ARTICHOKE GERMINATION *Cynara cardunculus*

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REASON FOR STUDY

CUSTOMER CONTACTED WONDERING WHY THE SAME SEED LOT GERMINATED BETTER FOLLOWING ISTA RULES THEN AOSA RULES

IN HOUSE STUDY DONE WITH CUSTOMER ARTICHOKE SAMPLES

- GERM INCREASED AN AVERAGE OF 10% AT 20C VERSUS 20-30C.

SECOND IN HOUSE STUDY COMPLETED

- 20C AND 15 C COMPARISON ON TOWEL
- UNTREATED AND TREATED SEED AT BOTH TEMPERATURES
- SAND ON TOP OF TOWEL AT BOTH TEMPERATURES

CUSTOMER PROVIDED ADDITIONAL ARTICHOKE SEED. LABS WERE ASKED TO PARTICIPATE IN REFEREE TO DETERMINE IF 20C WAS BETTER OR COMPARABLE TO 20-30C

ORIGINAL ARTICHOKE INHOUSE STUDY COMPARING 20C VS 20-30C

SAMPLE	20-30C	20C	Difference
1	67	78	11
2	76	88	12
3	77	87	10
4	74	79	5
5	45	61	16
6	71	66	-5
7	65	80	15
8	62	69	7

SECOND IN HOUSE ARTICHOKE STUDY COMPARING 15C AND 20C

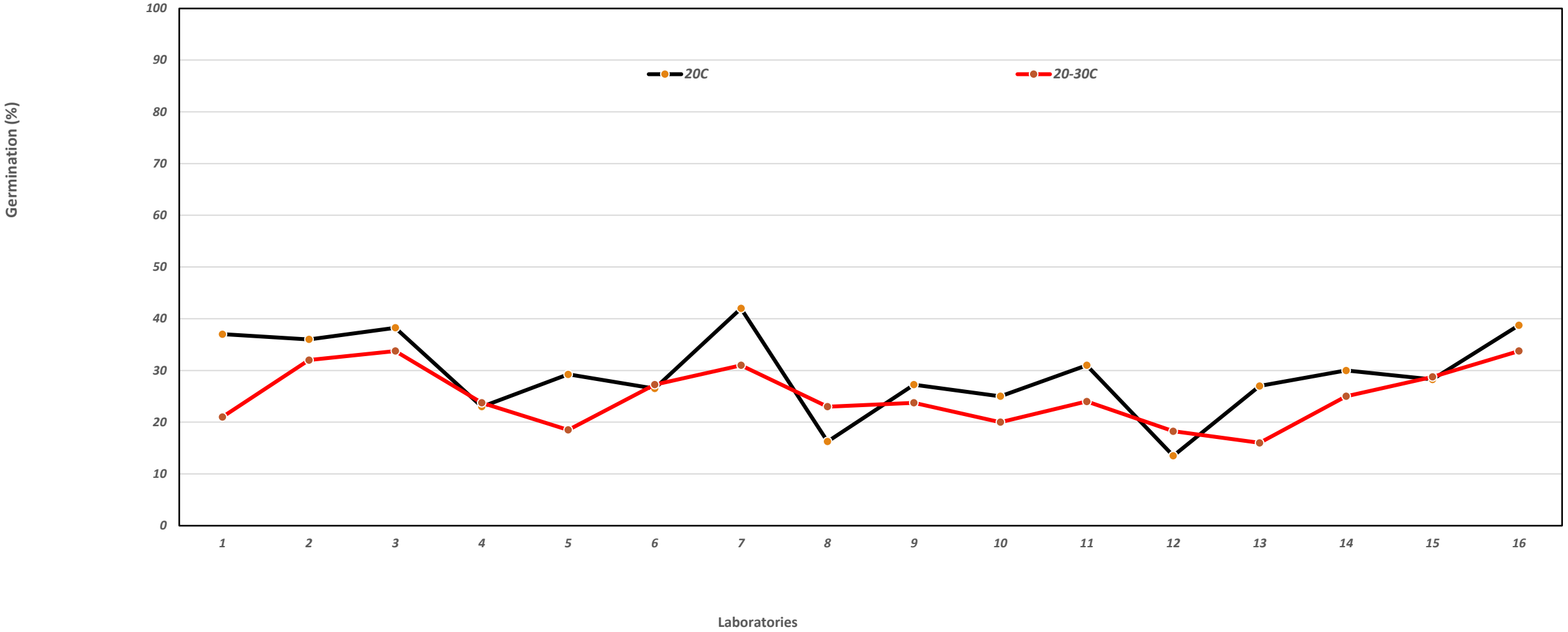
SAMPLE	15C UNTREATED	20 C UNTREATED	15 C TREATED	20 C TREATED	15 C SAND UNTREATED	20 C SAND UNTREATED	15 C SAND TREATED	20 C SAND TREATED
1			46	64				
2			77	76				
3			85	85				
4	84	84	85	86				
5	84	83	87	89				
6	82	73	87	80	79	80	79	82
7	40	42	53	59	38	46	46	50
8	77	73	82	78	70	81	56	78

