CLOUD SEEDING EXPERIMENT

5. Describing Seeded and Unseeded Rainfalls

We will describe the data by obtaining the basic measures of center, spread, and shape for the distributions of rainfalls for unseeded and seeded days. The hyperlinks in this part lead directly to the corresponding SPSS commands and dialog boxes used to obtain the graphical displays.

The *Explor e* command in SPSS produces the summary statistics for both distributions. The outputs are displayed in Section 10 (click here to view it). For your convenience, we summarized the outputs in the form of the following table:

	STATISTICS	RAINFALLS	
		UNSEEDED	SEEDED
MEASURES OF CENTER	MEAN	164.5885	441.9846
	MEDIAN	44.2000	221.6000
	5% TRIMMED MEAN	120.7350	351.7201
	95% CI FOR MEAN	(52.1296, 277.0473)	(179.1260, 704.8433)
MEASURES OF SPREAD	STANDARD DEV.	278.4264	650.7872
	STANDARD ERROR	54.6039	127.6299
	VARIANCE	77521.26	423524.0
	IQR	159.6000	365.3250
	MINIMUM	1.0000	4.1000
	MAXIMUM	1202.600	2745.600
	RANGE	1201.600	2741.500
MEASURES OF SHAPE	SKEWNESS	2.7892	2.4352
	ST. ERROR SKEWNESS	0.4556	0.4556
	KURTOSIS	8.1731	6.0084
	ST. ERROR KURTOSIS	0.8865	0.8865
COUNT		26	26

The above numerical results confirm our conclusions reached in the previous section about the graphical displays for the data. All displayed measures of center indicate that the typical rainfall on the seeded days exceeds significantly the rainfall on the unseeded days. The measures of spread show that the spread of rainfall amounts is much larger on the seeded days. The distribution of rainfall amounts is more skewed on the unseeded days.