

CHAPTER FOUR

RESULT

The previous chapter explained the design and test methodology. This chapter reports on the results of assessments which is divided into 3 parts based on the DUS.

4.1 DISTINCNESS

During the observation period, the 88 characteristics of both candidate and example varieties have been recorded and described in Table 5. The comparative trial test results could be summarized as follows:

4.2.1 The distinctness of the candidate variety compared with the reference variety was noted. The results of plant characteristic test were recoded for 20 plants and shown in terms of mean value, acceptable value of standard deviation, and LSD/significant. The standard applied for distinctness over the period of test is a significant difference at 1% (probability, $P = 0.01$) significance level in at least one characteristic.

4.2.2 Sixteen characteristics of the candidate variety are distinct from the example variety and this is illustrated in Table 6

4.2.3 The main characteristics that are used to claimed for novelty were the shape and the color of the flower, shown in Figure 2,3

4.2 UNIFORMITY

No particular problem was noted regarding the uniformity. Even though both Dangphimon and Dangphiriya varieties have reached 3 different heights during treatment, the majority population could be considered as uniform.

4.3 STABILITY

A variety is considered sufficiently stable as there is no evidence to indicate that it lacks uniformity or fails to conform to the essential characteristics of its description. Moreover, as the tested plants are the vegetatively propagated variety, (Dangpimon), the candidate then was considered to be sufficiently stable because there was no evidence to indicate that it lacks uniformity (“The Community Plant Variety Protection Office”, 2002) which means the stability would exist for every generation. Therefore, the stability test was not conducted during this research.

From the results of the DUS testing above, it can be determined that the candidate variety, Dangphimon, and the example variety, Dangphiriya are different and it is suitable to grant a PBR to Dangphimon owners. The findings of the result will be summarized and discussed in the next chapter.

Table 5. Table of characteristics

Characteristics		Expression of characteristic												Candidate variety		Example variety	
		1	2	3	4	5	6	7	8	9	10	11	12	Dangphimon		Dangphiriya	
1	Plant: size	very small		small		medium		large		very large				3	35.90	3	28.25
2	Pseudobulb: attitude	erect		Semi-erect		horizontal		Semi-drooping		drooping				3	Semi-erect	3	Semi-erect
3	Pseudobulb: length	very short		short		medium		long		Very long				3	33.65	3	27.05
4	Pseudobulb: thickness	very small		small		medium		large		Very large				5	1.86	5	1.48
5	Pseudobulb: shape in longitudinal section	linear	lanceolate	ovate	obovate	elliptic	others							5	elliptic	5	elliptic
6	Pseudobulb: shape in cross section	elliptic	circular	angular	others									2	circular	2	circular
7	Leaf: main green color	White-cream	green	purple	others									2	green	2	green

Table continues

Table 5. (continued)

8	Leaf: shape	liner	elliptic	Narrow ovate	Narrow obovate	spatulate								3	narrow ovate	3	narrow ovate
9	Leaf: length														13.86		14.35
10	Leaf: width														5.32		5.67
11	Leaf: thickness														0.17		0.16
12	Leaf: margin	entire	pendulous	weavy										1	entire	1	entire
13	Leaf: number of colors	1 color	2 colors	more than 2 colors										1	1 color	1	1 color
14	Leaf: colors			light green		green		dark green						5	green	5	green
15	Leaf: presence of variegation	absent							present					1	absent	1	absent
16	Leaf: present of pubescence	absent							present					1	absent	1	absent
17	Inflorescence: attitude	erect	semi-erect	horizontal	recurving									1	erect	2	Semi-erect
18	Inflorescence: position of adherence	whole	top part	middle part	basal part									1	whole	1	whole
19	Inflorescence: position of flowers	along peduncle	apical											1	along peduncle	1	along peduncle

Table continues

Table 5. (continued)

