# Quantitative Assessment of Cricket Fields

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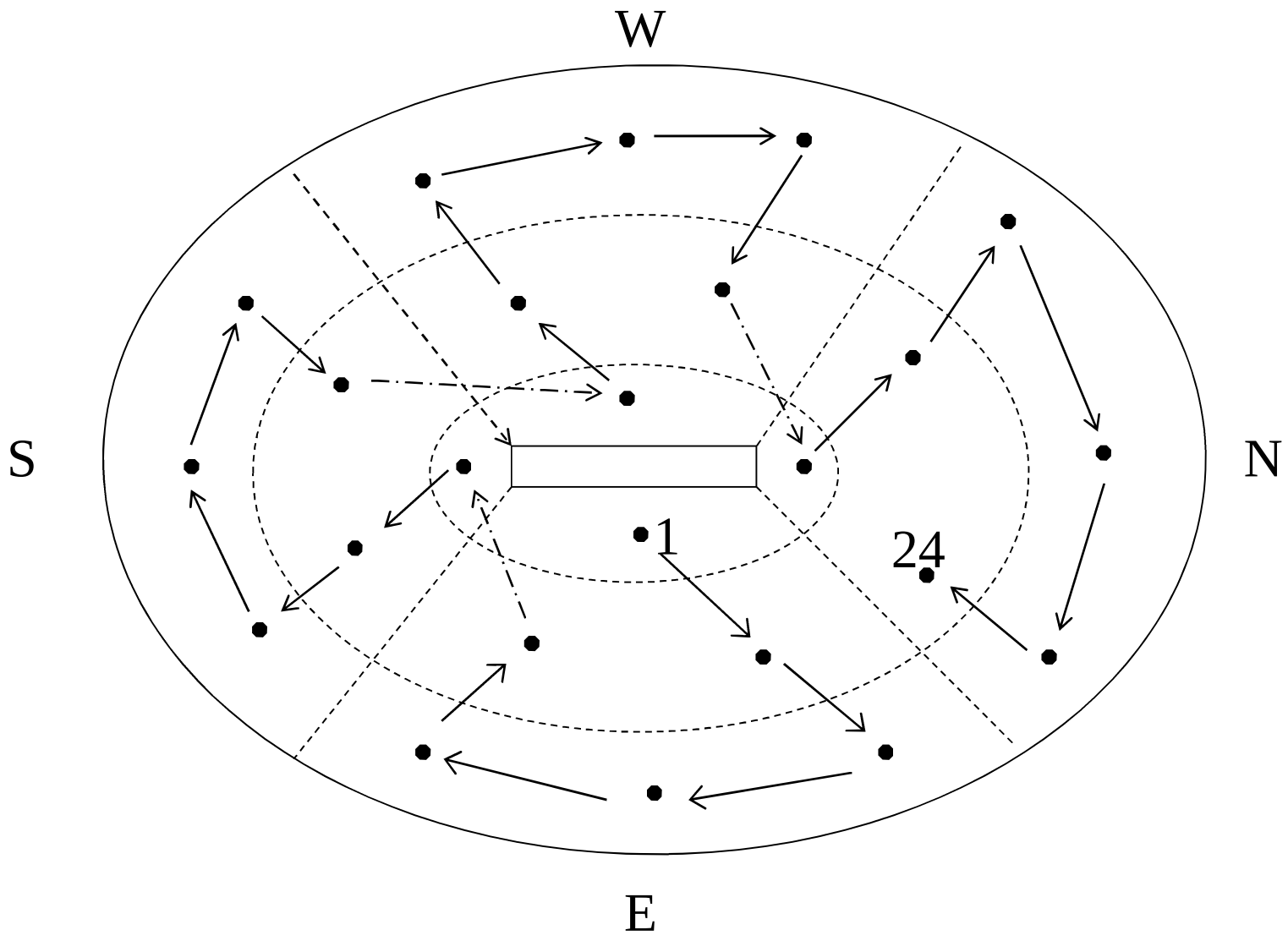
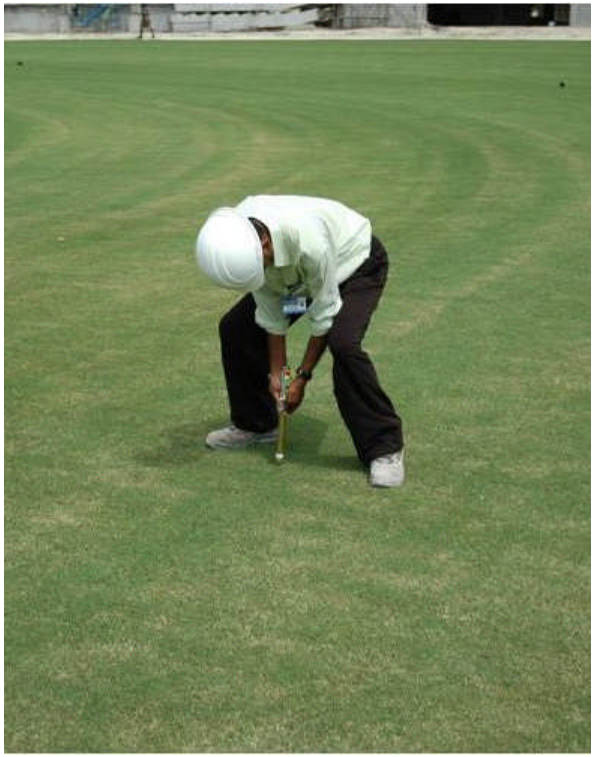
# *Cricket Outfield Sampling locations*