LAB REFEREE

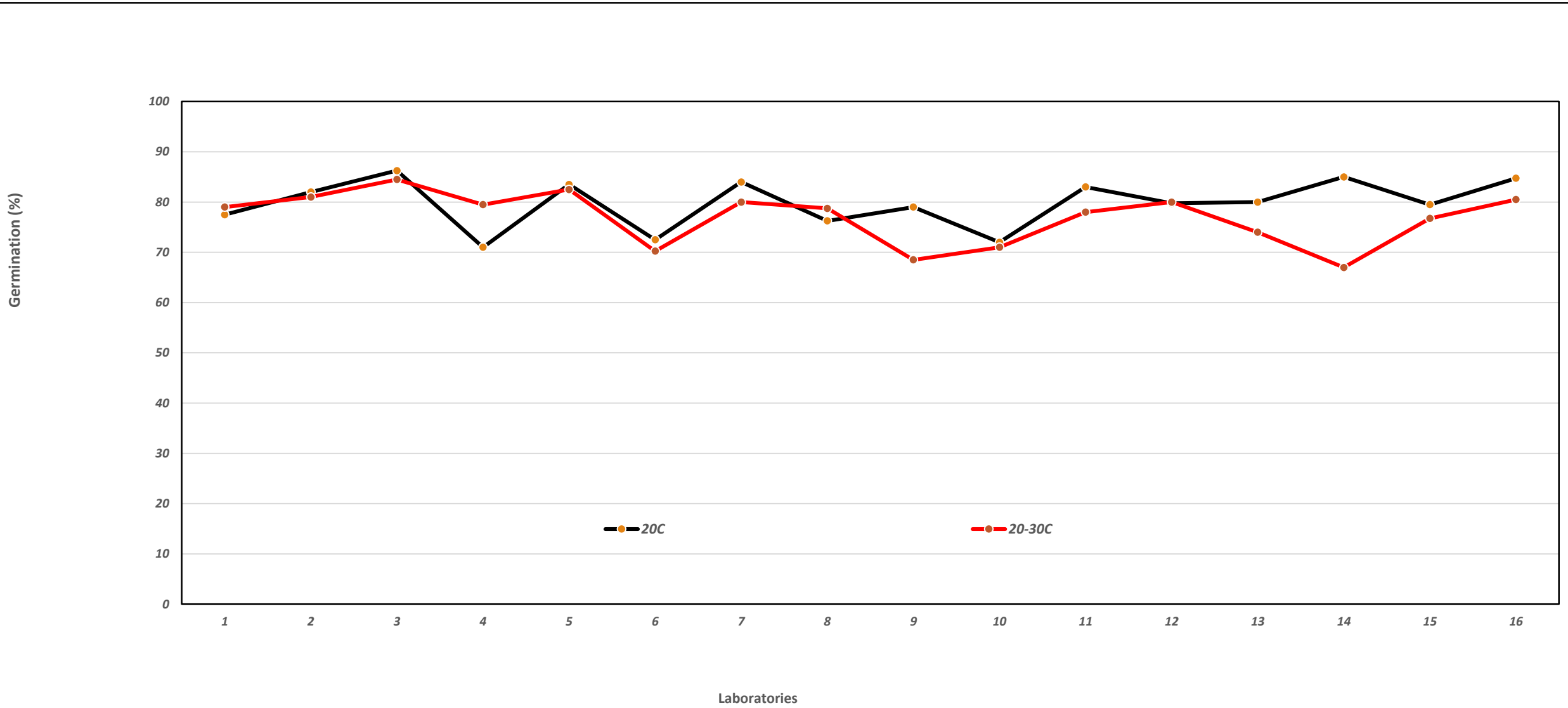
5 ARTICHOKE SAMPLES WERE SENT TO 20 LABORATORIES

16 LABORATORIES RETURNED GERMINATION DATA

