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Doguet et al.

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(54) **ZOYSIAGRASS PLANT NAMED ‘Y2’**

(50) Latin Name: *Zoysia japonica*
Varietal Denomination: **Y2**

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patent is extended or adjusted under 35
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(52) **U.S. Cl.** **Plt./390**

(58) **Field of Classification Search** **Plt./390**
See application file for complete search history.

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(57) **ABSTRACT**

An asexually reproduced variety of perennial zoysiagrass
with a unique combination of morphological characters
including medium leaf blade width and good persistence
under low maintenance.

2 Drawing Sheets

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Latin name of the genus and species of the plant claimed:
The present invention relates to the genus and species *Zoysia*
japonica (L.) Merr.

Variety denomination: ‘Y2’.

BACKGROUND OF THE INVENTION

Field of Invention

The present invention relates to a new and distinct asexu-
ally reproduced variety of perennial zoysiagrass (*Zoysia*
japonica (L.)) Merr.

BRIEF SUMMARY OF THE INVENTION

BACKGROUND OF THE INVENTION

This invention relates to a new and distinct perennial
zoysiagrass cultivar identified as ‘Y2’ zoysiagrass (herein
referred to as ‘Y2’). The inventors, David L. Doguet and
Virginia G. Lehman, discovered ‘Y2’ under cultivated condi-
tions near Poteet, Tex. in a collection of plants from Kobe,
Japan made by Jack Murray (deceased). ‘Y2’ was identified
as a distinctly different vegetative patch or clonal plant
differing by non-aggressiveness and quality under low main-
tenance from the surrounding plants. The inventors asexu-
ally reproduced ‘Y2’ by taking vegetative cuttings of stolons
and rhizomes, cutting the rhizomes and stolons into
segments, each with a vegetative bud, and rooting them in
potting media.

For purposes of registration under the “International Con-
vention for the Protection of New Varieties of Plants”
(generally known by its French acronym as the UPOV
Convention) and noting Section 1612 of the Manual of Plant
Examining Procedure, it is proposed that the title of the
invention is Zoysiagrass plant named ‘Y2’.

**BRIEF DESCRIPTIONS OF THE
ILLUSTRATIONS**

FIG. 1. Plant of ‘Y2’ zoysiagrass showing stolon and tiller
growth.

FIG. 2. Tiller of ‘Y2’ zoysiagrass showing few long leaf
hairs.

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COMPLETE DESCRIPTION OF THE VARIETY

‘Y2’ was characterized in greenhouse and field condi-
tions. ‘Y2’ is a unique variety of zoysiagrass (*Zoysia*
japonica (L.)) Merr. that Doguet and Lehman discovered
under cultivated conditions near Poteet, Tex. Plants were
grown from a collection of plants made by Jack Murray
(deceased) from Kobe, Japan. ‘Y2’ was identified as a
distinctly different vegetative patch or clonal plant differing
in non-aggressiveness and quality under low maintenance
from the surrounding plants. The plants were located in
USDA Plant Hardiness Zone 8. ‘Y2’ was propagated by the
inventors under field and greenhouse conditions by cutting
of rhizomes and stolons, rooting them in soil, and planting
of the rooted material to provide planting stock for studying
performance and for comparison of morphological charac-
ters after propagation. ‘Y2’ has been propagated by
rhizomes, stolons, tillers, and sod. Asexually reproduced
plants of ‘Y2’ have remained stable and true to type through
successive generations of propagation. No seedling estab-
lishment from ‘Y2’ has been noticed in either greenhouse or
field studies.

‘Y2’ is a perennial zoysiagrass that spreads by both
stolons and rhizomes. Characteristics of ‘Y2’ measured in
2005 were taken from plants that were approximately 15
months in age. The greenhouse was located near Lebanon,
Oreg., with a nighttime low temperature of 50 degrees F.,
and daytime high of 80 degrees F., and a minimum soil
temperature of 77 degrees F. The plants were grown with a
minimum 14-hour day length, supplemented with photosyn-
thetically active radiation equivalent to approximately 50%
sunlight. The plants were fertilized with the equivalent of 1
pound of actual N per month, using a soluble fertilizer of
20-20-20 in two equal soluble applications per month.