# Soil Compaction

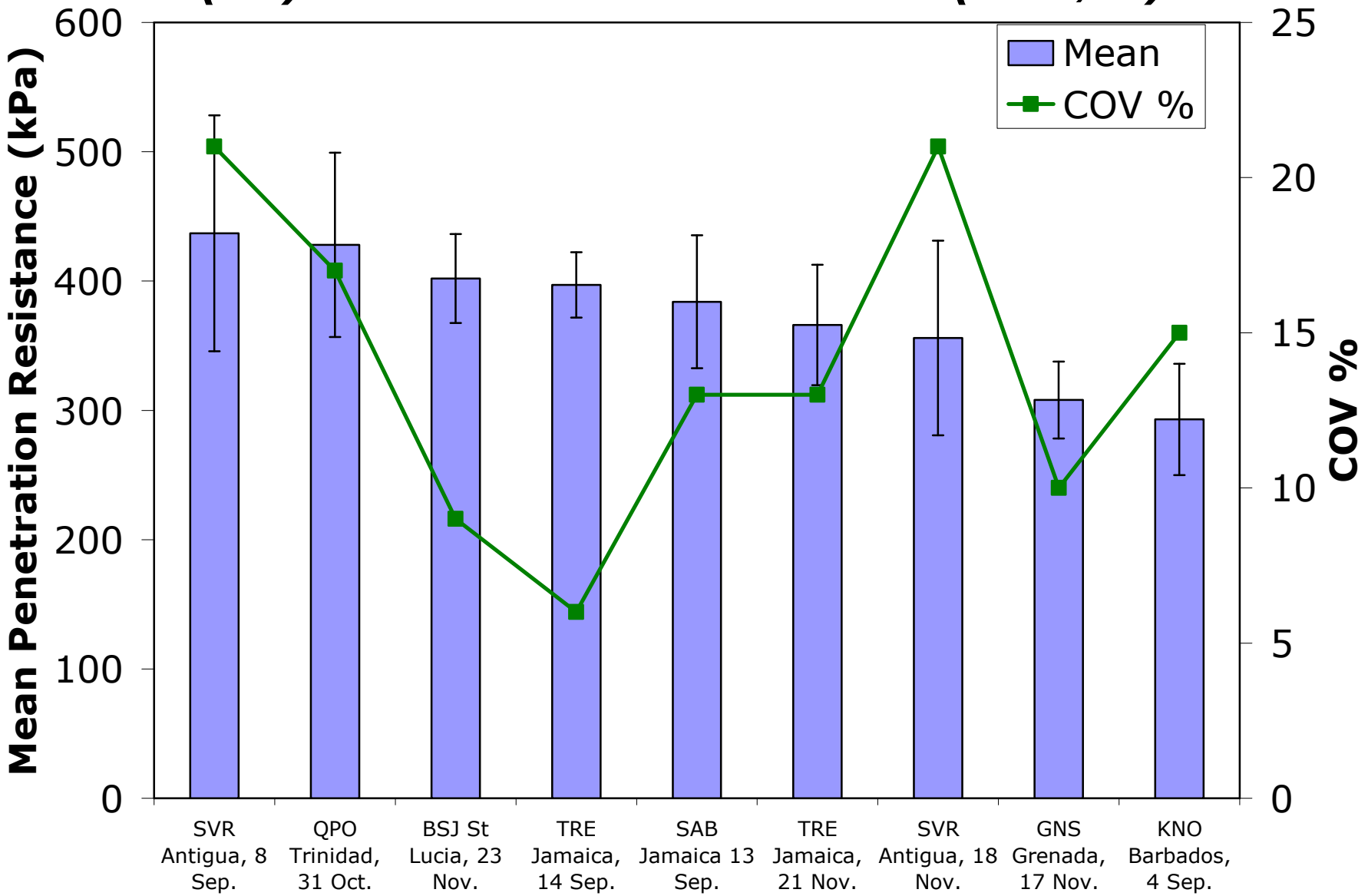
## Lang Penetrometer

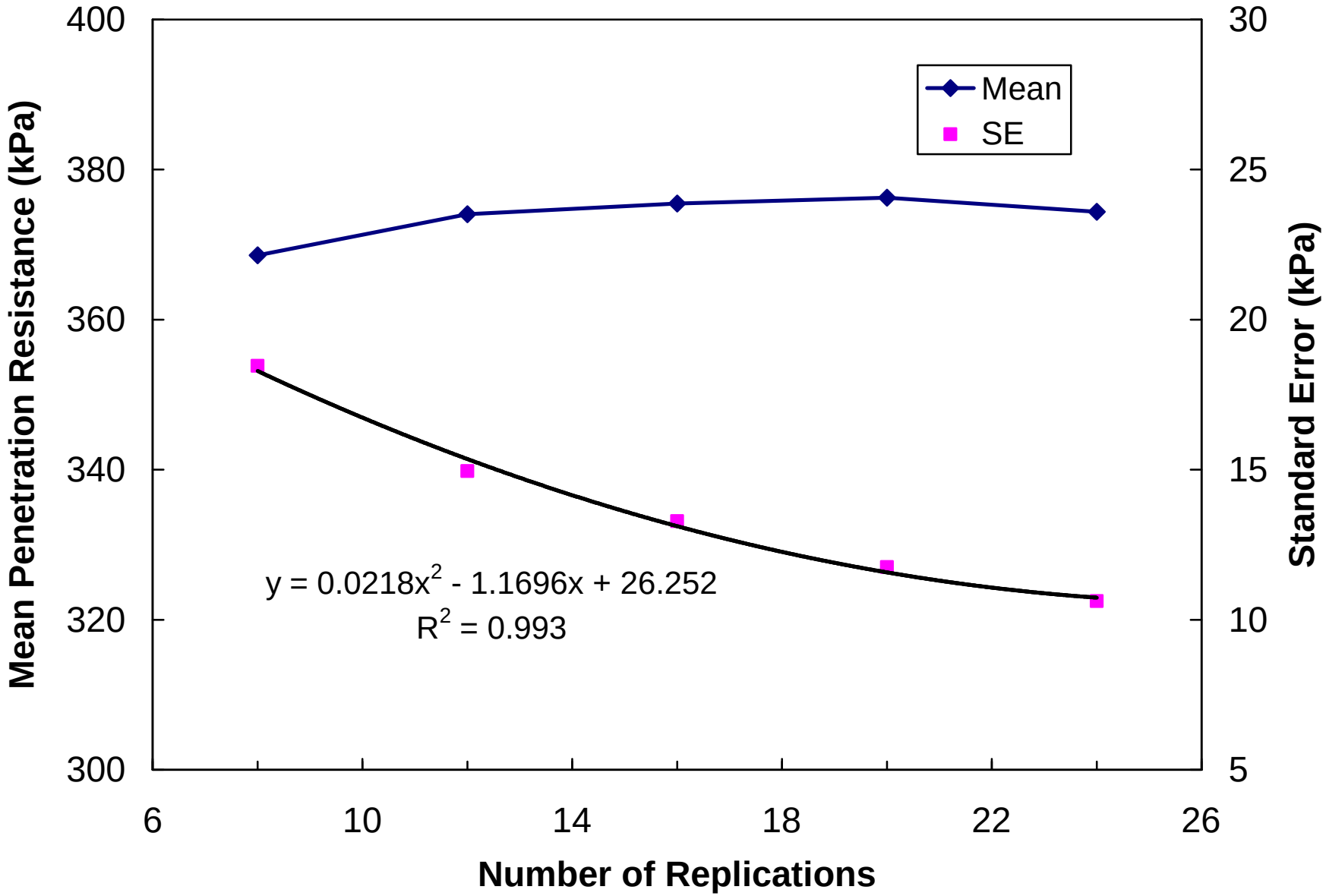


KNO
Barbados

TRE
Jamaica

# *Mean penetration resistance (kPa), standard deviation (SD) and coefficient of variation (COV, %)*



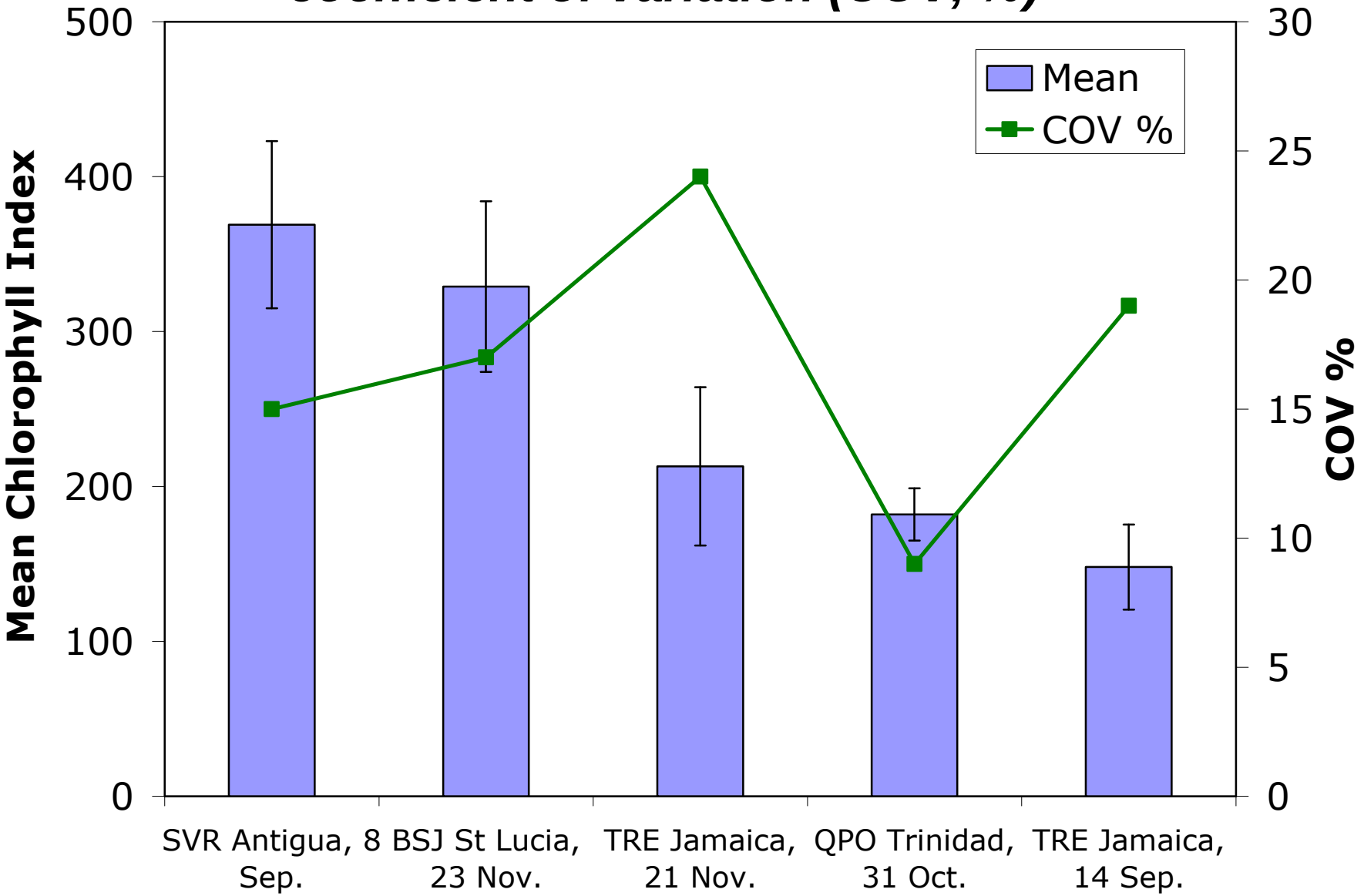

Mean
SE
y = 0.0218x2 - 1.1696x + 26.252
R2 = 0.993
Mean Penetration Resistance (kPa)
Standard Error (kPa)
Number of Replications
400
380
360
340
320
300
30
25
20
15
10
5
6
10
14
18
22
26