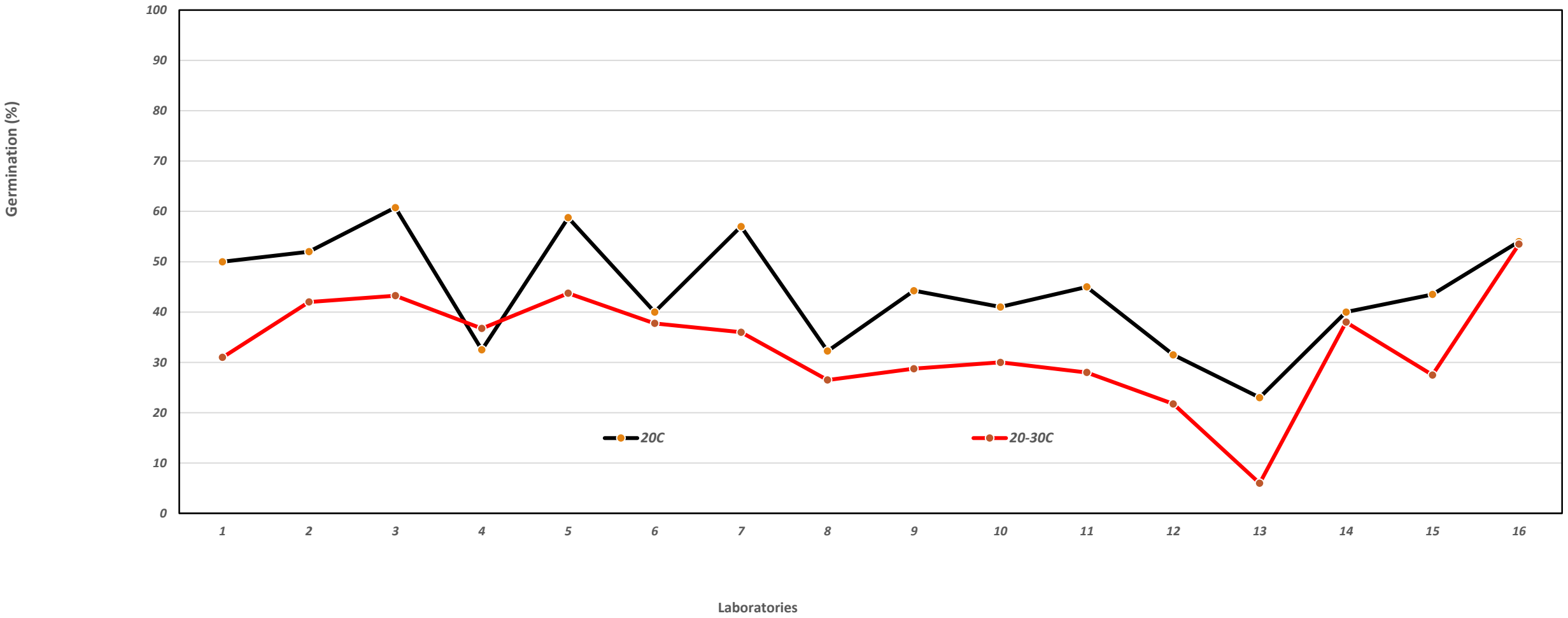
SAMPLE 1


100
90
80
70
60
50
40
30
20
10
0
20C
20-30C
Germination (%)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Laboratories

