA I MIKROBIOLOGIYA, vol. 39, no. 2, March 2003 (2003-03-01), pages 237 - 241, ISSN: 0555-1099
- See references of WO 2005021715A2

Citation (examination)  
JEFFREY C SUTTLE: "Auxin-induced sprout growth inhibition: Role of endogenous ethylene", AMERICAN POTATO JOURNAL, POTATO ASSOCIATION OF AMERICA, ORONO, ME, US, vol. 80, no. 5, 1 September 2003 (2003-09-01), pages 303 - 309, XP009131431, ISSN: 0003-0589, DOI: 10.1007/BF02854314

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