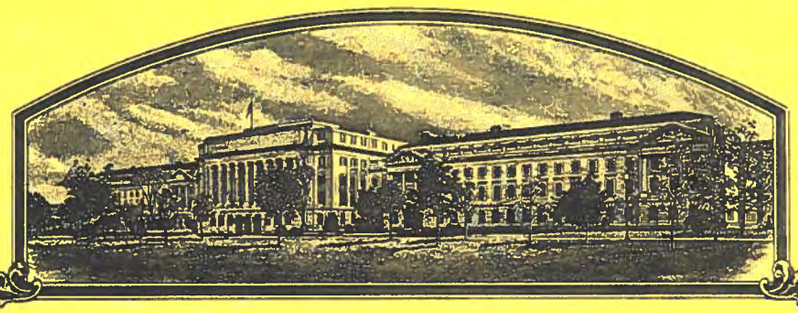

No. 202100154

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

FNP, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Administrator of the Agricultural Marketing Service

An application requesting a certificate of protection for an alleged novel variety of sexually reproduced, asexually reproduced, or tuber propagated plant, the name and description of which are contained in the application and exhibits, a copy of which is hereunto annexed and made a part hereof, and the various requirements of law in such cases made and provided have been complied with, and the title thereto is, from the records of the PLANT VARIETY PROTECTION OFFICE, in the applicant(s) indicated in the said copy, and whereas, upon due examination made, the said applicant(s) is (are) adjudged to be entitled to a certificate of plant variety protection under the law.

Now, therefore, this certificate of plant variety protection is to grant unto the said applicant(s) and the successors, heirs or assigns of the said applicant(s) for the term of TWENTY years from the date of this grant, subject to the payment of the required fees and periodic replenishment of viable germplasm material of the variety in a public repository as provided by law, the right to exclude others from selling the variety, or offering it for sale, or reproducing it, or importing it, or exporting it, or conditioning it for propagation, or stocking it for any of the above purposes, or using it in producing a hybrid or different variety there from, to the extent provided by the PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

ZOYSIA

'Green Zoa K Grass'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the* ***City of Washington, D.C.*** *this tenth day of December, in the year* ***two thousand twenty one.***

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Administrator
Agricultural Marketing Service

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

202100154

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.
Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421).
Information is held confidential until certificate is issued (7 U.S.C. 2426).
OMB Collection #0581-0055

FOR OFFICIAL USE ONLY:	
PVPO NUMBER: 202100154	FILING DATE: 12/15/2020
FILING AND EXAMINATION FEES PAID	DATE
$5,150	12/15/2020

1. NAME OF OWNER: (Name to be printed on certificate)

FNP, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME:

Green Zoa

3. VARIETY NAME:

Green Zoa K Grass

4. ADDRESS:

60, Noam-ro, Doan-myeon, Jeungpyeong-gun, Chungcheongbuk-do 27902, Republic of Korea

5. OWNER TELEPHONE: (+00 (000) 000-0000)

+82-43-836-1751

6. OWNER FAX NUMBER AND/OR EMAIL ADDRESS:

+82-43-836-1753

7. IF OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION: *(corporation, partnership, association, etc.)*

Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION:

Republic of Korea

9. DATE OF INCORPORATION:

September 3, 2002

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) AND/OR BREEDERS(S) TO SERVE ON THIS APPLICATION:
(First person listed will receive all documents including the certificate of protection)

NAME(S):	ADDRESS(ES):
Cory ELLISON	Morrison & Foerster LLP 425 Market Street San Francisco, CA, 94105, USA

11.REPRESENTATIVE TELEPHONE: (+00 (000) 000-0000)

(415) 268-7452

12. REPRESENTATIVE FAX:

(415) 268-7522

13. REPRESENTATIVE EMAILS:

CEllison@mofo.com

OMB NO. 0581-0055
Expiration Date: 01/31/2022

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

20210154

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.
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OMB Collection #0581-0055

14. CROP KIND: *(Common Name)*	15. GENUS AND SPECIES:	16. FAMILY NAME: *(Botanical)*
Zoysiagrass	Zoysia japonica Steud.	Poaceae

17. IS THE VARIETY A FIRST-GENERATION HYBRID?

○ YES ◉ NO

18. DOES THE VARIETY CONTAIN ANY BIOTECHNOLOGY EVENTS? *

○ YES ◉ NO

*A biotechnology event is defined as a single insertion of a nucleic acid construct into a specific site in a plant's chromosome that is regulated under the U.S. Coordinated Framework for the Regulation of Biotechnology.

19. SEE ATTACHED CHECKLIST, PLEASE INCLUDE WITH FINAL SUBMISSION

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD ONLY AS A CLASS OF CERTIFIED SEED?
(*See Section 83(a) of the Plant Variety Protection Act)*

○ YES *(If "yes", answer items 21 and 22 below)*
◉ NO *(If "no", go to item 23)*
○ UNDECIDED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?

○ YES ○ NO

IF YES, WHICH CLASSES?

○ FOUNDATION ○ REGISTERED ○ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

○ YES ○ NO

IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS:

FOUNDATION REGISTERED CERTIFIED

COMMENTS:

OMB NO. 0581-0055
Expiration Date: 01/31/2022

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?

○ YES ◉ NO

IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES:

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)?

◉ YES ○ NO

IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER:

1) Republic of Korea, granted on June 5, 2019 under Grant No. 197

25. The owners declare that a viable seed sample will be furnished directly to an acceptable repository in support of the variety within three months of filing. For a tuber propagated variety or vegetatively reproduced variety, a germplasm sample will be deposited in a public repository within three months of the date of the Notice of Allowance letter. These will be maintained for the duration of the certificate. Germplasm will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned owner(s) is(are) the owner of this plant variety and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER:		SIGNATURE OF OWNER:	
/Cory Ellison/			
NAME: *(Please print or type)*		NAME: *(Please print or type)*	
Cory Ellison, Morrison & Foerster LLP Patent Agent, Representative of Owner			
CAPACITY OR TITLE:	DATE:	CAPACITY OR TITLE:	DATE:
Representative	12/15/2020		

19. CHECK LIST: (Please include with final submission)

ST-470 APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

20210015 4

☑ Owner and Variety Information.

See UPOV Explanatory Notes on Variety Denominations Under the UPOV Convention (https://www.upov.int/edocs/infdocs/en/upov_inf_12_4.pdf)

See UPOV Explanatory Notes on the Definition of Breeder Under the 1991 Act of the UPOV Convention (https://www.upov.int/edocs/expndocs/en/upov_exn_brd.pdf)

☑ Exhibit A. Origin and Breeding History of the Variety

See UPOV Explanatory Notes On The Definition Of Variety Under The 1991 Act Of The UPOV Convention (https://www.upov.int/edocs/expndocs/en/upov_exn_var.pdf)

☑ Exhibit B. Statement of Distinctness

See UPOV General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants (https://www.upov.int/export/sites/upov/resource/en/tg_1_3.pdf)

☑ Exhibit C. Objective Description of Variety

Please submit the Exhibit C matching the subject crop (if one is not available please contact the PVPO) (https://www.ams.usda.gov/services/plant-variety-protection/pvpo-c-forms)

For Distinctness, Uniformity, and Stability (DUS) testing guidance please see UPOV Database of Test Guidelines for Specific Crop Kinds: (https://www.upov.int/test_guidelines/en/)

An officially issued DUS report may be submitted in place of an Exhibit C for most crops. Additional information may be required during the examination. Please contact PVPO for more information.

☑ Exhibit D. Additional Description of the Variety *(Optional)*

Additional information and Evidence (Including: Photographs, Data, Genetic Information, Attachments)

☑ Exhibit E. Statement of the Basis of the Owner's Ownership

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the owner is an owner who is not the original owner, both the original owner and the owner must meet one of the above criteria. The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

FILING AND EXAMINATION FEE

☑ Use ePVP, pay.gov, credit card, or make checks and money orders payable to "Treasurer of the United States" Fee of $5,150 covers application and certificate filing fee.

GERMPLASM DEPOSIT

☐ Germplasm has been deposited with:

☐ Technical Infeasibility of Germplasm Deposit (Please contact PVPO)

☐ Germplasm will be deposited after PVP Certificate Issuance (Potato and Vegetatively Reproduced Varieties)

EXHIBIT A

OMB NO. 0581-0055
Expiration Date: 01/31/2022

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

202100154

EXHIBIT A
ORIGIN AND BREEDING HISTORY

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.
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OMB Collection #0581-0055

NAME OF OWNER (S):	TEMPORARY OR EXPERIMENTAL DESIGNATION:	VARIETY NAME:
FNP, Inc.	Green Zoa	Green Zoa K Grass

I. PROPAGATION:

1. How is the variety propagated?

Sexually Propagated:

(●) Seed

Asexually Propagated:

( ) Bulb ( ) Cutting ( ) Grafting ( ) Layering
( ) Offset ( ) Suckering ( ) Tissue Culture ( ) Tuber
(X) Other (Specify) Stolons

dbc 6/21/2021 per applicant

II. GENEALOGY:

1. Describe the genealogy of the variety including the ownership, protections (with reference numbers), and origins of the stock plants. Please include the breeding methods used, duration of breeding stages, and any additional testing or development work completed. (Please attach more pages if necessary).

1) Seeds obtained by self-fertilization of Zoysiagrass (Zoysia japonica Steud.) were germinated in vitro and at the same time embryogenic calluses were induced from somatic cells.
2) During the cultivation of these embryogenic calluses and the selection of somatic mutants, the breeder found a variant with green creeping stem that is different from traditional wild-type Korean zoysiagrass.
3) 'Green Zoa' is a somatic variant that appeared in the tissue culture process of wild-type Korean zoysiagrass.
4) The variant with green creeping stem that appeared in vitro cultivation was named 'Green Zoa K Grass'.
5) The color of the creeper and seeds on the ground is green, ~~the groundling~~ the tendency for stolon growth is high, and the internodes are short.