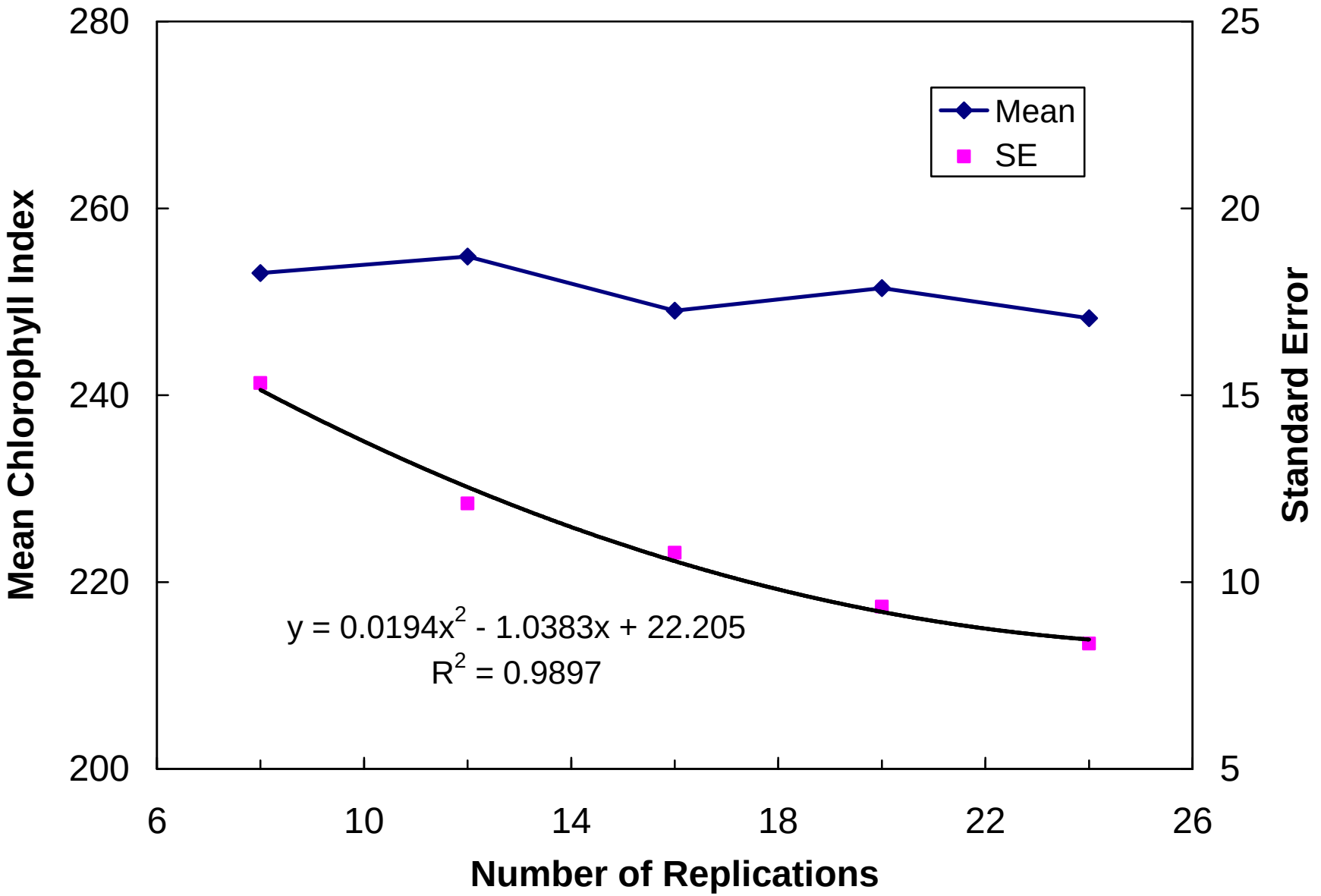
# Chlorophyll Index

## FieldScout CM1000

SVR
Antigua

# *Mean chlorophyll index, standard deviation (SD) and coefficient of variation (COV, %)*

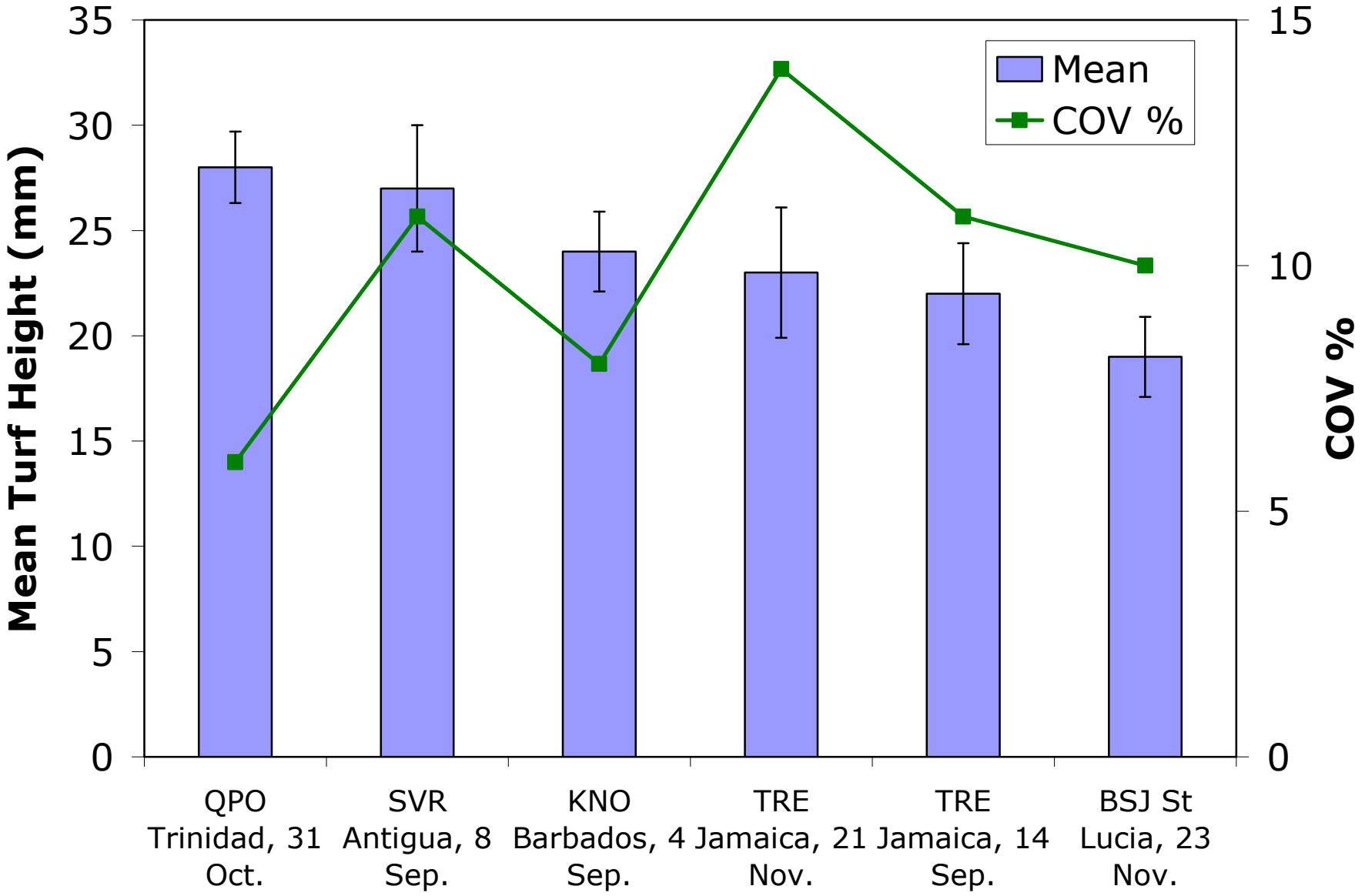


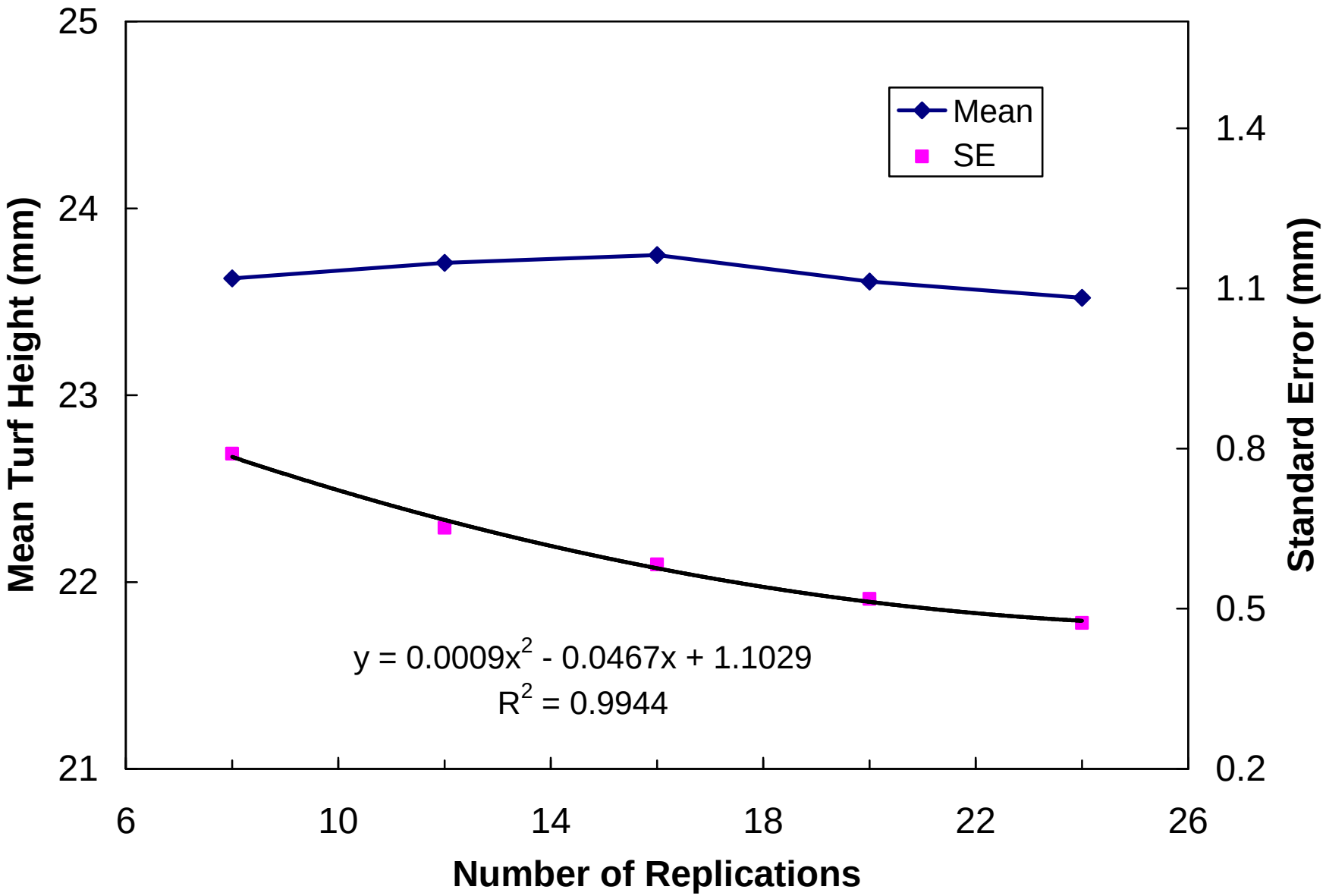

280
260
240
220
200
25
20
15
10
5
6
10
14
18
22
26
Mean
SE
Mean Chlorophyll Index
Standard Error
Number of Replications
y = 0.0194x2 - 1.0383x + 22.205
R2 = 0.9897