20	Inflorescence: arranging of flowers	2 rows	3 rows	round	Not definitely									1	2 rows	1	2 rows
21	Inflorescence: distance of flowers	close	medium	distant											4.13		3.73
22	Inflorescence: number of flowers			slight		medium		large						5	12.10	5	12.40
23	Inflorescence: length			short		medium		long						5	40.85	5	39.15
24	Peduncle: length			short		medium		long							21.52		12.35
25	Floral axis: type	erect	zigzag											1	erect	1	erect
26	Floral axis: color	light green	green	dark green	purple- green									2	green	2	green
27	Pedicele: type	normal	twisty											1	normal	1	normal
28	Pedicele: angle with floral axis	narrow	right angle	wide										1	narrow	1	narrow
29	Pedicellate- ovary: length	short		medium		long								5	4.60	5	4.15
30	Pedicele: color														white 155C		white 155C

Table continues

Table 5. (continued)

31	Flower: width in front view														6.67		6.70
32	Flower: length in front view														6.66		6.95
33	Flower: thickness of petal/sepal	thin	medium	thick											0.06		0.05
34	Flower: length of mentum	short		medium		long								3	medium	3	medium
35	Flower: shape of mentum	Type I	Type II	Type III	Type IV	Type V	Type VI	Type VII	Type VIII					5	Type V	5	Type V
36	Flower: scent	absent								present				1	absent	1	absent
37	Petal: shape	Type I	Type II	Type III	Type IV	Type V	Type VI	Type VII	Type VIII	Type IX	Type X	Type XI	Type XII	10	Type X	10	Type X
38	Petal: general appearance of petals and sepals	incurving	spreading	relaxing	twist									1	incurving	1	incurving
39	Petal: curvature of longitudinal axis	slight		medium		heavy								1	slight	1	slight
40	Petal: shape in cross section	strongly concave	moderately concave	flat	convex	strongly concave								3	flat	3	flat

Table continues

Table 5. (continued)

41	Petal: undulation of margin	absent or very weak	weak	medium	strong	very strong								1	very weak	1	very weak
42	Petal: width														2.64		2.55
43	Petal: length														4.02		4.19
44	Petal: number of colors	one color	two colors	three colors	more than three colors									1	1 color	2	2 colors
45	Petal: main color														PV N78		W 155C
46	Petal: color pattern														-		purple N70
47	Petal: color pattern type	self-colored	shaded	edged	striped	netted	spotted	shaded + striped	shaded + netted	shaded + spotted	mark + splash			2	shaded	2	shaded
48	Petal: extent of color pattern	small		medium		large								3	medium	5	large
49	Dorsal sepal: shape	Type I	Type II	Type III	Type IV	Type V	Type VI	Type VII	Type VIII	Others				2	Type II	2	Type II
50	Dorsal sepal: general impression	incurving	spreading	relaxing	twist									1	incurving	1	incurving

Table continues

Table 5. (continued)

51	Dorsal sepal: curvature of longitudinal axis	slight		medium		heavy								1	slight	1	slight
52	Dorsal sepal: twisting	absent or very weak		weak		medium		strong		very strong				1	absent or very weak	1	absent or very weak
53	Dorsal sepal: shape in cross section	strongly concave	moderately concave	flat	moderately convex	strongly convex								3	flat	3	flat
54	Dorsal sepal: undulation of margin	absent or very weak		weak		medium		strong		very strong				1	absent or very weak	1	absent or very weak
55	Dorsal sepal: width														1.62		1.62
56	Dorsal sepal: length														3.62		4.15
57	Dorsal sepal: number of colors	one color	two colors	three colors	more than three colors									1	1 color	2	2 colors
58	Dorsal sepal: main color														PV N78		W 155C
59	Dorsal sepal: color pattern														PV N78		W 155C

Table continues

Table 5. (continued)

