



evtqvUK dmtj i eZgvb Ae`v

ISAAA Gi "dmj `Re chv` i vek!Avb tk` a KZR i nPZ Dvqbkj t`tki Kul`-Re chv` D`m`e`bi vek!cvi` w`iZi mvi`sk|

G mSL`vi vkt`i vovg

Lei	AvidKv - AvidKvq `Re chv` GKwI KiY vel`tq Kul Ges `v`-`v` vetkl`A` i AvfgZ	- bZb Dw`m`c`Dr`tmPK tmj` t`j` vR nt`Z B`_vbj Drcv` b` ep`x
Gvkqv I chv`s`gavmMi xq	- GmGmAvi gvKf` mgat dmtj i Rb` wWGbG vcdsMvi vcdUvm	
BD`ivc	- Wg`U BD`ivc`xq BD`ivc`q`bi Ab`tgw` t`bi Rb` t`c`v`BUvi xmqweb` tck K`ti` t`Q	- c`K`K`sj KZ tmvbj` x` Avj` t`e`ik` teUv` K`v`i` wU`b` Drcb`e
M`tel Yv	- gw`u`Z` t`j` Sn` Nv`v`Z` mn`bkj` U`P`y`R`ub`K` avb	- GKK` W`g`b`v`u` wR`b` av`bi` t`K`v`i` w`d`t`j` i` c`v`g`v` b`q`S`b` K`ti`
	- I` t`-`v` f`f`v` K`b`f`e`v`i` Gi` c`i`Z` A`w`a`K` c`i`Z`i`v`a` v`b`w`i`Z` K`ti`	- Z`v`B`I` q`v`b` w`R`G`g` L`v`i` c`i`Z` t`f`v`v`i` t` w`f`v`x`
I`Nvi Yv	- di`v`m`x` f`v`l`v`q` c`t`K`U`-`t`K` G`L`b` Ab`j` v`B`ib` c`v`l` q`v` h`v`i`Q`	- Av`B`m`v`t`K`m` Gi` b`Z`b` c`K`i`k`b`v`-` The` did` you` know` booklet

Lei

AvidKv

AvidKvq `Re chv` GKwI KiY vel`tq Kul Ges `v`-`v` vetkl`A` i AvfgZ7

%Re chv` GKwI KiY- D`P`g`v`I` vi` w`f`U`w`g`b` Ges` w`g`b`v`i`j` m`a`u`b`e`D`w`m`c` i` c`R`b`b` G` m`B`v`t`n` A`v`i`d`K`v` K`w`l` I` `v`-`v` A`w`a` B`t`i` i` w`e`A`v`b`x` b`w`i`Z`w`a`f`i` K` Ges` Ab`v`b` t`b`Z`e`t`v` i` Ask`M`h`t`Y` t`g`v`a`v`m`v`q` Ab`v`v`Z` Av`A`w`j` K` K`g`R`v`j` vi` G`U`v`B` g`j` Av`t`j` v`P` w`e`l`q`| GB` K`g`R`v`j` v`q` Ask`M`h`b`K`v`i`x`i`v` `Re` chv` GKwI KiY m`a`u`v`K`Z` m`v`a`c`i`Z`K` M`t`e`l` Y`v`, A`v`i`d`K`v`q` G` a`i`t`b`i` c`h`v`v` i` c`h`v`i` Ges` K`w`l` I` `v`-`v` b`w`i`Z`i` B`m`y`Z` Gi` A`S`-`F`v`v` i` w`e`l`t`q` Av`t`j` v`P`b`v` K`i`t`e`b`| A`v`i`d`K`v`i` A`w`a`K`i`v`k` M`i`g`-`v`-`y`-` g`v`b`y` t`K`e`j` g`v`i` Z`v`i` i` c`a`v`b` L`v`-`k`m`i`U` m`S`-`v`c`b` K`i`t`Z` c`v`i` h`v`i`Z` m`v`a`v`i` b`Z` t`M`S`b` c`h`v` D`c`v`-`v`b` w`e`t`k`l` K`ti` t`j` Sn`, w`R`S`K` Ges` w`f`U`w`g`b`-`G` Gi` A`f`i`v`e`_`v`t`K`| h`v`i` d`t`j` A`v`i`d`K`v`i` D`c`-`m`v`v`i`v` A`A`t`j` i` G`K`-`Z`Z`x`q`v`st`k`i` I` t`e`i`k` g`v`b`y` t`M`S`b` c`h`v` D`c`v`-`v`b`i` Z`x`e`A`f`v`t`e` F`M`t`Q`| w`e`-`Z`w`i` Z` : <http://www.ifpri.org/pressrel/2006/20060502.asp>