# Grass Height

## Rising Disc (NZSTI)

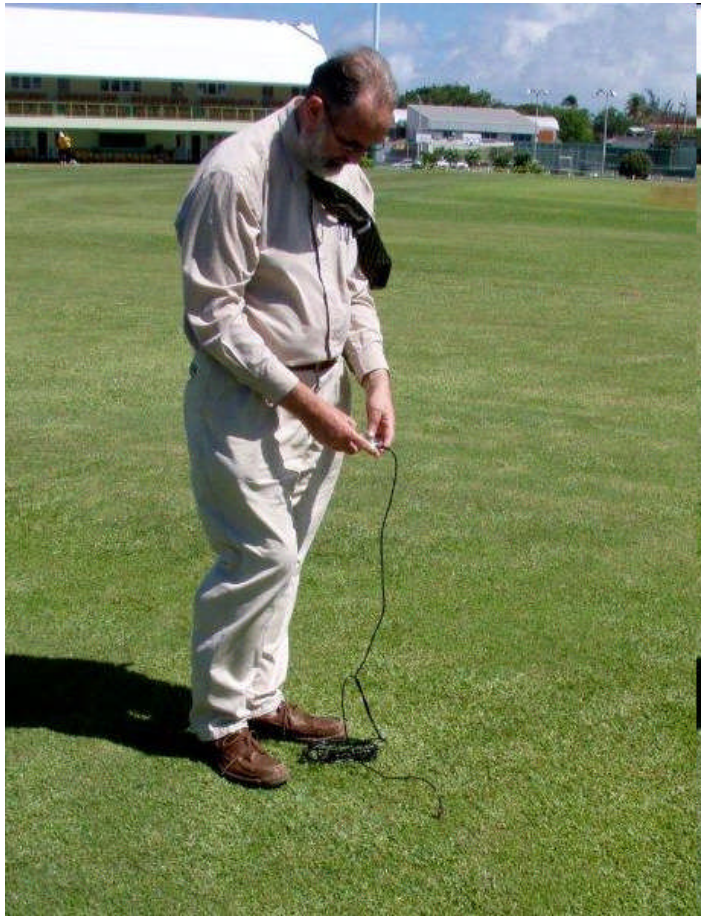
KNO
Barbados


Mean Turf Height (mm)
35
30
25
20
15
10
5
0
15
10
5
0
COV %
Mean
COV %
QPO Trinidad, 31 Oct.
SVR Antigua, 8 Sep.
KNO Barbados, 4 Sep.
TRE Jamaica, 21 Nov.
TRE Jamaica, 14 Sep.
BSJ St Lucia, 23 Nov.

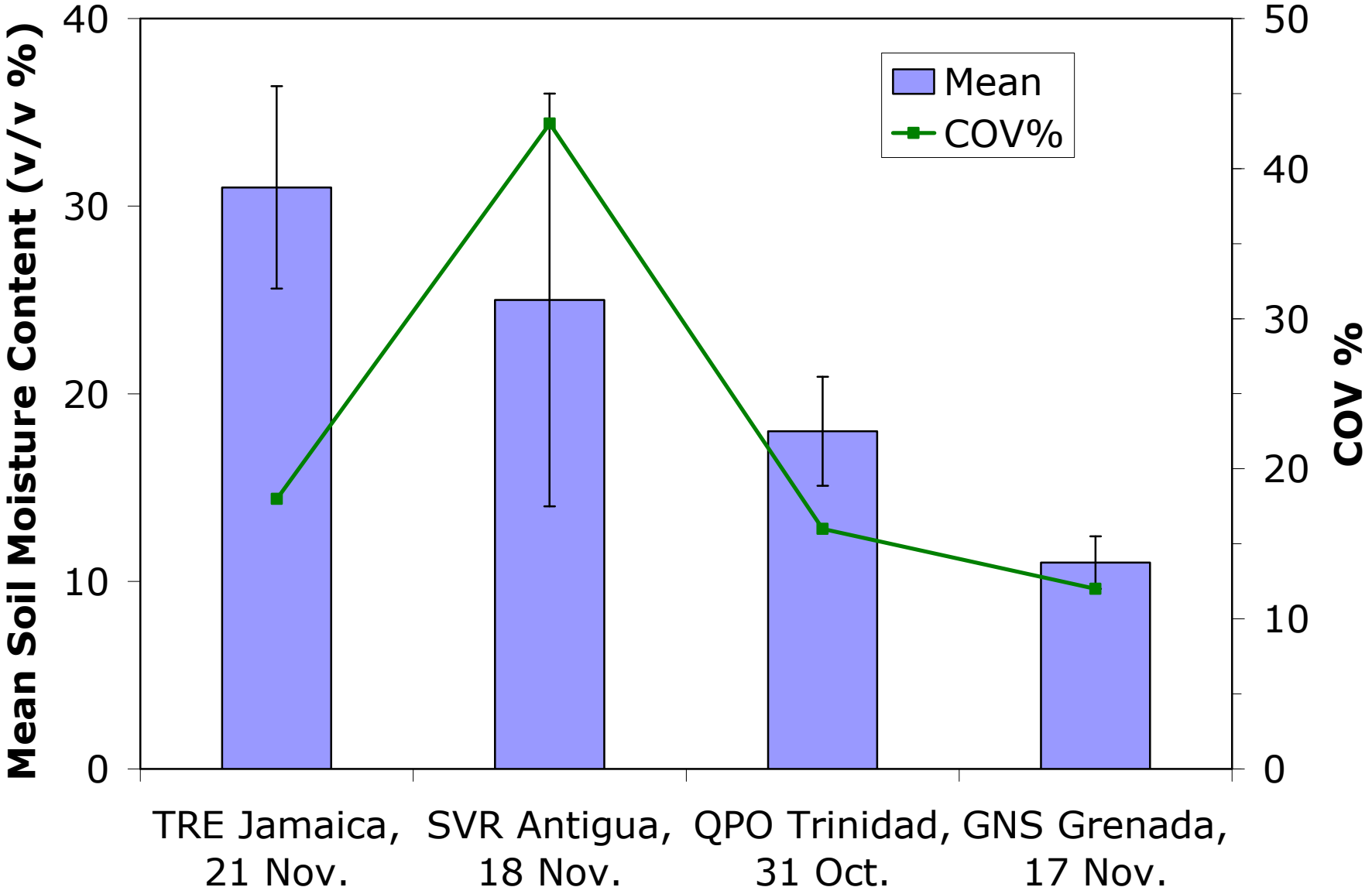

Mean
SE
Mean Turf Height (mm)
Standard Error (mm)
Number of Replications
25
24
23
22
21
1.4
1.1
0.8
0.5
0.2
6
10
14
18
22
26
y = 0.0009x2 - 0.0467x + 1.1029
R2 = 0.9944