Please see the Attachment to Exhibit A for additional information on the genealogy of the variety.

dbc 6/21/2021 per applicant

2. Give the details of subsequent stages of selection and multiplication.

Year(s)	Detail of Stage	Selection Criteria
2011	Generation of F1 seedlings	
2012	Comparative cultivation for analyzing variety properties	
2013	Comparative cultivation for analyzing variety properties	
2014	Analysis of rust resistance for the variety	

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

202100154

EXHIBIT A
ORIGIN AND BREEDING HISTORY

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.
Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421).
Information is held confidential until certificate is issued (7 U.S.C. 2426).
OMB Collection #0581-0055

NAME OF OWNER (S):	TEMPORARY OR EXPERIMENTAL DESIGNATION:	VARIETY NAME:
FNP, Inc.	Green Zoa	Green Zoa K Grass

III. UNIFORMITY:

1. YES Is the variety uniform?:

(●) A. Yes ( ) B. No

2. How did you test for uniformity?

1) 'Green Zoa' and 'Jungji' which is a check variety are vegetative propagation crops that have homogeneity by proliferating and maintaining.
2) After runner propagation, the length of the nodes per experimental section is 3.21±0.2 cm, and green stolon was confirmed.
3) In the 2nd year of cultivation, the uniformity requirement was satisfied because there was no occurrence of heterologous stolons and the uniformity was confirmed in the 3rd year of cultivation.

IV. STABILITY:

1. YES Is the variety stable?:

(●) A. Yes ( ) B. No

2. How did you test for stability? Over how many generations?

by selfing
1) 'Green Zoa' was proliferated after isolation and its morphological variations were investigated.
2) 3000 seeds of 'Green Zoa's self-fertilized F1 individuals were ~~bred separately.~~ grown in separate pots.
3) Among the F1 individuals of germinated 'Green Zoa', only 2 individuals had red stolon and showed 0.1% of recurrent ratio.

dbc 6/21/2021 per applicant

3. YES Are genetic variants observed or expected during reproduction and multiplication?

(●) A. Yes ( ) B. No

If Yes, state how these variants may be identified, their type and frequency.

grown
3000 seeds of 'Green Zoa's self-fertilized F1 individuals were ~~bred~~ separately. Among the F1 individuals of germinated 'Green Zoa', only 2 individuals had red stolon and showed 0.1% of recurrent ratio.

‘Green Zoa’

Exhibit A Attachment - Origin and Breeding History

1. Propagation

While ‘Green Zoa’ is seed propagated, the variety can also be propagated asexually via stolons/runners.

2. Genealogy, Uniformity, and Stability

The information below provides a more detailed description of the genealogy and breeding history of ‘Green Zoa’, as well as assessment of the uniformity and stability of this variety.

The year 2010

1. Seeds obtained by self-fertilization of Zoysiagrass (*Zoysia japonica* Steud.) were germinated *in vitro* and at the same time embryogenic callus from somatic cells was induced.

2. During the selection of plant mutants from this embryogenic callus, a green cryptic variant that is different from Korean grass was found.

3. ‘Green Zoa’ is a somatic variant that appeared from the tissue culture process of wild grass.

4. The green ~~creeper~~ stolon variant that appeared on board was named ‘Green Zoa’.

5. The color of the ~~creeper~~ stolon and seeds on the ground is green, ~~the groundling~~ the tendency for stolon growth is high, and the internodes are short.

The year 2011

1. ‘Green Zoa’ was proliferated after purification and its morphological variations were investigated.

2. 3,000 seeds of ‘Green Zoa’s self-fertilized F1 individuals were ~~bred~~ grown separately.

3. Among the F1 individuals of germinated ‘Green Zoa’ F1, two individuals had red stolon and showed 0.1% regression to the stolon.

The year 2012-2013

1. To compare ‘Green Zoa’ with other zoysiagrass cultivars, comparative cultivation tests with existing varieties were performed.

2. Compared to zoysiagrass (*Zoysia japonica* Steud.) ~~cultivar~~ variety ‘Jungji’ as a control, ‘Green Zoa’ has a shorter length of ~~runner~~ stolon nodes, the density is high, the stolon ~~is excellent~~ growth is long, and the roots are well-developed.

dbc 6/21/2021 per applicant

3. For ‘Green Zoa’, the green period is longer than that of ‘Jungji’, and the color difference is shown when entering the dormant period.

4. A comparative test of resistance to rust between ~~cultivars~~ varieties ‘Green Zoa’ and ‘Jungji’ was conducted to confirm that there is resistance (August - September, 2012).

The year 2013-2014

1. Characteristic investigations for ‘Green Zoa’ were performed together with cultivar ‘Jungji’ as a comparison variety.

2. Proliferation of ‘Green Zoa’ was done using ~~runners~~ stolons (which is asexual propagation, not seed propagation), to maintain ‘Green Zoa’ characteristics.

For additional statement of uniformity and stability, see part 5 of attachment to Exhibit B. dbc 3/5/2021

Applicant reports selection criteria of: a) the length of the leaf was short in the open field, b) a green stolon came out and when it bloomed, the color of the calyx was green and the color of the seed was green, c) the length of the stolon was short, and d) resistance to rust was also shown when grown in the open field. dbc 6/21/2021

EXHIBIT B

OMB NO. 0581-0055
Expiration Date: 01/31/2022

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

202100154

EXHIBIT B
STATEMENT OF DISTINCTNESS

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.
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OMB Collection #0581-0055

NAME OF OWNER (S):	TEMPORARY OR EXPERIMENTAL DESIGNATION:	VARIETY NAME:
FNP, Inc.	Green Zoa	Green Zoa K Grass

BASED ON OVERALL MORPHOLOGY Green Zoa K Grass *(Subject Variety)* IS MOST SIMILAR TO Jungji (Korean wild-type variety) *(Most Similar Variety(ies))*.

The variety Green Zoa K Grass *(Subject Variety)* most clearly differs from Jungji (Korean wild-type variety) *(Most Similar Variety(ies))* in the following traits:

Traits	Subject Variety	Most Similar Variety	Location of Evidence
Qualitative Traits			
Underground stolon = rhizome	Length of underground stolon is short	Length of underground stolon is longer than 'Green Zoa'	Evidence photographs attached - See Exhibit B Attachment
Root trait	Root growth is active and secondary roots are developed	Root growth is less active than 'Green Zoa'	
Color Traits			
Stolon Color	Dark Olive Green (5GY 4/6)	Dark ~~Seal~~ Brown (7.5YR 2/2)	Munsell Color Chart - See Exhibit B Attachment
Sheath Color	Light Yellowish Green (2.5GY 8/10)	Apple Green (5GY 7/12)	
Unripe Spikelet Color	Light Yellowish Green (2.5GY 8/8)	~~Onyx~~ (5R 2/2) dark red	
Quantitative Traits			
Plant Height	13.87 +/- 0.83 cm	16.63 +/- 1.50 cm	Statistics attached - See Exhibit D
Length of Stolon Internode	3.21 +/- 0.18 cm	5.76 +/- 0.21 cm	
Length of Inflorescence	4.50 +/- 0.38 cm	5.26 +/- 0.32 cm	
Number of Tillers	3.48 +/- 0.28/cm^2	2.90 +/- 0.14/cm^2	
Other Traits			
Green period	Greening occurs early and dormant entry speed is slow, so the green period is long.	Greening occurs late and dormant entry speed is fast, thus green period is shorter than 'Green Zoa'.	Evidence photographs attached - See Exhibit B Attachment
Example			
Leaf Pubescence	Heavy Pubescence	Glabrous	Photograph attached
Leaf Color	Dark Green (5GY 3/4)	Light Green (2.5GY 8/10)	Munsell Color Chart
Plant Height	200 cm +/- 10 cm (N=25)	250 cm +/- 15 cm (N=25)	Statistics attached

dbc 6/21/2021 per applicant

Please use additional tables to present clear differences for additional comparison varieties.
Include additional pages of supporting evidence in Exhibit D.

‘Green Zoa’

Exhibit B Attachment - Statement of Distinctness

The information below provides additional information and evidence on the distinctiveness of zoysiagrass variety ‘Green Zoa’.

General Summary of Distinctness

1. Species and scientific names: *Zoysia japonica* Steud.

2. Variety name: ‘Green Zoa K Grass’

3. Main morphological characteristics of plants:
   - Green stolon and strong ~~groundling~~ stolon growth
   - Long greening period due to fast early greening and slow transition to dormancy
   - Because of the short ~~robe~~ leaf length and short stolon length, the ~~robe~~ leaf density is high.
   - Resistant to dryness, coldness and rust
   - When entering the dormant phase, the fallen leaves become lighter in color.
   - Width of flag leaf is 2.1 mm on average, which is ~~shorter~~ less than Jungji (WT) as a check variety.

4. Characteristics that distinguish ‘Green Zoa’ from the most similar variety ‘Jungji’:
   - The stolon of ‘Jungji’ is ~~red,~~ brown whereas ‘Green Zoa’ has a green stolon.
   - For ‘Green Zoa’, the ~~lobe~~ leaf is shorter than ‘Jungji’ and the ~~nodules~~ internodes of ~~stolon~~ rhizomes are about 4-6 mm shorter, resulting in a higher ~~lobe~~ leaf density.
   - The transition to autumn dormancy for ‘Green Zoa’is slow and the fallen leaves are lighter in color than ‘Jungji’
   - The roots of ‘Green Zoa’ are more developed than ‘Jungji’
   - The onset of shoots, which is closely related to the green period, was found to be about 20-23 days earlier in ‘Green Zoa’ compared to ‘Jungji’.
   - The flowering time of ‘~~Jungji~~ 'Green Zoa' ’ is 5 to 7 days earlier than ‘~~Green Zoa~~ 'Jungji' ’.
   - There was no significant difference in inflorescence length between ‘Green Zoa’ and ‘Jungji’.

- When entering the dormant phase, ‘Green Zoa’ becomes light greenish yellow compared to the ~~magenta~~ red of ‘Jungji’.

