

## Data used in Examples

Sections A and B use photosynthetic rate data adapted from Steele and Torrie (Principles and Procedures of Statistics: A Biometrical Approach, McGraw-Hill Book Co., 1980, page 244). The variables included are:

**1) PHOTO - Photosynthetic rate ( $10^4$ )**

**2) IRRAD - Irradiance**

**3) CO2 - Ambient CO<sub>2</sub> concentration**

**4) RESIST - Leaf resistance to water vapor**

```
data photo;
  input photo irrad co2 resist;
cards;
  348      294      665      990
  131      190      671      968
  402      294      664      1868
  731      550      577      1814
  526      550      577      2521
 1346     2000      576      1516
  655      550      614      1935
  360      550      605      4675
  618      550      605      2234
 1385     2000      545      1158
```

---

1550	2000	502	985
1415	2000	502	1697
1467	2000	521	646
842	800	536	1086
927	800	536	998
1099	1200	556	911
1086	1200	570	765
910	1200	547	1284
1055	1600	582	915
937	1600	553	1410
349	400	576	4111
498	400	568	1802
989	800	557	801
829	800	557	983

;

The data used in section C is adapted from Allen and Cady (Analyzing Experimental Data by Regression, Lifetime Learning Pub., 1982, page 234). This data involves plant height and yields of soybeans grown under 3 different conditions: Check - ambient light, Lighted - additional light, and Shaded - partial shading. The variables are as follows:

- 1) YIELD - Seed yield in grams**
- 2) HEIGHT - Height of harvested plants in centimeters**
- 3) TRT - Class variable with 3 categories 1=Check, 2=Lighted, 3=Shaded.**

```
data soy;
  input yield height trt;
  cards;
12.2    48  1
12.4    52  1
11.9    42  1
11.3    35  1
11.8    40  1
12.1    48  1
13.1    60  1
12.7    61  1
12.4    50  1
11.4    33  1
12.3    48  1
12.2    51  1
12.6    56  1
13.2    65  1
12.3    51  1
16.6    63  2
15.8    50  2
16.5    63  2
15.0    33  2
15.4    38  2
15.6    45  2
15.8    50  2
15.8    48  2
16.0    50  2
15.0    35  2
16.2    50  2
16.7    62  2
15.8    49  2
15.9    52  2
9.5     52  3
9.5     54  3
9.6     58  3
8.8     45  3
9.5     57  3
9.8     62  3
9.1     52  3
10.3    67  3
9.5     55  3
8.5     40  3
8.6     41  3
10.4    67  3
9.4     55  3
10.2    66  3
9.3     56  3
;
```