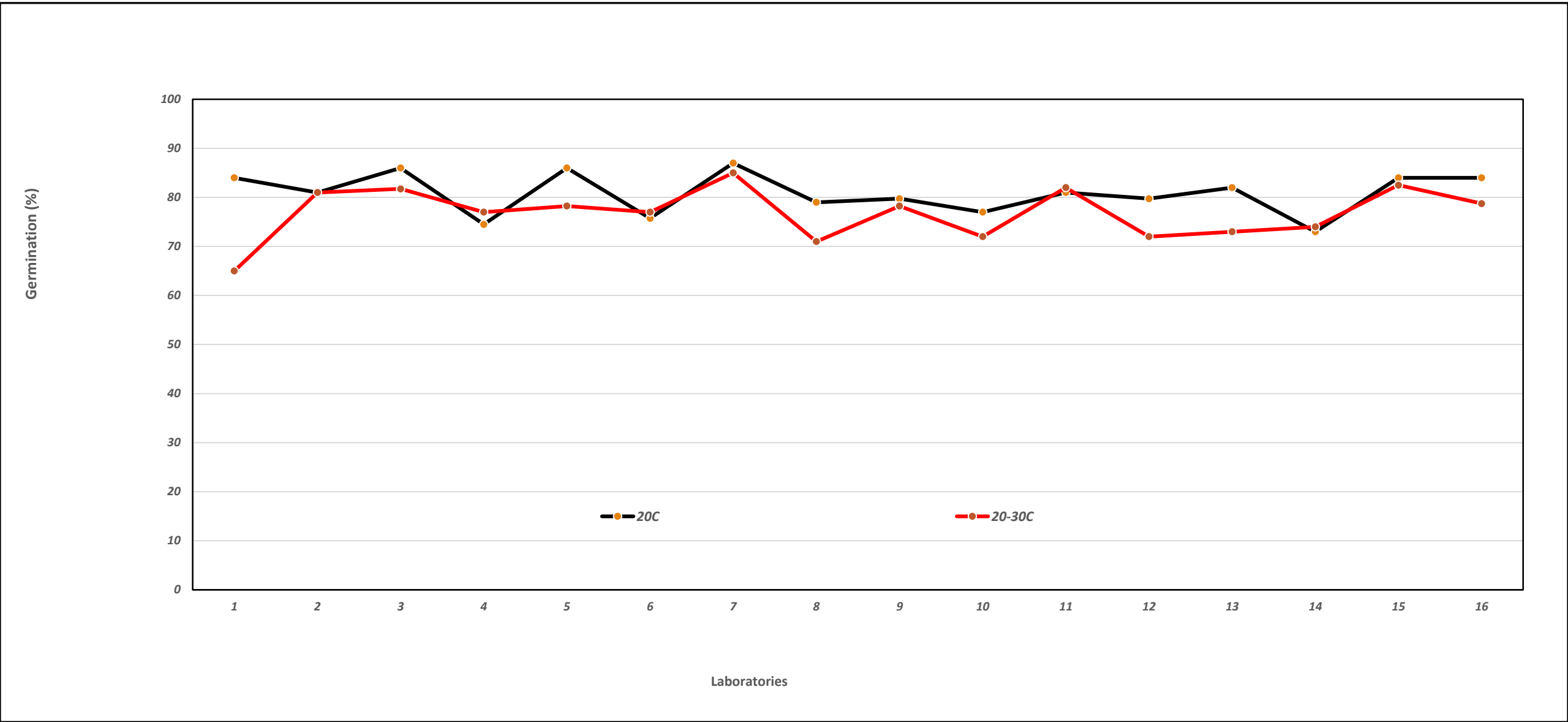
SAMPLE 2


Germination (%)
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
20C
20-30C
Laboratories