5. The uniformity and stability of ‘Green Zoa’ is confirmed

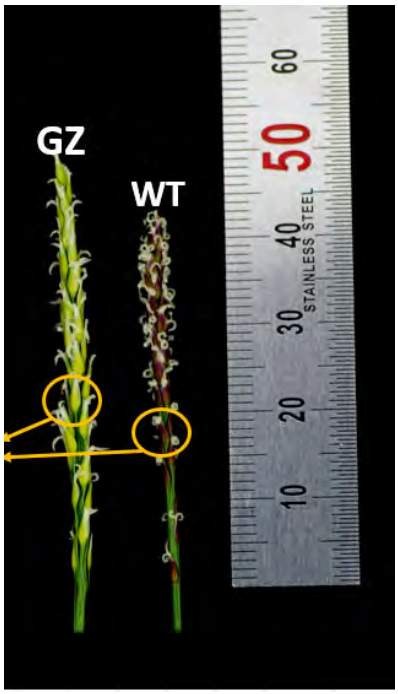
- ‘Green Zoa’ and ‘Jungji’ (which is a check variety) are vegetative propagation crops that have homogeneity by proliferating and maintaining.
- After runner propagation, the length of the ~~nodes~~ internodes per experimental section is 3.21±0.2 cm, and green stolon was confirmed.
- In the 2nd year of cultivation, the uniformity requirement was satisfied because there was no occurrence of heterologous stolons and the uniformity was confirmed in the 3rd year of cultivation.

6. Additional information to help distinguish ‘Green Zoa’ from other similar varieties, primarily that ‘Green Zoa’ exhibits the following characteristics:

- Strong ~~groundling~~ stolon growth with green stolon
- Early greening is fast and entry to the dormant phase is slow, so the green period is long.
- The denseness of the ~~lobe~~ leaf is high due to the short length of the ~~lobe~~ leaf and the length of the stolon.internode
- Resistant to dryness and rust
- When entering the dormant phase, ‘Green Zoa’ turns pale greenish yellow, compared to Jungji showing red leaves.

Photographs and Evidence of 'Green Zoa' Distinctiveness

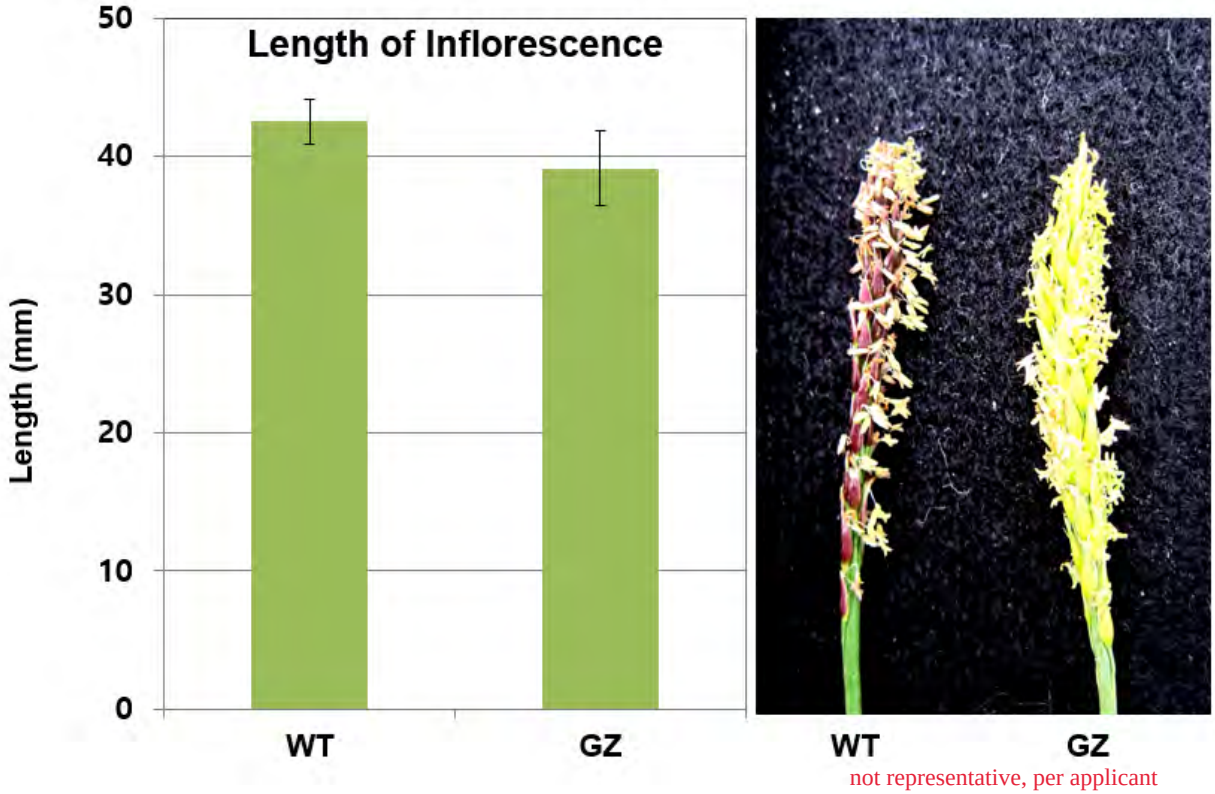
1. Comparison of internode lengths between 'Green Zoa' (GZ) and comparative variety 'Jungji' (WT). The photograph was taken at Jeungpyeong cultivation field, May 2, 2011.



No Awn
Glume was not differentiated from spikelet

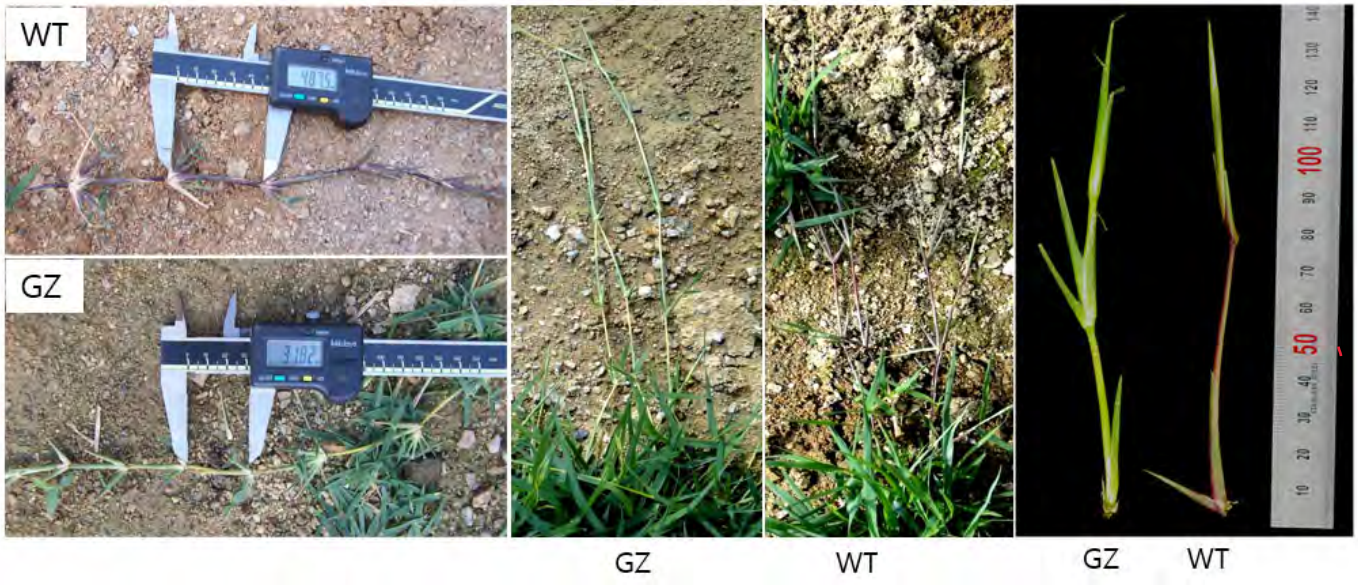
2. Comparison of the morphology of major organs for ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT).

3. Comparison of inflorescence length between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT).

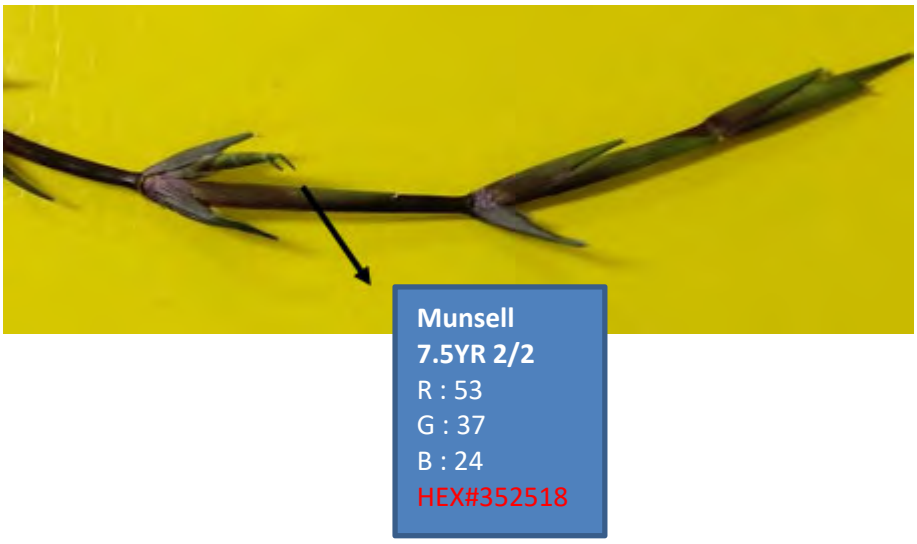


not representative, per applicant

4. Comparison of ground stolon length between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). Stolons of ‘Jungji’ (WT) and ‘Green Zoa’ (GZ) were cultivated in an open cultivation field. ‘Green Zoa’ has short green ground stolons.