bZb Dw`m`c`Dr`tmPK tmj` t`j` vR nt`Z B`_vbj Drcv` b` ep`x

K`t`b`f`i` i` M`t`e`l`K`e`U` U`t`g`t`U`v` M`v`t`Q` G`K`w`l` b`Z`b` G`b`R`v`B`g` L`v`R` t`c`t`q`t`Q`b` h`v` tmj` t`j` vR nt`Z B`_vbj Drcv` t`b`i` e`q` K`g`v`Z` c`v`i` | G`b`R`v`B`w` m`v`a`c`i`Z`K` c`h`v`v` A`t`c`v`l`v` A`w`a`K`Z`i` m`n`t`R` B`_vbj` t`K` f`v`i`z`t` c`v`i` | GB` t`c`c`v`i` w`U`i` m`n`-`t`j` L`K` t`R`v`t`m`i`j` b` t`i`v`R` e`t`j` t`Q`b` G`U`v`B` c`U`g` tmj` t`j` vR a`v`i` b`v`l`g` D`w`m`c`-`t`K`v`l` G`b`R`v`B`g`| t`i`v`R` Ges` Z`v`i` m`n`K`g`f`i`v` G`K`_`"Q` D`w`m`c`-`t`c`U`v`t`b`i` c`h`v`Y` t`c`t`q`t`Q`b` h`v` k`w`v` k`v`j` x` `Re` R`v`j` v`b`x` w`n`t`m`t`e` e`v`u`Z` n`t`Z` c`v`i` | t`i`v`R` g`t`b` K`ti` b` %Re` R`v`j` v`b`x` m`a`u`t`K` M`t`e`l` K`i`v` GB` G`b`R`v`B`g`_`t`j` v` e`-`e`n`v`i` i` b`Z`b` w` M`S`-`D`t`b`v`w`P`Z` K`i`t`Z` c`v`i` | w`e`-`Z`w`i` Z` : <http://www.news.cornell.edu/stories/April07/Biofuels.rose.kr.html>.

Gvkqv Ges c`k`v`s`gavmMi xq

GmGmAvi gvKf` mgat dmtj i Rb` wWGbG vcdsMvi vcdUvm

m`a`c`i`Z` f`v`i`t`Z` Ab`v`v`Z` f`f`v`i` B`b`w`v`j` v`B`b`m` Ges` c`v`t`j` k`b` Gi` Av`b`w`e`K` `e`i`k`o` k`x`l` R` G`K` K`g`R`v`j` v` Ask`M`h`b`K`v`i`x`i`v` w`e`t`k`l` t`b`i` R`b`-`w`m`a`u`j` w`m`K`t`q`Y` w`i`v`c`U` (G`m` G`m` A`v`i`) g`v`K`v`f`m` e`-`e`n`v`i`t`i` A`v`b` I` `v`-`v` t`j`v` AR`B` K`ti` b` w`e`r`f`b`a`c`f`R`w`i`Z`i` Av`b`w`e`K` M`t`e`l` Y`v`q` w`m`a`u`j` w`m`K`t`q`Y` w`m` v`B` G`g` G`g` I` q`v`B` w`U` Gi` Av`b`w`e`K` w`R`b`Z`E`j`e` Ges` K`g`R`v`j` vi` e`-`v` t`g`w`i`j` b` I` q`v`i` e`v`i` U`b` Gi` g`t`Z`, G`t` i` R`b` L`v` A`i` w`W`G`b`G` Gi` c`i`q`v`R`b` n`q`, w`K`S`-`e`-`e`n`v`i` K`x` h`v` w`K` K`R`i`Z` P`v`t`Q` Z`v` m`a`u`t`K` A`b`w`f`A` n`q` Z`v`n`t`j` f`j` c`v`l` A`v`m`t`Z` c`v`i` | c`v`i` t`e`k`b`v`q` t`e`w`k` c`v`i` g`v`b` b`g`b`v`i` R`b`-`w`W`G`b`G` G`-`v`U`f`K`k`b`, w`W`f`K`U`k`b` Ges` w`e`t`k`l` K` c`x`w`Z` Av`t`j` w`P`Z` n`q`| w`e`-`Z`w`i` Z` : <http://cimmyt.org/english/wps/news/2007/apr/dnaFingerprint.htm>.