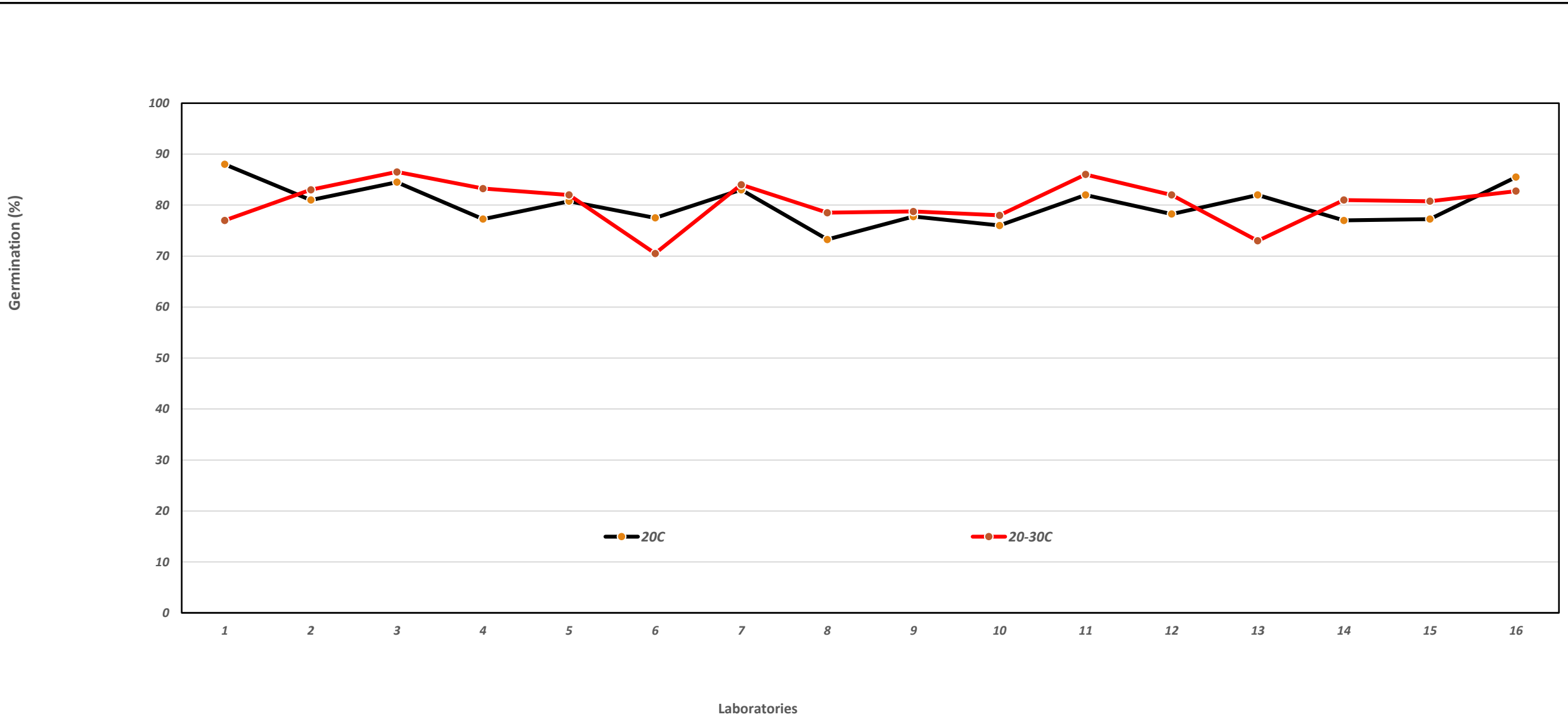
SAMPLE 3


Germination (%)
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
20C
20-30C
Laboratories

SAMPLE 4


Germination (%)
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
20C
20-30C
Laboratories

SAMPLE 5


Germination (%)
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
20C
20-30C
Laboratories

CONCLUSIONS

THE TEMPERATURE EFFECT WAS MORE NOTICEABLE THE LOWER THE GERMINATION

THERE WSA ALSO MORE VARIABILITY AMONGST LABS THE LOWER THE GERMINATION

NEITHER 20C OR 20-30C PROVIDED SIGNIFICNALY BETTER RESULTS ACROSS ALL SAMPLES AND LABS