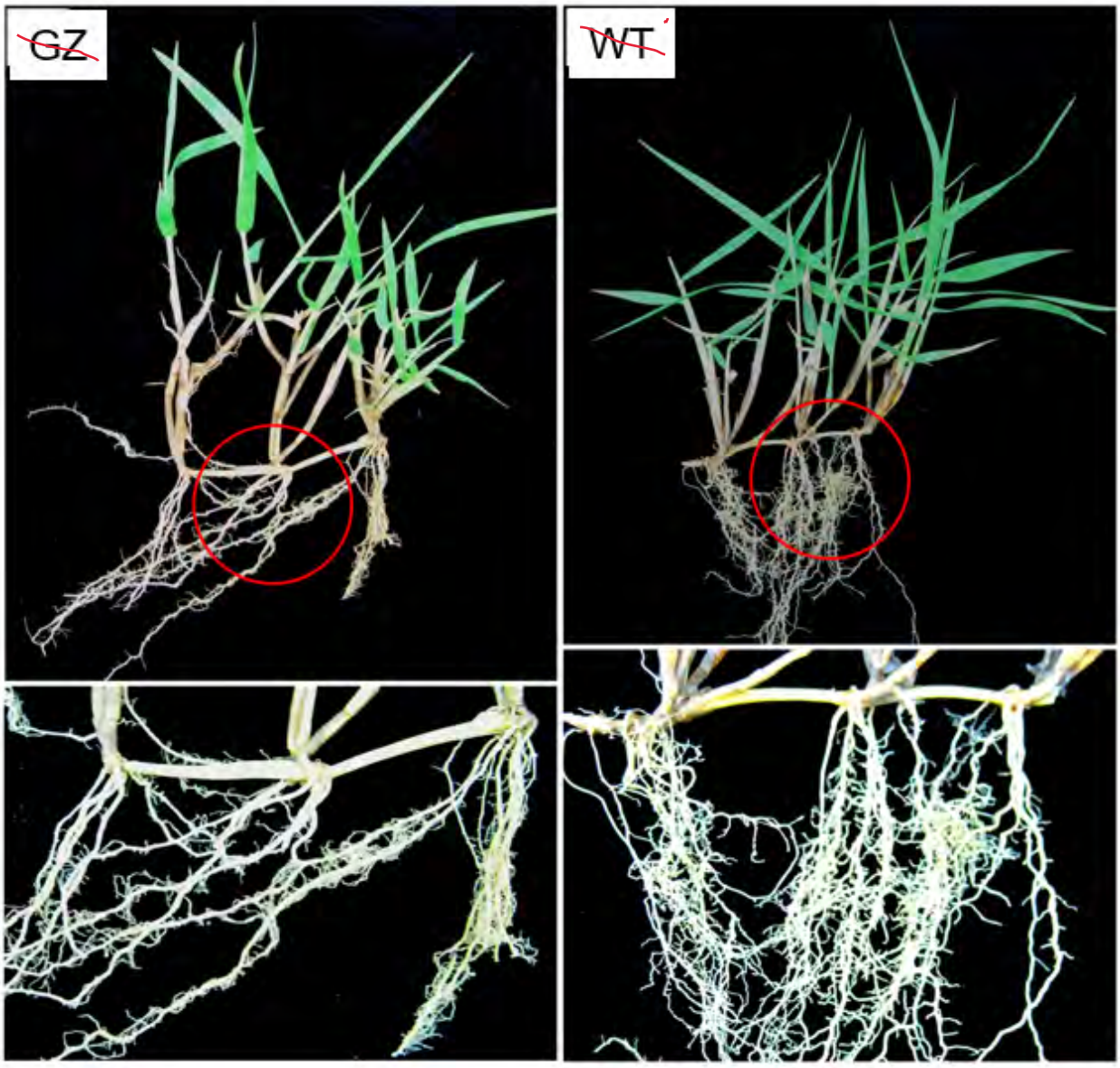
5. Comparison of stolon color between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). ‘Jungji’ is shown in the top image (Munsell color chart 7.5 YR 2/2), and ‘Green Zoa’ is shown in the bottom image (Munsell color chart 5GY 4/6).



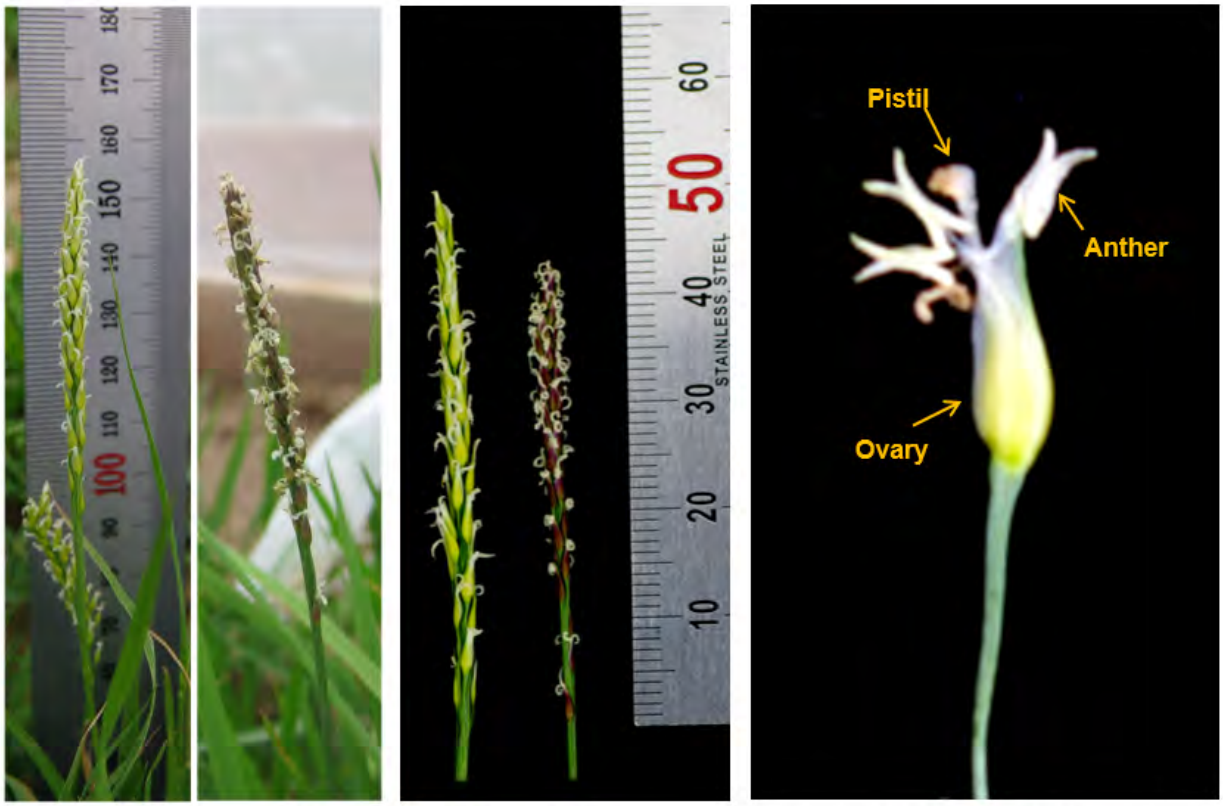
rhizomes

6. Comparison of ~~underground stolons~~ between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). ‘Green Zoa’ (GZ) has underground stolons that are short (red circle) and have strong root growth, and high density of secondary roots.

WT GZ



7. Comparison of inflorescence and flower between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT).



not representative lengths
see data below

8. Summary of major traits between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). Data are averages of n = 21-40 or 7 plants analyzed in April 2011.

Examined Traits	Jungji (WT)	Geen Zoa (GZ)
Height ~~Length~~ of Plant	16.63±1.5 cm	13.87±0.8 cm
Length of 3rd stolon Internode	5.76±0.2 cm	3.21±0.2 cm
Length of Sheath	3.37±0.2 cm	7.37±0.6 cm
Length of Lateral Leaf	6.03±0.7 cm	6.60±1.0 cm
Width of Lateral Leaf	0.41±0.3 cm	0.44±0.01 cm
Length of Flag Leaf	2.50±0.3 cm	5.04±0.3 cm
Width of Flag Leaf	0.15±0.0 cm	0.21±0.0 cm
Length of Inflorescence	5.26±0.3 cm	4.5±0.4 cm
Width of Inflorescence	0.29±0.0 cm	0.31±0.0 cm
Length of Spikelet	1.21±0.0 cm	1.29±0.1 cm
Number of Spikelets per Spike	56.71±0.7	~~53.80±1.3~~ 54.6 +/- 1.2
Number of Tillers	2.90±0.1 /cm2	3.48±0.3 /cm2

See Exh. D tables dbc 3/6/2021

dbc 6/21/2021 per applicant

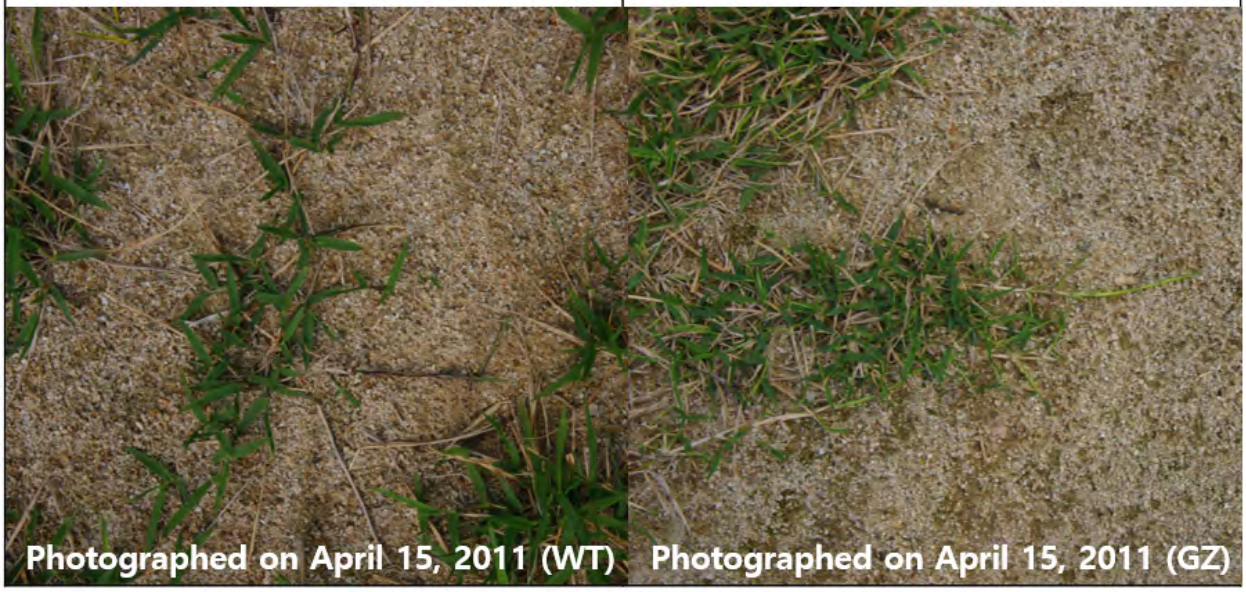
dbc 3/6/2021

9. Comparison of shoot budding between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). Data are from Jeungpyeong Open Field: N36/S127.