‘Y2’ has a stiff leaf of medium length and medium width.
‘Y2’ has a shorter leaf than Crowne or BM230 (Table 1)
when measured under greenhouse conditions in Lebanon,
Oreg., 2005. ‘Y2’ has a longer floral area than ‘Diamond’ but
a shorter floral area than Crowne or BM230 (Table 2). ‘Y2’
has few adaxial surface leaf hairs compared to the varieties
‘Cavalier’, ‘Palisades’, ‘Zorro’, or ‘Crowne’ that have many
leaf hairs present (Table 3). No seeds of ‘Y2’ have devel-
oped; no seedlings have been noted in field production area

or field test areas. The inflorescences produced in the greenhouse have consisted of empty glumes.

'Y2' has not shown susceptibility to the zoysiagrass mite in Poteet, Tex., where some susceptible varieties have shown symptoms of the mite. 'Y2' has shown some susceptibility to cool-weather brown patch. 'Y2' has shown resistance to Fall armyworm when adjacent *Paspalum* and *Cynodon* sp. plants have shown severe damage. 'Y2' has shown to excel with low maintenance inputs and is especially adaptable to areas such as bunker faces. 'Y2' has shown good turfgrass performance and temperature adaptation when tested as far north as Beltsville, Md., USDA hardiness zone 7a, which would extend the area of adaptation for 'Y2' in a line from northern Maryland across central Tennessee through northern Arkansas through Oklahoma in an East/West line and on a North/South line from Washington D.C., south through Mexico. 'Y2' will be limited only by winter survival in colder regions. 'Y2' is superior in survival under low maintenance conditions compared to 'Zeon' and 'Jamur' in water use demands as shown in test situations near Poteet, Tex., and will be limited by adequate precipitation in drier to arid regions. 'Y2' is adapted from sandy to heavier loam soil textures and from slightly acid to slightly alkaline soil pH.

TABLE 1

Leaf blade widths and lengths and texture class of selected zoysiagrass cultivars, measured under greenhouse conditions in Lebanon, OR, 2005.				
Variety	Leaf Stiffness	Length, 4th youngest crown leaf cm	Width, 4th youngest crown leaf mm	Leaf Texture Class
'Y2'	Very Stiff	1.27	1.56	Medium
'Royal'	Medium Stiff	—	0.78	Very Fine
'Diamond'	Soft	0.85	0.92	Very Fine
'Cavalier'	Medium Stiff	—	0.55	Very Fine
'Cavalier'	Medium Stiff	3.39	3.01	Medium-Coarse
BM 230	Medium Stiff	2.33	3.28	Coarse

TABLE 2

Inflorescence and leaf characters of selected zoysiagrass cultivars, measured under greenhouse conditions in Lebanon, OR, 2005.					
Variety	Length floral area cm	Length, flowering stem, from lowest node to base floral region mm	Sheath length, 4 th crown leaf cm	Anther length mm	Stem width at base of inflorescence mm
'Y2'	1.67	3.7	1.55	1.16	0.81
'Cavalier'	—	—	1.25	—	—
'Diamond'	1.3	—	0.9	—	—
'Royal'	—	—	1.43	—	—
'Palisades'	—	—	4.15	—	—
'Crowne'	3.05	11.0	3.05	—	0.71
'BM230'	2.73	14.75	1.75	1.74	0.84

TABLE 3

Adaxial leaf hair length measurements of selected zoysiagrass cultivars, measured under greenhouse conditions in Lebanon, OR, 2005.	
Variety	Leaf hair, adaxial Presence/Number
'Y2'	Few
'Palisades'	Many
'Zorro'	Many
'Diamond'	Absent
'Royal'	Absent
'Crowne'	Many
'Cavalier'	Many
'BM230'	Absent

TABLE 4

Stolon characters of selected zoysiagrass cultivars, measured under greenhouse conditions in Lebanon, OR, 2005.					
Variety	Thickness 1 st youngest stolon node mm	Thickness 2 nd youngest stolon node mm	Stolon Internode length, 1 st to 2 nd node cm	Stolon Internode length, 2 nd to 3 rd node cm	Stolon Internode length, 3 rd to 4 th node cm
'Y2'	1.56	1.96	1.03	1.06	1.13
'Cavalier'	1.94	2.05	2.8	2.55	2.45
'Diamond'	0.88	1.16	1.27	1.5	1.34
'Zorro'	1.67	2.03	2.32	2.43	2.76
'Royal'	1.65	1.84	2.1	2.28	2.17
'Palisades'	2.05	2.19	2.93	4.28	5.35
'Crowne'	2.13	2.27	3.2	2.43	2.95
'BM 230'	2.05	2.24	—	—	—

COMPLETE BOTANICAL DESCRIPTION OF THE VARIETY

Origin: 'Y2' is a cultivar of a single clone discovered under cultivated conditions in a Poteet, Tex. planting of zoysiagrass clones derived from a collection of zoysiagrasses from Kobe, Japan made by Jack Murray (deceased).