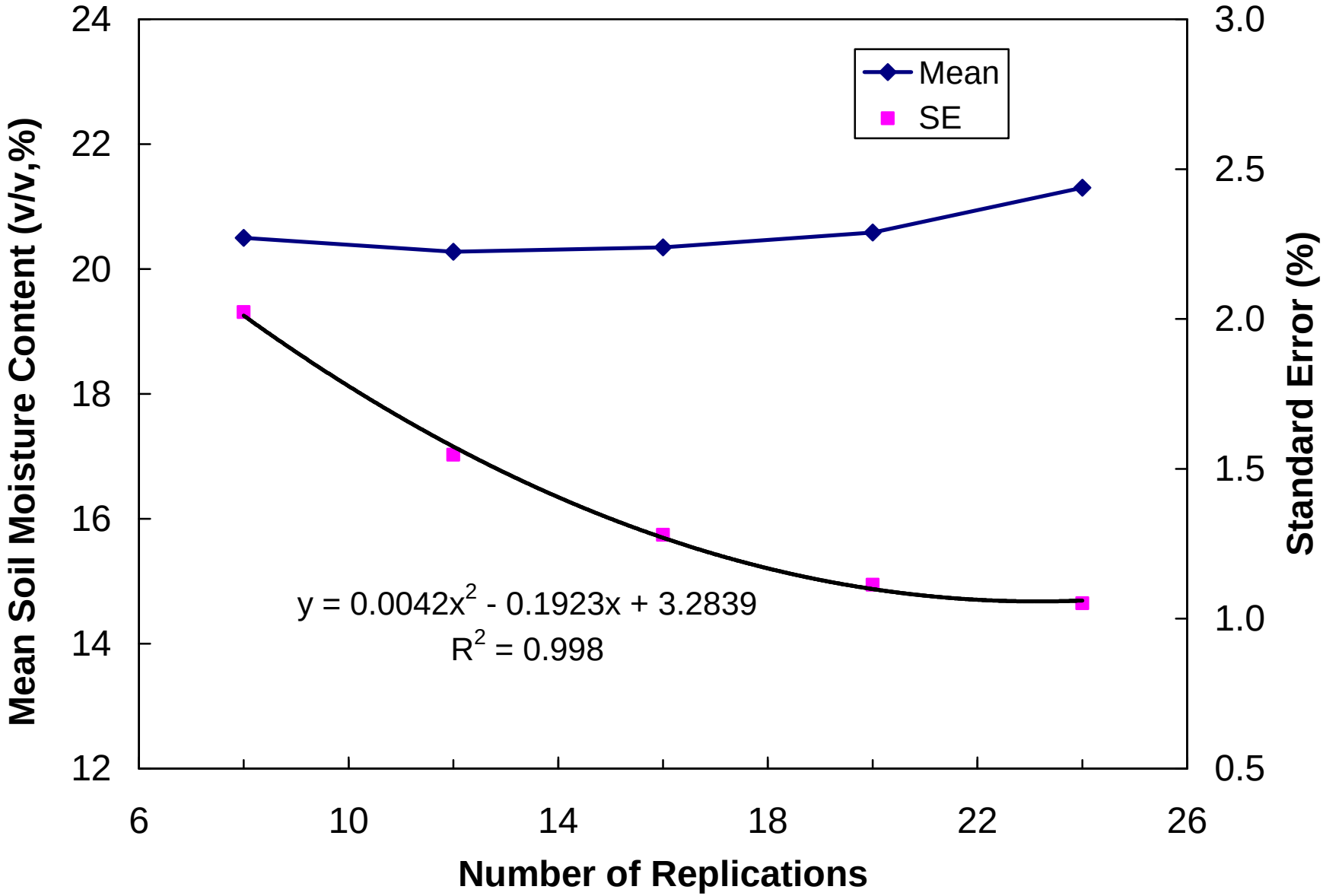
# Soil Moisture Content

EC5, Decagon Devices Inc.



3WS
Barbados


Mean Soil Moisture Content (v/v %)
COV %
Mean
COV%
0
10
20
30
40
50
TRE Jamaica, 21 Nov.
SVR Antigua, 18 Nov.
QPO Trinidad, 31 Oct.
GNS Grenada, 17 Nov.