Jungji (WT)	Green Zoa (GZ)
Shoot occurrence date: Late March, 2011	Shoot occurrence date: Mid March, 2011

10. Comparison of stem budding between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT).

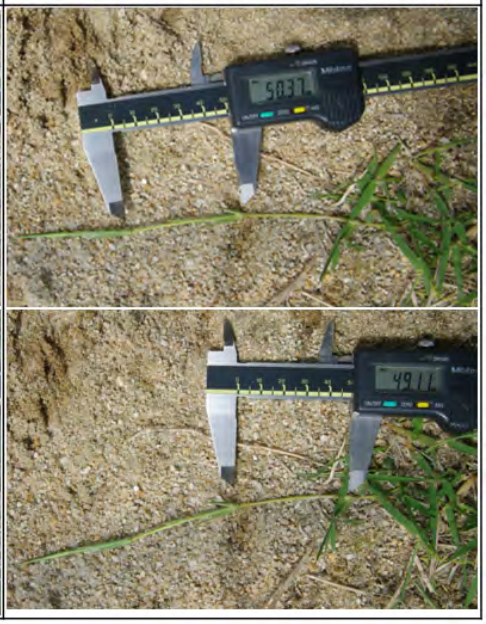
Jungji (WT)	Green Zoa (GZ)
Stem budding date: Early April, 2011	Stem budding date: Mid March, 2011



11. Comparison of flowering between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT).

Jungji (WT)	Green Zoa (GZ)
Flowering date: Mid April, 2011	Flowering date: Mid April, 2011
	

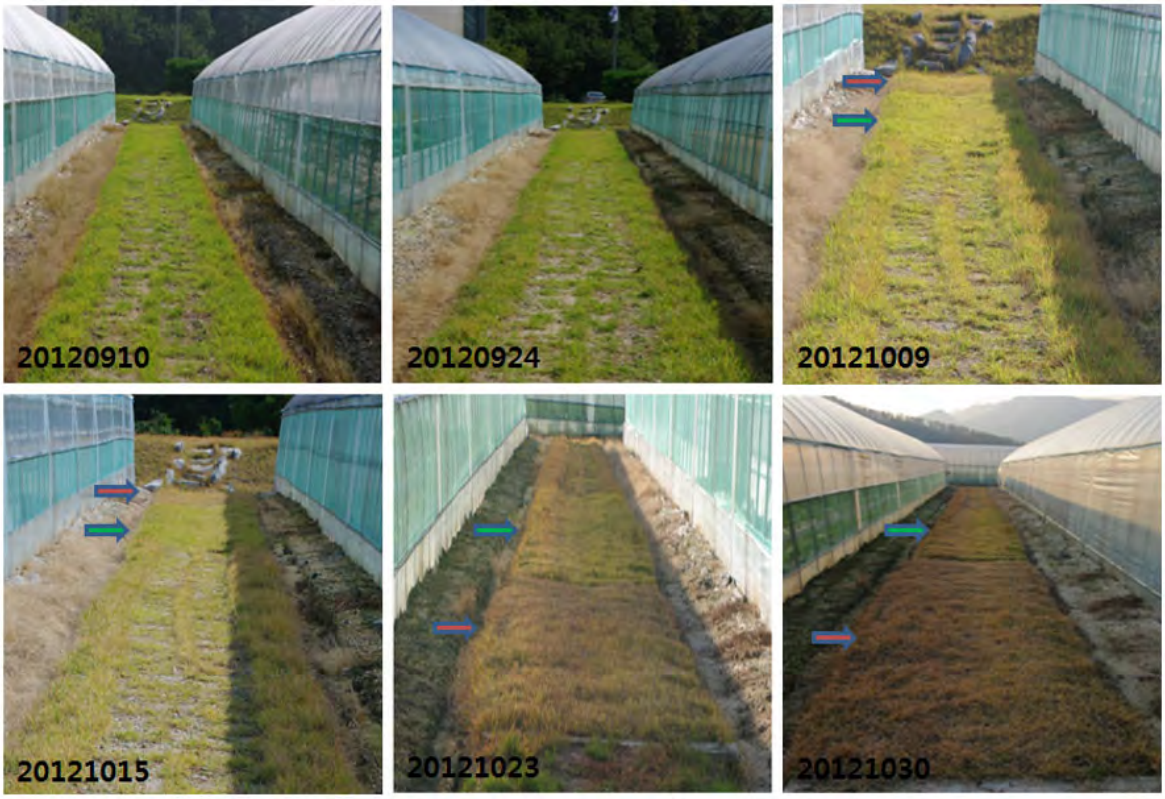
12. Comparison of shoot internode length between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). Data are from May 2, 2011.

Jungji (WT)	Green Zoa (GZ)
Length of 1st internode: 52.7±3.6 mm	Length of 1st internode: 44.3±4.1 mm
Length of 2nd internode: 53.5±4.1 mm	Length of 2nd internode: 51.6±3.0 mm
	

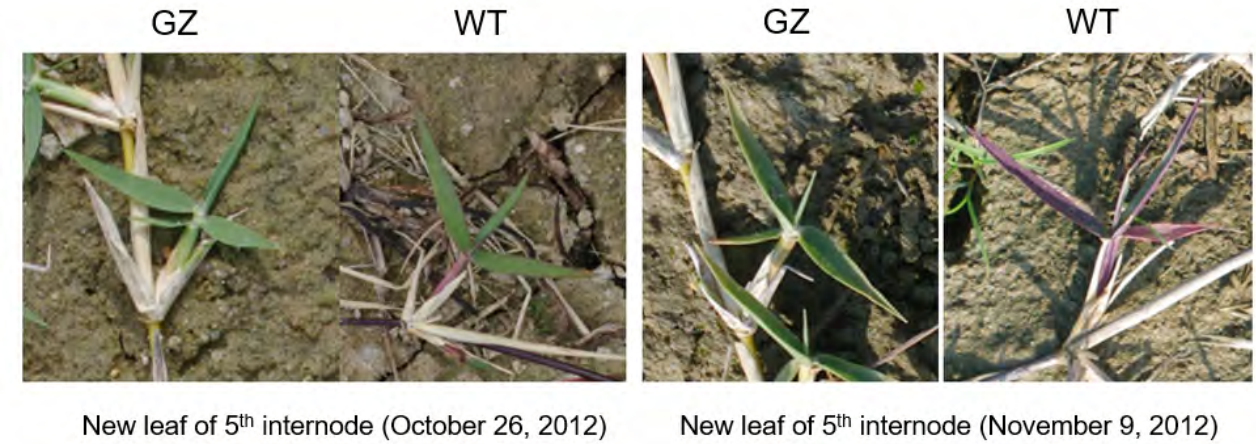
13. Comparison of inflorescence length between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). Data are from May 2, 2011. Disagreement with table in 8. due to time of measurement.

Jungji (WT)	Green Zoa (GZ)
Length of ~~inflorence~~ spike: 42.5±1.6 mm	Length of ~~inflorence~~ spike: 39.1±2.7 mm
	

14. Comparison of the green period between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). Data are from September – October 2012. Differences in the green period between ‘Green Zoa’ (GZ, green arrow) and ‘Jungji’ (WT, red arrow) are shown.



15. Comparison of entry of the dormant phase between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). Data are from late October – early November 2012.

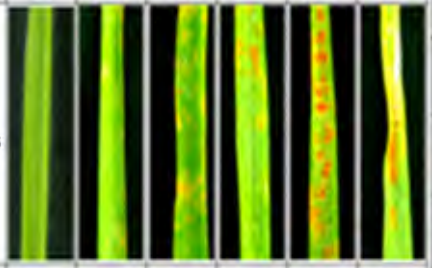


16. Comparison of overall shape of plants with seeds between ‘Green Zoa’ (GZ) and comparative variety ‘Jungji’ (WT). Data are from May 2011.