Classification: *Zoysia japonica* (L.) Merr.

Growth habit: 'Y2' is a perennial plant that spreads by stolons and rhizomes and produces a dense, fine textured turfgrass. The inflorescence of 'Y2' is a terminal spike-like raceme, with spikelets on short pedicels.

Leaf blade: Rolled in the bud, concave surface.

Leaf blade pubescence: 1 to 25 hairs on adaxial surface, none on abaxial surface.

Leaf sheath pubescence: Absent, except for a few long hairs at mouth of sheath, mean length sheath hairs: Y2: 3.41 mm; Zorro: 4.47 mm; Cavalier: 4.41 mm; BM 230: 5.68 mm; Royal: 4.33 mm; Palisades: 3.51 mm.

Leaf blade margin: Y2=semi-rough; BM230=rough; Cavalier=mostly smooth.

Leaf blade veins: Obscure.

Leaf blade flexibility (softness): Very stiff.

Vegetative leaf, 2nd youngest vegetative leaf, non-flowering stolon:

Blade length range.—Y2: 0.7 cm to 2.3 cm, mean length: 1.74 cm; Zorro: 0.3 to 3 cm, mean length: 1.78 cm; Royal: 0.5 to 2.4 cm, mean length: 1.23; Palisades: 1.4 to 11.7 cm, mean length: 7.62 cm.

Blade width mean.—Y2: 1.28 mm to 2.4 mm, mean width: 2.09 mm; Zorro: 0.97 to 2.24 mm, mean

width: 1.76; Royal: 1.06 to 2.1 mm, mean width: 1.63; Palisades: 2.9 mm to 5 mm, mean width: 3.91. Sheath length mean, 4th youngest vegetative leaf: Range: 0.9 to 2.8 cm, mean length: 1.55 cm; mean, Cavalier: 1.25. Stolon leaf angle, third youngest leaf: Y2: 78.3; Zorro: 71.4; Cavalier: 80.8; Crowne: 109; BM230: 91.5.

Inflorescence characters:

Culm total length, including floral area to node below flag leaf.—5.3 cm. Length of stem of inflorescence: Y2: 3.7 cm. Floral area length: Y2: 1.67 cm; BM230: 2.73 cm.

Culm width, stem thickness, base of floral area.—0.57 mm.

Anther length.—1.16 mm.

Floret (seed) length.—2.54 mm.

Floret (seed) width.—0.91 mm.

Node thickness, node below inflorescence.—Y2: 0.98 mm; BM230: 1.21 mm.

Pedicel length.—1.16 mm.

Flag leaf length.—Y2: 0.3 cm; Crowne: 1.53 cm.

Flag leaf width.—0.57 mm; Crowne: 1.41 mm.

Mature plant height, including inflorescence: Y2: 4.89 cm; Crowne: 14.6 cm; BM230: 22 cm;

Color notations, vegetative characters, based on The R.H.S. Colour Chart (light quality, photoperiod, and general growth of the plants affect color notations):

Leaf blade color adaxial leaf surface.—137 C green.

Leaf blade color abaxial leaf surface.—146A yellow green.

Stolon color.—145A yellow green; with cool temperatures, will show anthocyanin Purpling, 67A red purple.

Color notations, floral characters, based on The R.H.S. Colour Chart (light quality, photoperiod, and general growth of the plants affect color notations):

Culm stalk.—137C green.

Stigma.—155A white.

Anthers, fresh.—N77A purple.

Anthers, mature, dried.—N199D grey brown.