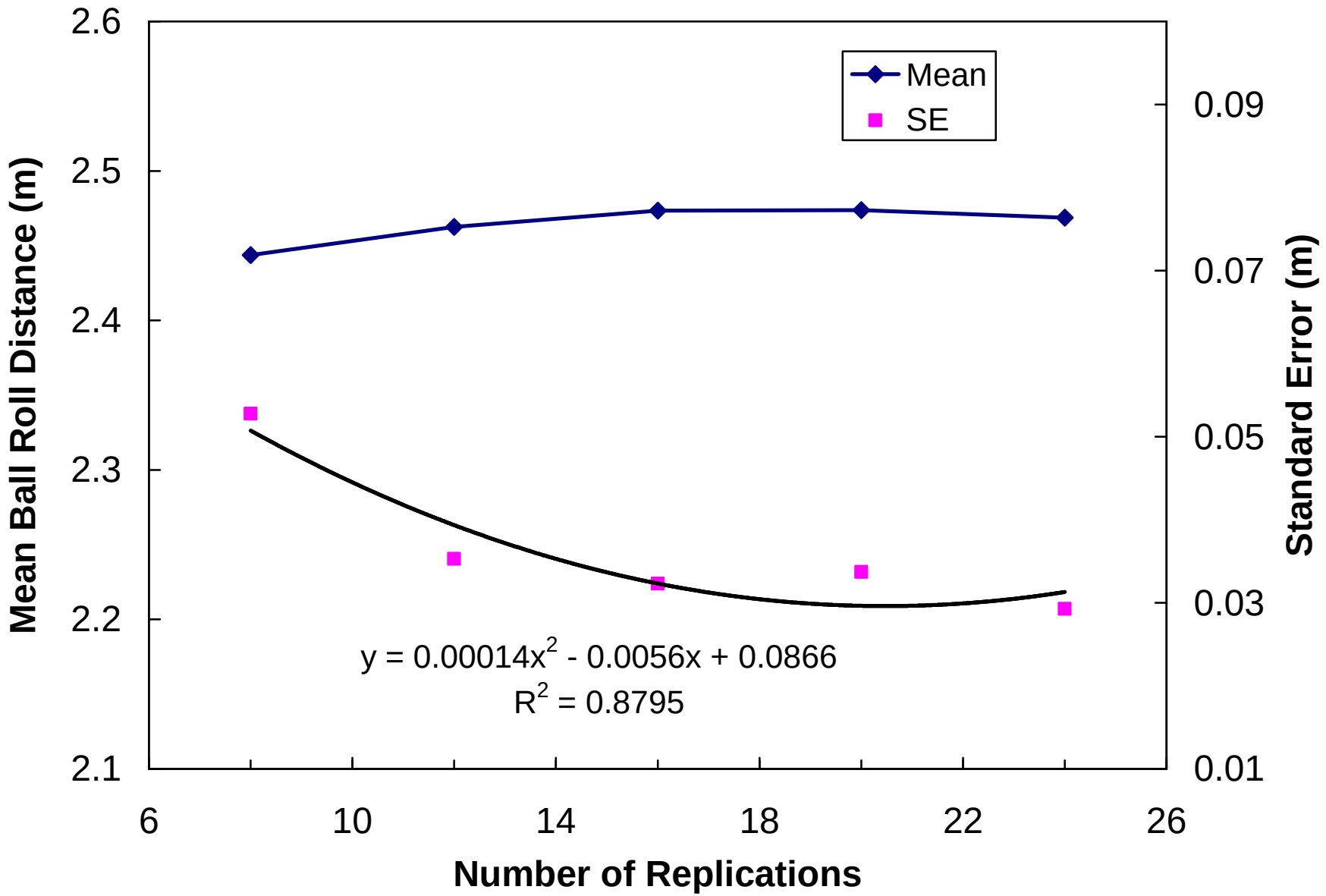

Mean
SE
y = 0.0042x2 - 0.1923x + 3.2839
R2 = 0.998
Mean Soil Moisture Content (v/v,%)
Standard Error (%)
Number of Replications
24
22
20
18
16
14
12
3.0
2.5
2.0
1.5
1.0
0.5
6
10
14
18
22
26

# Ball Roll Distance

## Cricket “Stimpmeter”

SVR
Antigua

3WS
Barbados


Mean
SE
Mean Ball Roll Distance (m)
Standard Error (m)
Number of Replications
2.6
2.5
2.4
2.3
2.2
2.1
0.09
0.07
0.05
0.03
0.01
6
10
14
18
22
26
y = 0.00014x2 - 0.0056x + 0.0866
R2 = 0.8795

# Outfield Soil Moisture (Top 5cm)

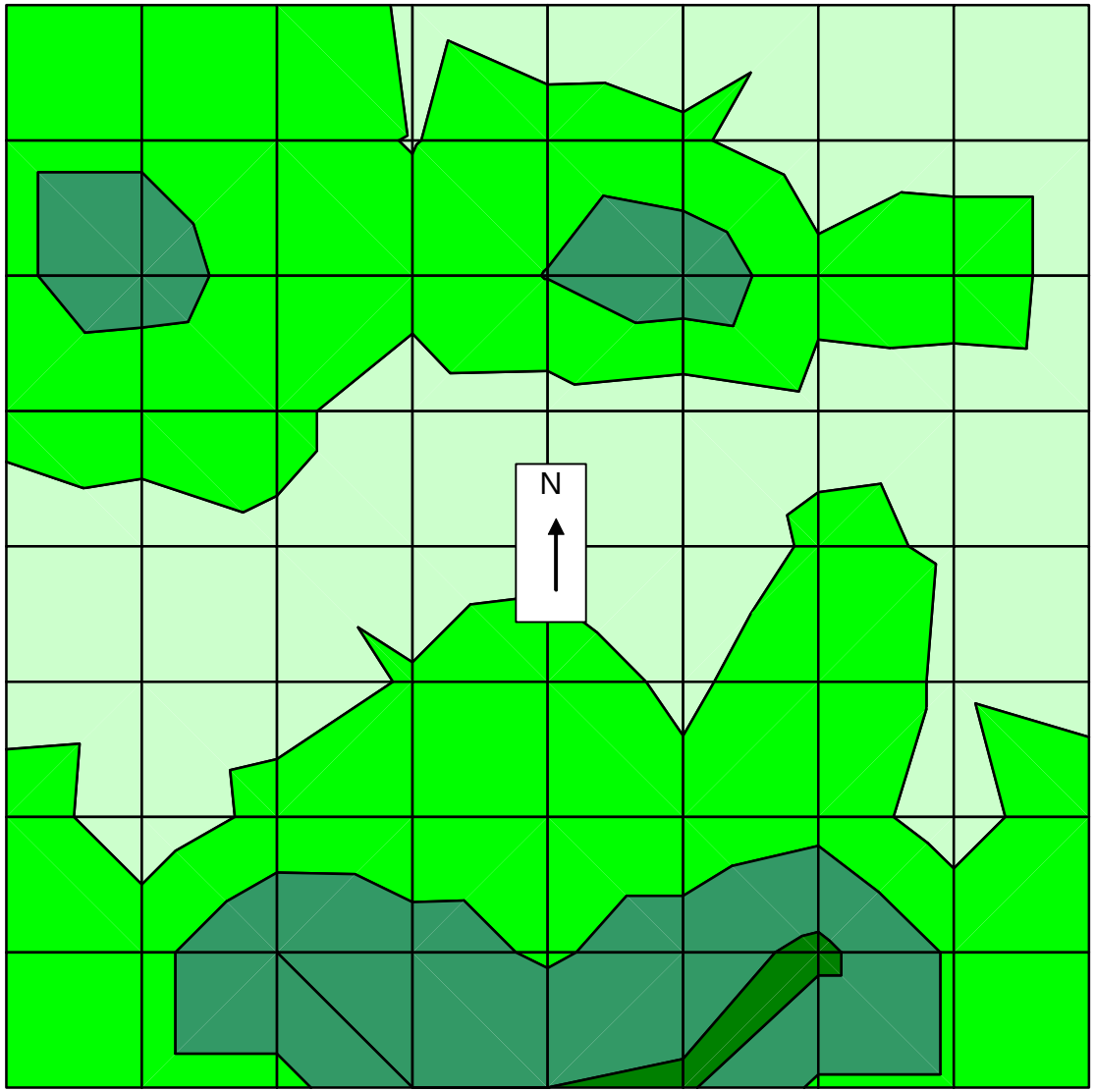
QPO Trinidad, 31 October 2006

Soil Moisture (%)

- 23-26
- 20-23
- 17-20
- 14-17

Mean= 18

COV %= 16



# Cricket Pitch Sampling Locations

North

| | | |
|---|---|---|
| | 1 | 20 |
| | 2 | 19 |
| | 3 | 18 |
| | 4 | 17 |
| West | 5 | 16 |
| | 6 | 15 |
| | 7 | 14 |
| | 8 | 13 |
| | 9 | 12 |
| | 10 | 11 |