BD`ivc

Wg`U` BD`ivc`xq BD`ivc`q`bi Ab`tgw` t`bi Rb` t`c`v`BUvi xmqweb` tck K`ti` t`Q

Wg`U` Z`v`i` A`S`M`m`S`M`v`t`b`i` A`M`O`Z` n`v`B` w`e`W` B`b`U`v`i` b`v`k`b`j` B`K`i`c`v`f`i` k`t`b`i` g`v`a`t`g` m`q`w`e`t`b`i` A`c`i`U`g`w` M`v`U`^{U`G`g`} t`U`B`U` L`v`-`-` Ges` M`e`v` x` L`v`-`i` f`t`c` A`v`g`-`v`b`x`i` R`b`-` BD`ivc`xq` BD`ivc`q`bi` K`v`t`Q` G`K`w`l` A`v`t`e`-`b` t`c`k` K`ti` t`Q`| Wg`U` 2009` m`v`t`j` m`q`w`e`t`b`i` g`v`a`t`g` m`P`b`v`i` g`a`-`w`-`t`q` f`f`v`i`, Z`j` v` Ges` Ab`v`b` d`m`t`j` i` A`v`i`v`Q`v`b`i`k`k` c`R`w`i`Z`i` e`w`i`v`R`-`K`x`K`i`b` K`i`v`i` c`v`i` K`i` b`v` K`ti` t`Q`| A`c`i`U`g`w` M`v`U` t`U`B`U` n`t`Q` t`c`v`BUvi`x` Wg`U` w`R`b` m`v`i`d`i`j` s` c`h`v`v` K`Z`K` D`m`e`Z` m`e`U`g` K`w`l` t`U`B`U`| w`e`-`Z`w`i` Z` : <http://pioneer.com/web/site/portal/menuitem.37a86e7ebae23cda47b2d10093a08/>.

c`K`K`sj` KZ` tmvbj` x` Avj` t`e`ik` teUv` K`v`i` wU`b` Drcb`e

c`i`Z`e`Q`i` w`f`U`w`g`b`-`G` Gi` A`f`i`v`e` 5,00,000` w`k`i` A`U` n`t`q` h`v`q`| B`u`y` x` Ges` R`v`g`f`b`x`i` M`t`e`l` K`e`x` G`K`w`l` M`t`e`l` Y`v` K`ti` b` h`v` tmvbj` x` Avj`-`b`v`t`g` A`w`f`w`n`Z`| c`K`K`sj` KZ` Avj`-`y`A`b`t`g`w`i` Z` w`f`U`w`g`b`-`G` Gi` A`t`a`R` c`U`v`b` K`ti` | M`t`e`l` K`e`x` e`v`K`t`U`v`i` q`v`j` D`r`m` c`x`w`i`Z`i` t`Q`U`v` c`-`w`b`t`-`f`K`K`v` e`-`e`n`v`i` K`ti` t`Q`b` h`v` Avj`-`y` t`e`l`v` K`v`i` wU`b` 33,600`_` b` e`p`x` K`ti` | tmvbj` x` Avj`-`y` g`t`a`-` Erwinia` bacteria` t`-`t`K` d`v`B`t`U`v`B`b` i`m`b`t`_`m` (C`r`i`B`) d`v`B`t`U`v`B`b` w`w`m`U`v`i` m` (C`r`i`e) w`R`b`m`g`a` c`t`e`k` K`i`v`t`b`v` n`q`| t`M`B`b` d`v`b`t`v` w`w`i` t`f`e`v` e`t`j` t`Q`b` t`h`, `Re` chv` GKwI` KZ` Avj`-`y` t`f`t`i` t`m`v`b`j` x` Avj`-`t`j` D`-`P`g`v`I` vi` K`v`i` wU`b`t`q`W` Ges` t`e`l`v` K`v`i` wU`b` i` t`q`t`Q`| w`e`-`Z`w`i` Z` : <http://nutraingredients.com/news/pirntNewsBis.asp?id=76099>