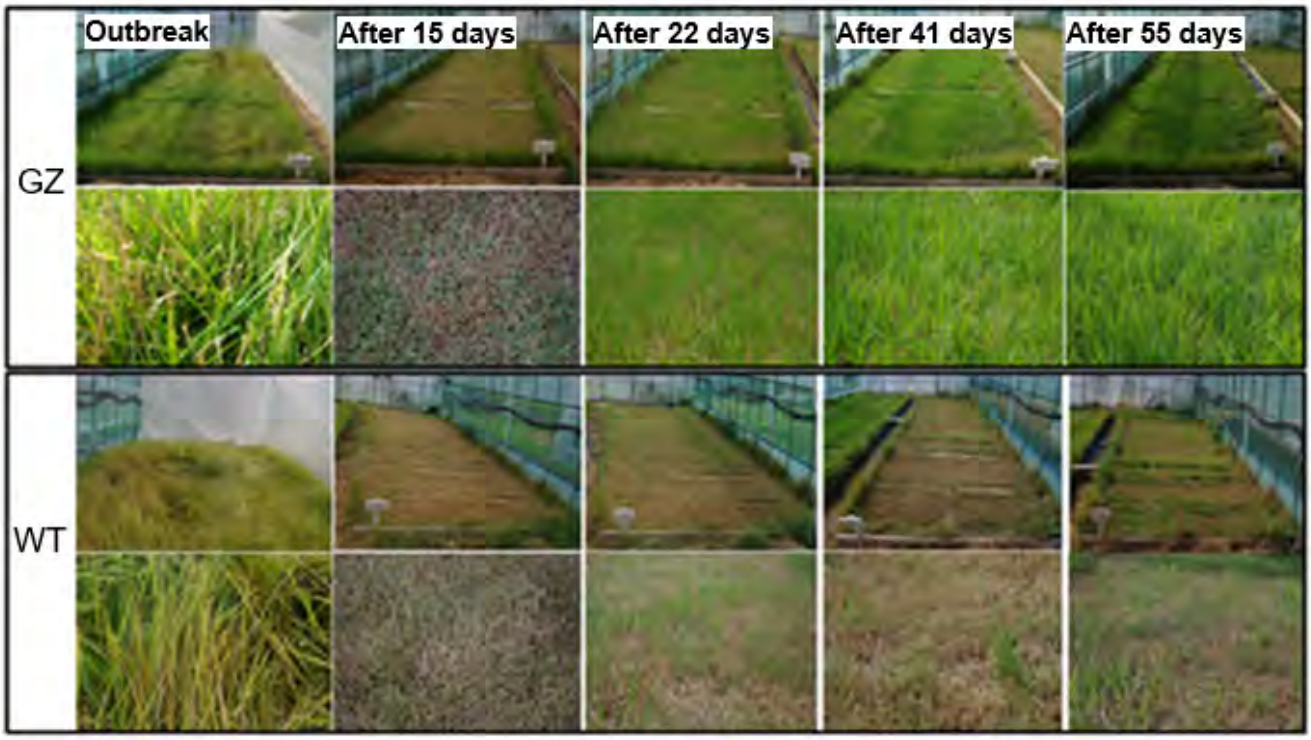
Fresh seeds are green.

Fresh seeds are reddish or brown.

17. Comparison of tolerance against rust ~~Lust~~ between 'Green Zoa' (GZ) and comparative variety 'Jungji' (WT). Data are from August – September 2012.

DI	H	D1	D2	D3	D4	D5
Symptoms						
Description	No disease	Lesions ~5% Progress	Lesions ~15% + Bleach ~5%	Lesions ~40% + Bleach ~15%	Lesions ~60% + Bleach ~40%	Lesions ~70% + Bleach ~50%

DI	Description
H	The color of the leaves is light green or dark green, and they are shiny.
D1	Less than 5% of small lesions less than 1 mm appear on the leaves. leaf area affected;
D2	Less than 15% of lesions of 1-3 mm appear on the leaves. leaf area affected;
D3	The lesion is distributed up to 40% over the entire leaves and bleach progresses about 15%.
D4	The lesion has a dark orange color and is distributed up to 60% over the entire leaves, and bleach proceeds about 40%.
D5	Lesions are more than 70%, bleach progresses more than 50%, and the damage begins in the shape of leaves.



Mean rating for GZ is 9 = H, per applicant plts inoculated?

EXHIBIT C

202100154

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY
Zoysiagrass (*Zoysia* spp.)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
FNP, Inc.	Green Zoa	Green Zoa K Grass

ADDRESS ***(Street and No. or RD No., City, State, Zip Code and Country)***

60, Noam-ro, Doan-myeon, Jeungpyeong-gun,
Chungcheongbuk-do 27902, Republic of Korea

FOR OFFICIAL USE ONLY

PVPO NUMBER

202100154

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal characteristic of this variety in the boxes below. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors. Characteristics marked with an asterisk (*) are characteristics that should be recorded.

STANDARD CHECK VARIETIES

1 = Common (Seed propagated, South Korean)
2 = Meyer (Vegetatively Propagated)
3 = Emerald (Vegetatively Propagated)
4 = Other (Specify) Jungji (Korean Wild-type)

1. **SPECIES**:

1 1 = *Zoysia japonica* 2 = *Zoysia matrella* 3 = *Zoysia tenufolia* 4 = Other (Specify) _____

2. **PLOIDY:**

2 1 = Diploid 2 = Tetraploid 20 Diploid Chromosome Number

3. **ADAPTATION**: (0 = Not Tested, 1 = Not Adapted, 2 = Adapted)

0 Northwest 0 North Central 0 Northeast
0 West Central 0 Central 0 East Central
0 Southwest 0 South Central 0 Southeast
2 Other Region: Jeungpyeong-gun, Chuncheongbuk-do, Republic of Korea

4. **RHIZOMES:**

4 1 = No Rhizomes 2 = Weakly Rhizomatous (Common) 3 = Moderately Rhizomatous (Meyer)
4 = Heavily Rhizomatous (Emerald)

____ cm Spread in one year; Test Area: _____

20210154

dbc 6/21/2021 per applicant

5. STOLONS AND SHOOTS:

3.21 cm Length of Third Internode

1.78 mm Maximum Diameter of Third Internode

2.55 cm Shorter Than Check Variety: Jungji

0.07 mm Narrower Than Check Variety: Jungji

Same as Check Variety: _____

Same as Check Variety: _____

____ cm Longer Than Check Variety: _____

____ Wider than Check Variety: _____

0 Percentage of Plants with Anthocyanin Pigmentation

3.48 Number of Growing Points per ~~Node Cluster~~ 30 cm

dbc 3/6/2021

6. LATERAL LEAF:

1 Ligule ~~Hear~~ air Length 1 = Short 5 = Medium 9 = Long

66.0 mm Length (3rd or 4th Leaf Below Apical Meristem)

4.4 mm Width (at Widest Part)

____ mm Shorter Than Check Variety: _____

____ mm Narrower Than Check Variety: _____

Same as Check Variety: _____

Same as Check Variety: _____

5.7 mm Longer Than Check Variety: Jungji

0.3 mm Wider Than Check Variety: Jungji

7 Width Class 1 = Fine 3 = Medium Fine (Emerald) 5 = Medium (Meyer) 7 = Coarse 9 = Very Coarse

7 Color: 1 = Light Green (Emerald) 3 = Medium Light Green 5 = Medium Dark Green (Common) 7 = Dark Green (Meyer) 9 = Dark Blue Green

3 Winter Color 1 = Gold 3 = Light Brown 5 = Dark Brown 7 = Purple 9 = Green

7. FLAG LEAF:

1 Ligule Hair Length 1 = Short 5 = Medium 9 = Long

50.4 mm Length

2.1 mm Width (at Widest Part)

____ mm Shorter Than Check Variety: _____

____ mm Narrower Than Check Variety: _____

Same as Check Variety: _____

Same as Check Variety: _____

25.4 mm Longer Than Check Variety: Jungji

0.6 mm Wider Than Check Variety: Jungji

8. SPIKE:

9.37 cm ~~mm~~ Length From Flag Leaf Collar to Tip

4.5 cm ~~mm~~ Length From Bottom Spikelet to Tip

2.00 cm ~~mm~~ Shorter Than Check Variety: Jungji

0.76 mm Shorter Than Check Variety: Jungji

Same as Check Variety: _____

Same as Check Variety: _____

____ mm Longer Than Check Variety: _____

____ mm Longer Than Check Variety: _____

55 Number of Spikelets per Spike

12 Number of Seadheads per cm^2

2 Fewer Than Check Variety: Jungji

____ Fewer Than Check Variety: _____

Same as Check Variety: _____

Same as Check Variety: _____

____ More Than Check Variety: _____

1 More Than Check Variety: Jungji

0.03 Percentage of Plants with Purple Anthers

99.97 Percentage of Plants with Yellow ~~Anthers~~ Glumes

0 Percentage of Plants with Another Color (Specify Color): _____

0.03 Percentage of Spikes with Anthocyanin Pigmentation

dbc 2/23/2021

** see Exh. D Table 1

20210154

9. **SEED**:

1,693 Number of Seeds per gm

____ Fewer Than Check Variety: _____

Same as Check Variety: _____

116 More Than Check Variety: Jungji

3.82 mm Glume Length

____ mm Shorter Than Check Variety: _____

Same as Check Variety: _____

0.33 mm Longer Than Check Variety: Jungji

0 Percentage of Glumes with Awns

1.14 mm Glume Width

0.13 mm Narrower Than Check Variety: Jungji

Same as Check Variety: _____

____ mm Wider Than Check Variety: _____

0 mm Awn Length

10. **COLD TOLERANCE**:

7 Cold Tolerance 1 = Low 3 = Moderately Low (Emerald) 5 = Moderate 7 = Moderately High (Meyer, Common) 9 = High

11. **DISEASE AND INSECT**: (1 = Least Resistant, 9 = Most Resistant)

____ Brown Patch (*Rhizoctonia solani*)

____ Dollar Spot (*Schlerotinia homeocarpa*)

9 Rust (*Puccinia Zoysiae*)

____ Fading Out (*Curvularia* spp.)

____ Other Disease or Pest (Specify): _____

____ Melting Out (*Helminthosporium* spp.)

____ Spring Dead Spot

____ Billbugs (*Sphenophorus ventus-vestitus*)

____ Chinchbugs (*Blissus* spp.)

12. **EXPERIMENTAL DESIGN***:

*Please explain the methods, conditions and experimental designs and data analysis method(s) utilized to collect and evaluate the data for the variety described within this application and reported on this form.

'Green Zoa' and 'Jungji' (WT) as a check variety (each n = 25 or 7)** were grown in the same place and under the same conditions. Plant material was collected, and the length and weight of each part were measured with calipers and scale, respectively, and the average and standard deviation were calculated using Excel software (See Exhibit D). Rhyzome spread rate per year was not measured.