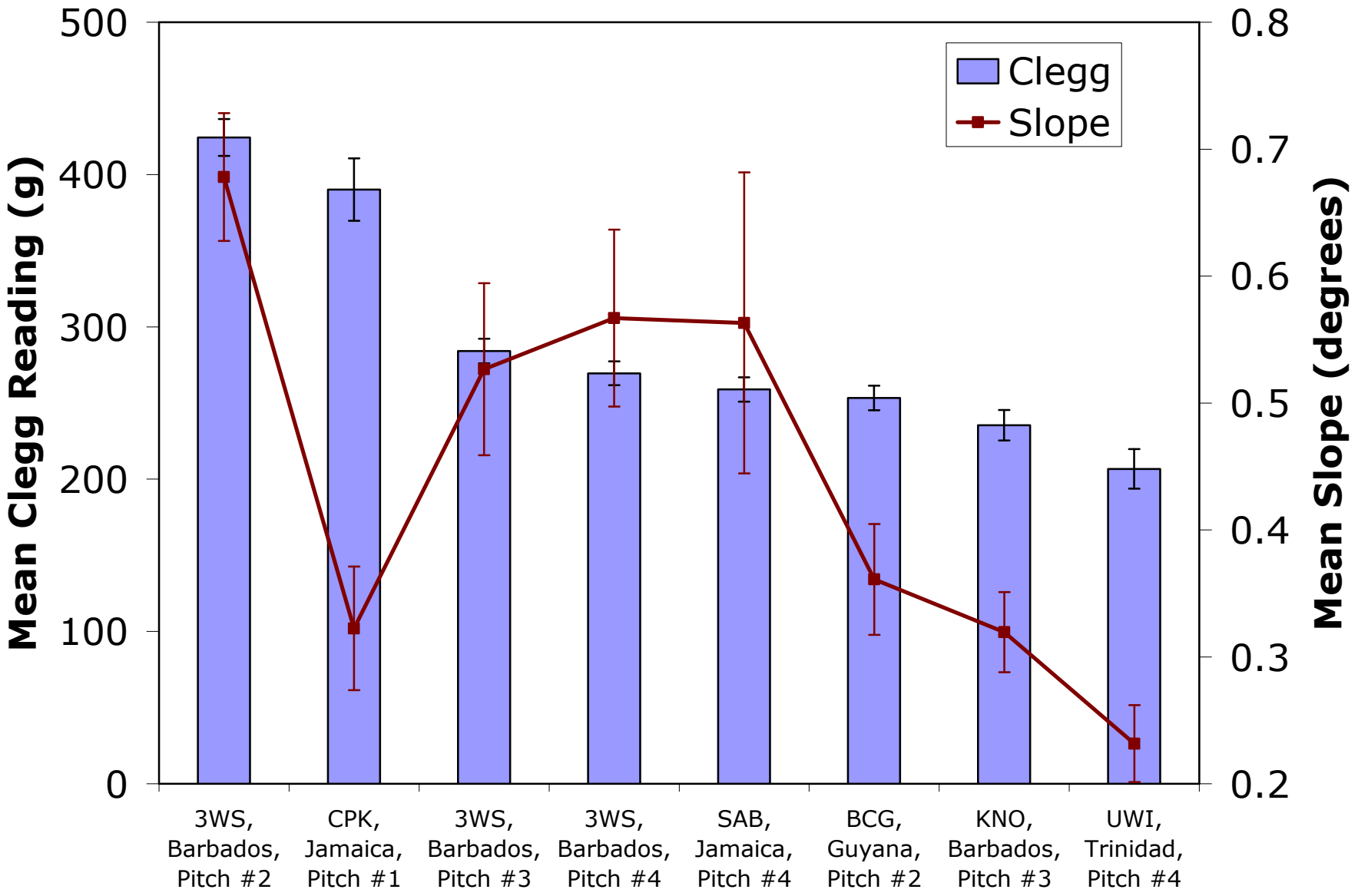
East

South

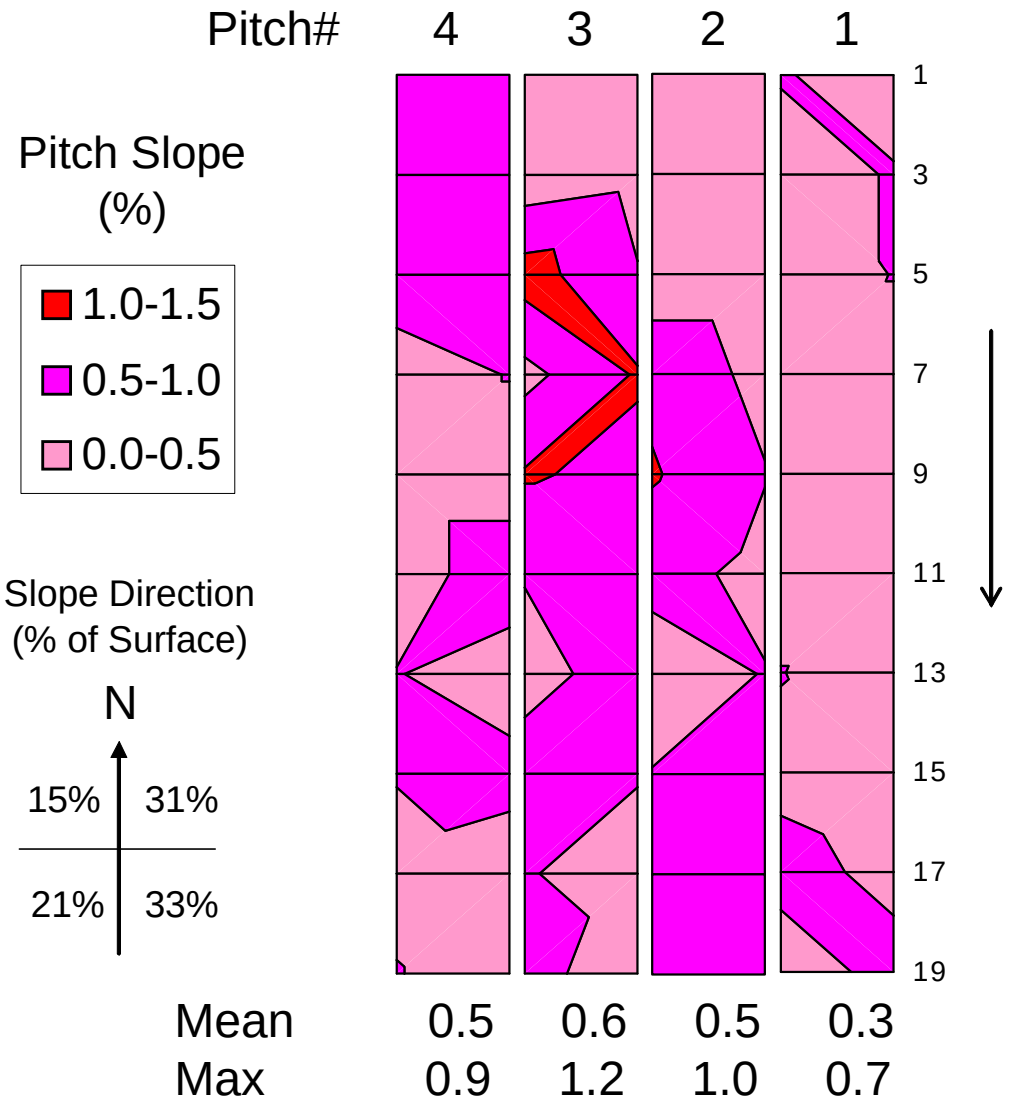
# Surface Hardness

## Clegg Hammer

SVR
Antigua


Clegg
Slope
Mean Clegg Reading (g)
Mean Slope (degrees)
500
400
300
200
100
0
0.8
0.7
0.6
0.5
0.4
0.3
0.2
3WS, Barbados, Pitch #2
CPK, Jamaica, Pitch #1
3WS, Barbados, Pitch #3
3WS, Barbados, Pitch #4
SAB, Jamaica, Pitch #4
BCG, Guyana, Pitch #2
KNO, Barbados, Pitch #3
UWI, Trinidad, Pitch #4

# Slope on the Cricket Square




PRV
Guyana
30 October 2006

# ACKNOWLEDGEMENTS

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