60	Dorsal sepal: color pattern type	self- colored	shaded	edged	striped	netted	spotted	shaded + striped	shaded + netted	shaded + spotted	mark + splash			2	shaded	2	shaded
61	Dorsal sepal: extent of color pattern		small		medium		large							3	small	5	medium
62	Lateral sepal: shape	Type I	Type II	Type III	Type IV	Type V	Type VI	Type VII	Others					5	Type V	5	Type V
63	Lateral sepal: general impression	incurving	spreading	relaxing	twist									3	relaxing	3	relaxing
64	Lateral sepal: curvature of longitudinal axis	slightly		medium		heavy								1	slightly	1	slightly
65	Lateral sepal: twisting	absent or very weak		weak		medium		strong		very strong				1	absent or very weak	1	absent or very weak
66	Lateral sepal: shape in cross section	strongly concave	moderat ely concave	flat	moder ately convex	strongly convex								4	moderat ely convex	4	moderat ely convex
67	Lateral sepal: undulation of margin	absent or very weak		weak		medium		strong		very strong				1	absent or very weak	1	absent or very weak
68	Lateral sepal: width														1.67		1.76

Table continues

Table 5. (continued)

69	Lateral sepal: length														3.77		4.19
70	Lateral sepal: number of colors	one color	two colors	three colors	more than three colors									1	1 color	2	2 colors
71	Lateral sepal: color pattern type	self- colored	shaded	edged	striped	netted	spotted	shaded + striped	shaded + netted	shaded + spotted	mark + splash			1	self- colored	1	self- colored
72	Lateral sepal: main color														PN 78A		W 155C
73	Lateral sepal: color pattern																P N78A
74	Lateral sepal: extent of color pattern		small		medium		large							3	small	3	small
75	Lip	absent								present				2	present	2	present
76	Lip: length														4.18		4.18
77	Lip: width														1.95		1.78
78	Lip: opened of lateral lobe	Type I	Type II	Type III	Type IV	Type V	Type VI	Type VII	Type VIII	Type IX	Type X	Type XI	Type XII	4	Type IV	2	Type II
79	Lip: eye	absent								present				1	absent	1	absent

Table continues

Table 5. (continued)

80	Lip: shape of eye	Type I	Type II	Type III	Type IV										-		-
81	Lip: number of colors eye	one color	two colors	three colors	four colors	five colors	more than five colors							2	2 colors	2	2 colors
82	Lip: main color														P N 78A		P N 78A
83	Lip: color of middle part														P N 78A		P N 78A
84	Lip: color of throat														V N78A		V N78B
85	Lip: color of callus														V N78A		W 155A
86	Column: shape	short	medium	long										2	medium	2	medium
87	Column: color														PN 78A		P N 78B
88	Column: color of anther cap														YG 154D		YG 154D

Table 6. Distinct characteristics

Characteristics		Candidate variety		Example variety	
		Dangphimon		Dangphiriya	
1	Petal: number of colors	1	1 color	2	2 colors
2	Petal: main color		PV N78		W 155C
3	Petal: color pattern				Purple N70
4	Petal: extent of color pattern	3	medium	5	large
5	Dorsal sepal: number of colors	1	1 color	2	2 colors
6	Dorsal sepal: main color		PV N78		W 155C
7	Dorsal sepal: color pattern		-		PV N78
8	Dorsal sepal: color pattern type	1	self-color	2	shaded
9	Dorsal sepal: extent of color pattern	3	small	5	medium
10	Lateral sepal: number of colors	1	1 color	2	2 colors
11	Lateral sepal: main color		PN 78A		W 155C
12	Lateral sepal: color pattern		-		P N78A
13	Lateral sepal: shape	4	Type 4	2	Type 2
14	Lip: color of throat		V N78A		V N78B
15	Lip: color of callus		V N78A		W 155A
16	Column: color		PN 78A		P N 78B

Figure 2. Dangphimon , example variety and Dangphiriya, candidate variety



Figure 3. Flowers and plant parts of 'Dangphimon' and Dangphiriya