** see Exh. D Table 1

EXHIBIT D

‘Green Zoa’

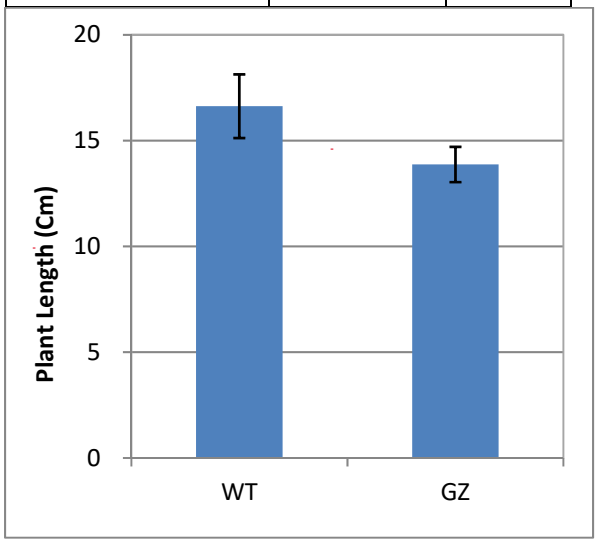
Exhibit D - Additional Description of the Variety

Data and Statistical Analysis

The data and information below provides raw data and statistical analyses related to the description of ‘Green Zoa’ found throughout the application. Where described in this attachment “GZ” refers to the subject variety ‘Green Zoa’, and “WT” refers to the comparison/check variety ‘Jungji’.

1. **Plant Height**

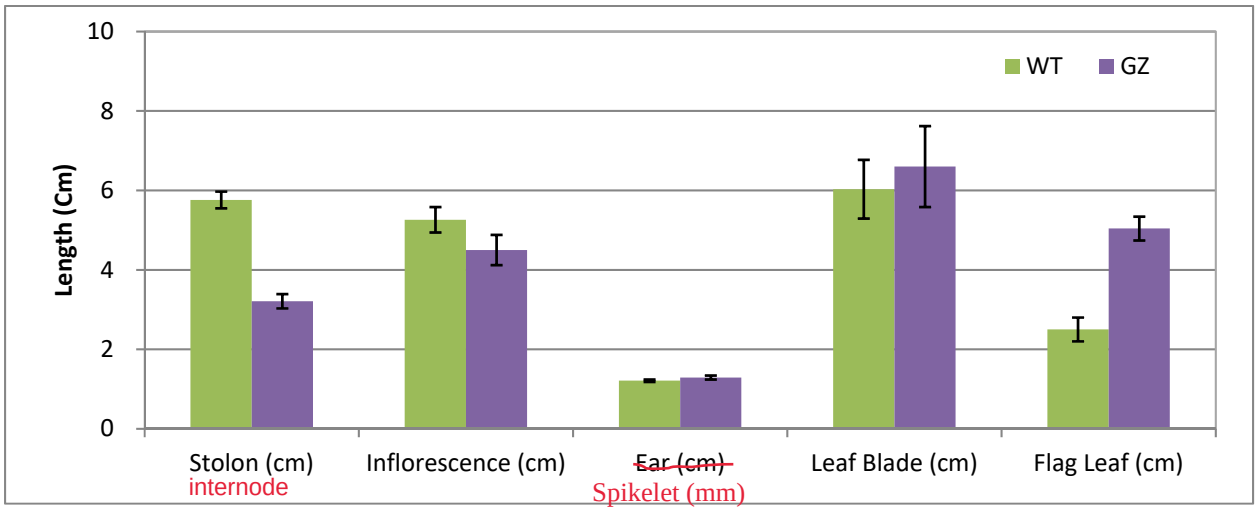
	Plant Height (cm)	
	WT	GZ
	17.5	16.5
	22.5	14.5
	16.9	13.3
	18.5	11.9
	18	10.5
	10.5	16.4
	12.5	14
	WT	GZ
Plant Height AVG	**16.63**	**13.87**
S.D	***1.50***	***0.83***



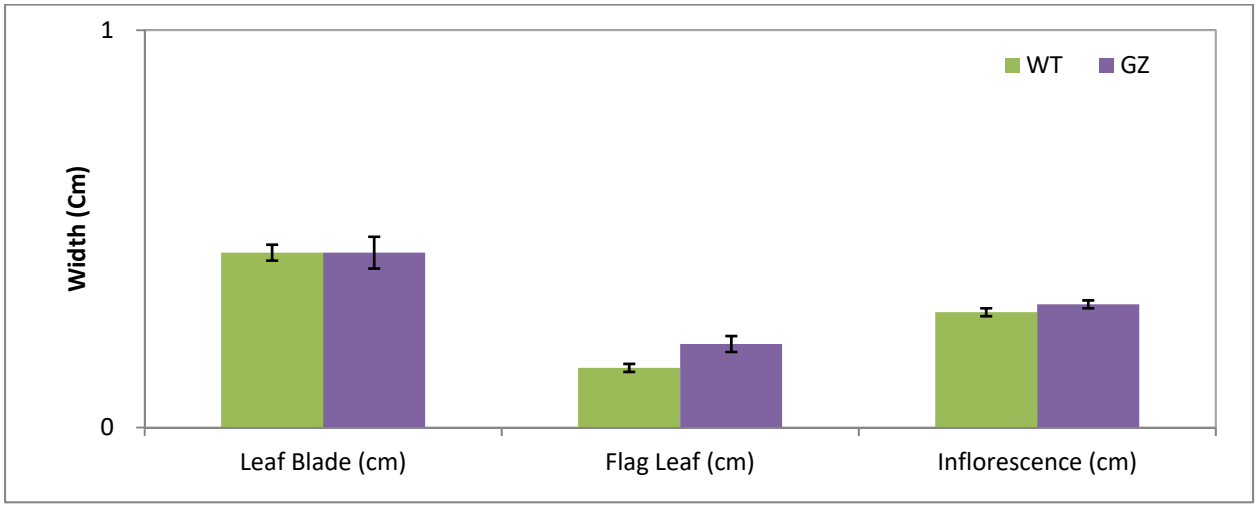
2. **Plant Characteristics**

	Length of Stolon Internode		**Length of Inflorescence** (spike)		**Length of Ear** ~~(mm)~~ spikelet		**Length of Leaf Blade**	
	WT	GZ	WT	GZ	WT	GZ	WT	GZ
	5.67	3.27	4.5	5.5	1.3	1.4	4.4	4
	5.4	3.97	5.8	4.5	1.2	1.5	10	5.5
	6.83	2.93	6.2	4.8	1.1	1.3	6.1	6.5
	5.33	2.77	6.3	3.4	1.2	1.2	6.6	4
	6.07	3	5	6	1.3	1.2	4.3	8
	5.88	3.73	4.8	3.8	1.2	1.3	4.8	11.8
	5.17	2.77	4.2	3.5	1.2	1.1	6	6.4
AVG	**5.76**	**3.21**	**5.26**	**4.50**	**1.21**	**1.29**	**6.03**	**6.60**
S.D.	***0.21***	***0.18***	***0.32***	***0.38***	***0.03***	***0.05***	***0.74***	***1.02***

too varied



	Width of Leaf Blade (cm)		**Width of Flag Leaf** (cm)		**Width of Inflorescence** (cm)	
	WT	GZ	WT	GZ	WT	GZ
	0.5	0.4	0.08	0.2	0.3	0.3
	0.4	0.4	0.1	0.3	0.3	0.4
	0.5	0.3	0.12	0.2	0.3	0.3
	0.4	0.4	0.2	0.2	0.3	0.3
	0.5	0.5	0.25	0.2	0.3	0.3
	0.4	0.6	0.2	0.2	0.2	0.3
	0.4	0.5	0.1	0.2	0.3	0.3
Mean	**0.44**	**0.44**	**0.15**	**0.21**	**0.29**	**0.31**
S.D.	***0.02***	***0.04***	***0.02***	***0.01***	***0.01***	***0.01***



SUMMARY TABLE

		WT	GZ	WT_S.D	GZ_S.D
Length	Stolon (cm)	**5.76**	**3.21**	*0.21*	*0.18*
Spike	Inflorescence (cm)	**5.26**	**4.50**	*0.32*	*0.38*
	~~Ear (cm)~~ Spikelet (mm)	**1.21**	**1.29**	*0.03*	*0.05*
	Leaf Blade (cm)	**6.03**	**6.60**	0.74	1.02
	Flag Leaf (cm)	**2.50**	**5.04**	0.30	0.30
Width	Leaf Blade (cm)	**0.44**	**0.44**	*0.02*	*0.04*
	Flag Leaf (cm)	**0.15**	**0.21**	*0.01*	*0.02*
	Inflorescence (cm)	**0.29**	**0.31**	*0.01*	*0.01*

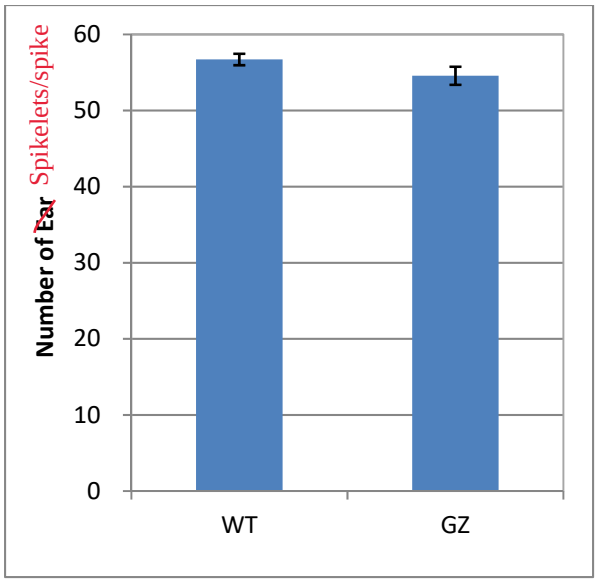
Spikelet

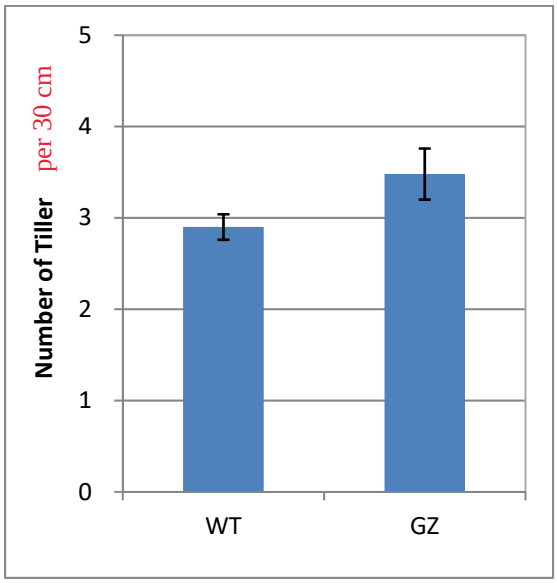
3. ~~Ear~~ Characteristics

Spikelets/spike

	Number of ~~Ear~~			**Number of Tillers**	
	WT	GZ		WT	GZ
	56	56		3	4.67
	58	58		2.67	3.33
	59	55		2.33	3
	58	48		3.33	4.33
	56	56		2.67	3
	53	54		3	3.33
	57	55		3.33	2.67
AVG	**56.71**	**54.57**		**2.90**	**3.48**
S.D.	***0.75***	***1.19***		***0.14***	***0.28***