Mtel Yv

gwlUz tj Sn NvUz mnbkj UYtRbW avb

hw l tmP wbfP avb Drcv b c x w z t z tj Sn NvUz A t c q v k z weij Z_wcl GUV GJ Kvj vBb A_ev K'vj tKwi qvm gwlUz dj b nvtmi KviY| f gvl vq e'euz A%Re tj Sn mvi Gi t q t t t mSbcy Dcv v t bi Afve i x Ki Y e'geUj Ges Komva th n Z t gwlUz Gi e'envi mvari YZ AKvhKi ntZ_vtK| D"P gvl vi wGBPG" D"P nvti KvhKvi xZvi Rb tUwKI vekte`vj q, Rvcvb AvbweK kw³ Mtel Yv tK> Ges Rvcvb l weAvb chny³ i Mtel Kez` avb MvtQ Bó t t K w P t j -w Wk t UR wRb t v b v s t i -KvR K t i t b l Mtel Yv cKvk K t i th, t m B me wRb hv evt q v m b t w U K c v l t q t Z G b R v B g G b t K w K i t Z c v t i Z v a v b M v Q t K w b a e g v l v i t j S t n i c o Z m n b k j K t i Ges dj b e w x K t i | we`Zwi Z: <http://www.pnas.org/cgi/reprint/104/18/7373>

GKK Wngb'vU wRb avtbi tKvfi wdti i cwi gvb wqšy

ceZb Mtel Yv gtZ tKvfi wdtj i cwi gvb mvtj vKms t km t bi nvi l Drcv t bi q g Z vi Dci wbfP K t i | D w t m c c R b b w e i v e v t q v g m Ges dj b i v o v t b i R b t K v f i w d j G i c w i g v b e w x K i v D w P r e t j g t b K t i b | m a c o Z P s u M s w e k t e ` v j t q i G K j M t e l K Z c K v k K t i b t h, a v t b i D c i t K v f i w d t j i t U B t U i w b q s g m a u t K a v i b v w t e l P x b v M t e l K i v w R i m b v t g i G K w G K K W n g b ' v U w R b w e t k l Y K t i b h v a v b M v t Q t K v f i w d j w b q s h K t i | G B c h f e q Y c e Z b a v i b v t h, t K v f i w d j G i c w i g v b G K w c w j t R b w K e w k o h v A t b K w R b O v i v w b q s z n q | we`Zwi Z: <http://dx.doi.org/10.1016/j.jplph.2006.11.006>

I t v f y K b e v i v i G i c o Z A n a K c o Z t i v a w b w o Z K t i

wRbZwEjKfite ifcvst-Z f y v e v M g A v t j U A v b t W R (I G I) w R b e n b K t i h v B D t i v c x q v b K Y e v i v i (B i m w e) G i c o Z A n a K c o Z t i v a x | m v a u z K M t e l b v j a d j v d j t t K A t U v q v Ges K v b w v i G K j M t e l K I G I f y v m a u t K c o w g K d j v d j w b w o Z K t i b | I G I f y v j v B G i t d t b w j K N b Z i b b U Y t R w b K A t c q v Z v r c h e y f v t e t e m k | G Z m s t M G K w g j G b R v B g t K v M s G w b t q v i R Z 13 w j t j w w R t b R w R b l t m t K U v i x t g U v t e w j R g w e w a t Z U Y w l a c k b G K B f v t e D P Z i M t e l K i v w e k l m K t i b t h, t d i w j K G w m W G e b x q D P g v l v i t d t b w j K G w m W I G I f y v G i t c v K v g v K o c o Z t i v a f w g K v i v t l | we`Zwi Z: <http://dx.doi.org/10.1021/jf063030f>.

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UvPis vekte`vj tqi Mtel Kiv etj b t f v v i w f w z Dci w f w z g j Z Z v t i j v t f i a v i b v i D c i w b f P K t i | M t e l K w g. d v s t P b Ges w m A v l j v b w j m g z w i k K t i b t h, t f v v w k q v Z v B I q v f b i t f v v i w e A v b l c h n y i c o Z m v a v i Y B w Z e v P K w f w z Z i x K i t Z c v t i | t P b Ges w j w b Y q K t i b t h, c o Z o v b l M t e l K h v i v w R b g w b c j k b K t i b Z v t i c o Z w e k t m i m v a v i b w f w z A b g w z j v t f i D c i B w Z e v P K c f v e i v t l | c v i Z c t q l, L v m v g M a i D c i w R b c h n y A v t b i t b w Z e v P K c f v e i t q t Q | we`Zwi Z: <http://dx.doi.org/10.1016/j.foodqual.2006.10.002>

tNvI Yv

di vmx fvl vq ctKU-tK GLb Abj vBtb cvl qv hvf"Q

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