References Cited

U.S. Patent Documents		
October, 1998.	Engelke, M. C.	U.S. PP 10,636. 'Diamond' zoysiagrass
October, 2000.	Engelke, M. C.	U.S. PP 11,570. 'Crowne' zoysiagrass
December, 1986.	Youngner, V. B.	U.S. PP 5,845. 'El Toro' zoysiagrass
September, 2000.	Engelke, M. C.	U.S. PP 11,515. 'Palisades' zoysiagrass

We claim:

1. A new and distinct variety of zoysiagrass plant, substantially as described and illustrated herein, characterized particularly by a unique combination of morphological characters.

* * * * *



Fig. 1

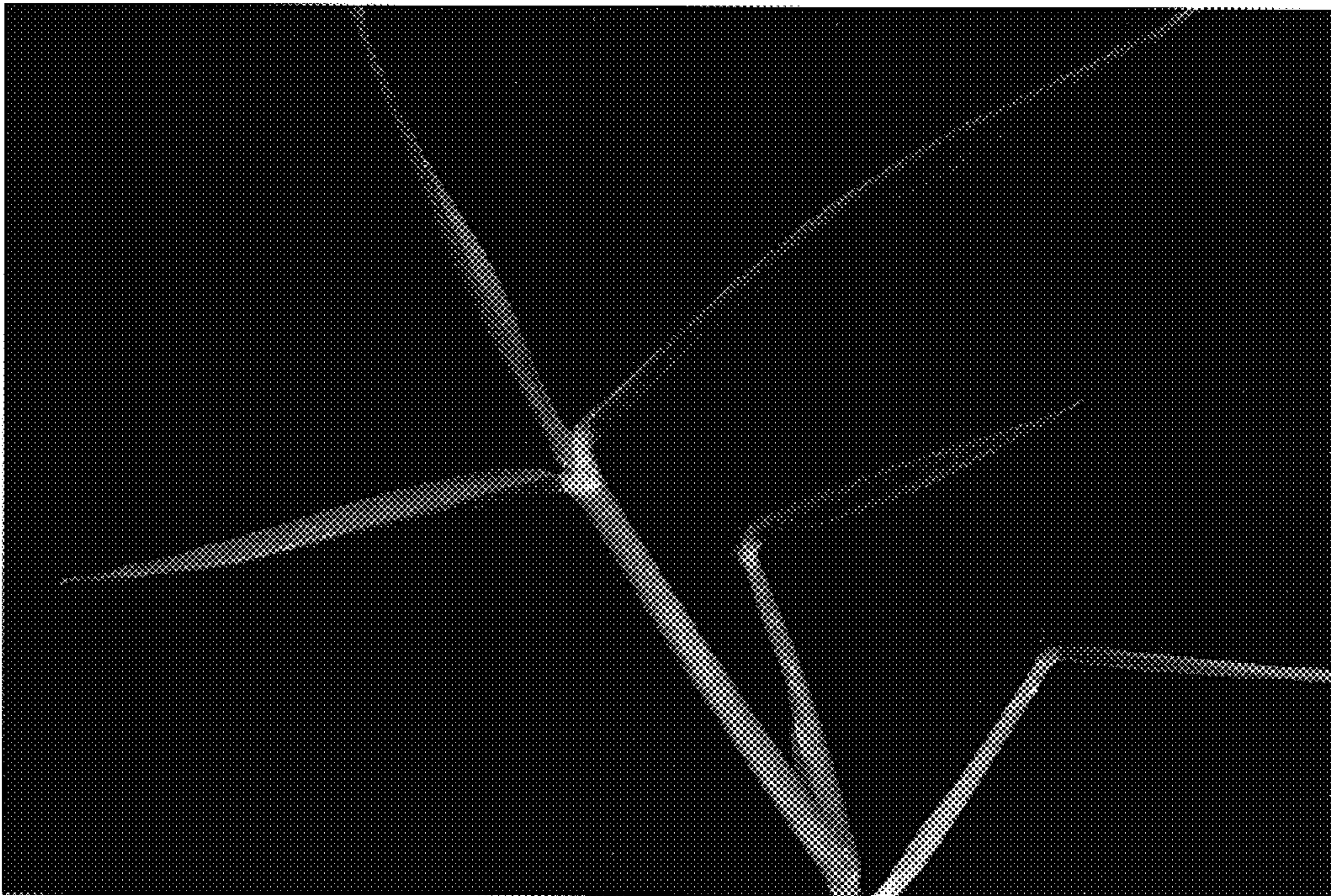


Fig. 2