(means of 3 lengths of 30 cm), per applicant





		Unit: mm	1	2	3	4	5	6	7	8	9	10.00	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Avg.	S.D.
Stolons and Shoots	Length of Third Internode (~~cm~~) mm	Green Zoa	32.32	33.42	33.82	31.35	33.59	31.29	34.21	32.52	33.22	28.35	31.49	32.42	32.55	33.25	34.23	28.56	34.74	28.06	32.16	33.98	28.22	32.72	30.19	33.6	32.62	32.12	2
		Jungji (WT)	57.32	58.25	52.56	56.54	60.24	56.26	58.24	56.22	59.02	59.62	57.25	59.29	53.52	59.46	56.27	56.21	56.24	56.26	60.31	60.24	56.28	57.42	58.25	59.52	59.24	57.6	2.02
	Maximum Diameter of Third Internode (mm)	Green Zoa	1.72	1.79	1.84	1.79	1.64	2.06	1.62	1.76	1.82	1.82	1.72	1.85	1.84	1.69	1.79	1.82	1.77	1.78	1.85	1.76	1.74	1.77	1.79	1.77	1.81	1.78	0.08
		Jungji (WT)	1.94	2.01	1.98	1.92	1.68	1.87	1.61	1.58	1.77	2.03	1.81	1.83	1.98	2.02	1.95	1.88	1.78	1.74	1.61	1.68	1.89	1.92	1.81	1.89	1.99	1.85	0.14
	Percentage of Plants with Anthocyanin Pigmentation	Green Zoa	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	0%	
		Jungji (WT)	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	100%	
	Number of Growing Points per Node Cluster (Number of Tillers)	Green Zoa	4.67	3.33	3	4.33	3	3.33	2.67		Avg.	3.48	S.D.	0.28															
		Jungji (WT)	3	2.67	2.33	3.33	2.67	3	3.33		Avg.	2.90	S.D.	0.14															
Lateral Leaf	Length (3rd or 4th Leaf Below Apical Meristem) (mm)	Green Zoa	59.32	72.52	53.22	60.32	64.24	70.24	72.34	51.35	54.24	74.52	75.46	68.35	52.46	76.23	78.25	73.53	52.52	75.24	77.23	75.56	76.25	51.22	51.65	62.34	71.56	66.01	10.04
		Jungji (WT)	66.24	51.12	67.63	52.56	68.45	65.22	52.21	51.06	67.25	63.13	63.01	68.22	53.21	54.17	64.56	61.24	66.13	65.01	64.01	51.42	51.17	67.56	52.21	53.17	67.56	60.3	6.96
	Width (at Widest Part) (mm)	Green Zoa	4.47	4.42	4.36	4.39	4.41	4.44	4.43	4.44	4.37	4.53	4.45	4.42	4.51	4.25	4.43	4.35	4.51	4.33	4.54	4.52	4.35	4.48	4.25	4.51	3.85	4.4	0.14
		Jungji (WT)	4.24	4.28	4.23	3.58	4.21	3.69	3.65	4.29	4.02	4.14	4.32	4.43	4.14	4.41	4.24	4.02	4.32	4.31	4.28	3.69	3.69	3.54	4.51	3.72	4.42	4.09	0.31
Flag Leaf	Ligule Hair Length (mm)	**No Ligule Hair**																											
	Length	Green Zoa	50.8	49.3	51.5	52.2	50.1	48.7	50.2		Avg.	50.40	S.D.	1.21															
		Jungji (WT)	25.4	25.8	24.2	28.3	24.5	23.2	23.5		Avg.	24.99	S.D.	1.74															
	Width (at Widest Part) (mm)	Green Zoa	2.1	2.9	1.9	1.9	1.9	2.0	2.0		Avg.	2.10	S.D.	0.36															
		Jungji (WT)	1.4	1.4	1.5	1.5	1.6	1.5	1.6		Avg.	1.50	S.D.	0.08															
Spike	Length from Flag Leaf Collar to Tip (~~mm~~)	Green Zoa	11.0	10.0	8.5	8.5	4.5	12.6	10.5		Avg.	9.37	S.D.	2.58															
	>cm	Jungji (WT)	13.0	16.7	10.7	12.2	13.0	5.7	8.3		Avg.	11.37	S.D.	3.57															
	Length from Bottom Spikelet to Tip (~~mm~~)	Green Zoa	5.5	4.5	4.8	3.4	6.0	3.8	3.5		Avg.	4.50	S.D.	1															
		Jungji (WT)	4.5	5.8	6.2	6.3	5.0	4.8	4.2		Avg.	5.26	S.D.	0.84															
	Number of Spikelets per Spike	Green Zoa	56.00	58.00	55.00	48.00	56.00	54.00	55.00		Avg.	55.00	S.D.	3.15															
		Jungji (WT)	56.00	58.00	59.00	58.00	56.00	53.00	57.00		Avg.	57.00	S.D.	1.98															
	Number of Seedheads per cm2	Green Zoa	10.00	13.00	11.00	14.00	9.00	14.00	16.00		Avg.	12.00	S.D.	2.51															
		Jungji (WT)	12.00	10.00	10.00	9.00	11.00	11.00	14.00		Avg.	11.00	S.D.	1.63															
	Percentage of Plant with Purple ~~Anthers~~ glumes	Green Zoa	0.03%																										
		Jungji (WT)	99.50%																										
	Percentage of Plants with Yellow ~~Anthers~~	Green Zoa	99.97%																										
		Jungji (WT)	0.50%																										
	Percentage of Plants with Another Color (Specifiy Color)	Green Zoa	0.00%																										
		Jungji (WT)	0.00%																										
			0.1 g	0.1 g	0.1 g	Sum	number of seeds per g																						
Seed	Number of Seeds per gram	Green Zoa	161	180	167	508	1693																						
		Jungji (WT)	146	173	154	473	1577																						
	Glume Length (mm)	Green Zoa	4.32	3.74	3.7	4.01	3.4	3.3	3.43	3.53	3.81	3.65	3.31	3.67	4.07	3.55	3.82	3.59	3.84	4.34	3.97	3.93	3.83	4.71	3.96	3.64	4.46	3.82	0.36
		Jungji (WT)	3.77	3.49	3.28	3.78	3.73	3.17	3.86	4.23	3.29	3.64	3.36	3.59	3.85	3.25	3.88	3.03	4	3.57	3.18	3.49	3.73	3.33	3.87	1.09	3.76	3.49	0.58
	Glume Width (mm)	Green Zoa	1.15	1.24	1.12	1.06	1	1.17	1.05	1.22	1.43	1.11	0.95	1.16	0.84	1.33	1.07	1.05	1.13	1.34	1.15	1.1	1.3	1.01	1.03	1.06	1.36	1.14	0.14
		Jungji (WT)	1.37	1.01	1.22	1.07	1.38	1.23	1.38	1.04	1.12	1.04	1.12	1.08	1.14	1.04	1.2	1.11	1.14	1.17	1.21	1.06	1.16	1.24	1.29	3.79	1.26	1.27	0.54
	Percentage of Glumes with Awns	**No Awe**																											
	Awn Length (mm)																												
	Spread in one year (cm)	Green Zoa	70	47	54	47	44	41	67	51	57	52	43	39	53	41	59	51	51	46	43	54	59	54	55	48	41	50.68	7.94
		Jungji (WT)	67	54	59	51	67	54	59	51	47	51	67	51	55	63	62	52	61	57	55	59	61	57	55	49	49	56.52	5.87
RhizomesSpread in one year	Not determined	Green Zoa																											
		Jungji (WT)																											
	Plant Height (cm)	Green Zoa	16.5	14.5	13.3	11.9	10.5	16.4	14		Avg.	13.87	S.D.	0.83															
		Jungji (WT)	17.5	22.5	16.9	18.5	18	10.5	12.5		Avg.	16.63	S.D.	1.5															

Table 1 - Trait Determination Data

EXHIBIT E

OMB NO. 0581-0055
Expiration Date: 01/31/2022

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.
Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421).
Information is held confidential until certificate is issued (7 U.S.C. 2426).
OMB Collection #0581-0055

NAME OF OWNER (S):	TEMPORARY OR EXPERIMENTAL DESIGNATION:	VARIETY NAME:
FNP, Inc.	Green Zoa	Green Zoa K Grass

1. Does the owner own all rights to the variety?

(●) YES ( ) NO

If NO, please explain:

2. Is the owner a U.S. national or a U.S. based entity?

( ) YES (●) NO

If NO, give name of country:

Republic of Korea

3. Is the owner the original owner?

(●) YES ( ) NO

If NO, please answer one of the following:

A. If the original rights to the variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

( ) YES ( ) NO

If NO, give name of country:

B. If the original rights to the variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

( ) YES ( ) NO

If NO, give name of country:

4. Additional explanation on ownership (Trace ownership from original breeder to current owner):