

Table 21. Analysis of Variance of Cameras, F Stops, Day, and Target Block for Film 2443 in the August Run Using Photographic Density as Measured by the MacBeth Densitometer Green Filter in a Controlled Experiment

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Squares	F Test
Camera (C)	5.10	3	2.00	66.67*
F Stop (S)	31.96	2	15.98	532.87*
C x S	1.37	6	0.23	7.59*
Days (T)	22.94	1	22.94	764.78*
C x T	4.49	3	1.50	49.94*
S x T	0.25	2	0.12	4.10
C x S x T	1.55	6	0.26	8.60*
Target Block (B)	65.31	3	21.77	725.95*
C x B	0.96	9	0.11	3.56
S x B	3.97	6	0.66	22.04*
C x S x B	0.63	18	0.04	1.17
T x B	3.64	3	1.21	40.47*
C x T x B	0.61	9	0.07	2.25
S x T x B	2.39	6	0.40	13.29*
C x S x T x B	0.54	18	0.03	63.43*
Sampling Error	0.05	96	0.00	
Total	146.65	191		

* Significant at the .01 level of probability.

Table 22. Analysis of Variance of Cameras, F Stops, Day, and Target Block for Film 2443 in the August Run Using Photographic Density as Measured by the MacBeth Densitometer Blue Filter in a Controlled Experiment

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Squares	F Test
Camera (C)	4.33	3	1.44	26.95*
F Stop (S)	30.61	2	15.31	285.44*
C x S	1.91	6	0.32	5.93*
Days (T)	15.44	1	15.44	287.88*
C x T	3.27	3	1.09	20.32*
S x T	2.62	2	1.31	24.40*
C x S x T	2.10	6	0.35	6.52*
Target Block (B)	39.59	3	13.20	246.10*
C x B	2.07	9	0.23	4.29*
S x B	10.22	6	1.70	31.78*
C x S x B	1.15	18	0.06	1.20
T x B	5.91	3	1.97	36.76*
C x T x B	1.23	9	0.14	2.55
S x T x B	1.00	6	0.17	3.11
C x S x T x B	0.97	18	0.05	106.11*
Sampling Error	0.05	96	0.00	
Total	122.46	191		

* Significant at the .01 level of probability.

Table 23. Estimated Correlation Coefficients Between Photographic Densities Digitized by a MacBeth Densitometer Film Taken in August on Clear Day Versus Cloudy Day.

Film 2443*		Clear Day				Cloudy Day			
Band of Light	Densitometer Filter	Total	IR	Red	Green	Total	IR	Red	Green
		Neutral	Red	Green	Blue	Neutral	Red	Green	Blue
Clear Day	- Total	1	.96	.97	.77	.74	.62	.76	.54
	- IR		1	.87	.78	.74	.66	.71	.55
	- Red			1	.75	.74	.58	.79	.54
	- Green				1	.61	.57	.59	.72
Cloudy Day	- Total					1	.97	.97	.79
	- IR						1	.89	.83
	- Red							1	.77
	- Green								1

Film 2448*		Total	Red	Green	Blue	Total	Red	Green	Blue
Band of Light	Densitometer Filter	Neutral	Red	Green	Blue	Neutral	Red	Green	Blue
		Clear Day	- Total	1	.92	.89	.78	.91	.86
- Red			1	.64	.52	.85	.94	.62	.49
- Green				1	.93	.80	.61	.91	.87
- Blue					1	.75	.54	.89	.94
Cloudy Day	- Total					1	.93	.91	.82
	- Red						1	.72	.60
	- Green							1	.96
	- Blue								1

*All values significantly different than zero at the .01 level of probability.

Table 24. Correlations Between Light Bands as Measured by MacBeth Spot Photographic Densities on Various Films and Concurrent Solameter Readings Computed on a Within Subclass Basis for Days, F Stops, Target Block, and Cameras for August Control Experiment

Film	Measured Band of Light	Solameter Readings							
		Total Incident	Green Incident	Red Incident	IR Incident	Total Reflected	Green Reflected	Red Reflected	IR Reflected
2402	Red	0.74	0.70	0.61	0.65	0.66	0.11*	0.85	0.85
2424	Infrared	0.70	0.71	0.62	0.66	0.63	0.08*	0.78	0.79
2443	Total	-0.69	-0.64	-0.54	-0.58	-0.59	-0.14*	-0.77	-0.80
2443	Infrared	-0.31	-0.29	-0.23*	-0.25	-0.21*	-0.13*	-0.33	-0.35
2443	Red	-0.27	-0.24	-0.20*	-0.21*	-0.19*	-0.13*	-0.28	-0.29
2443	Green	-0.21*	-0.18*	-0.14*	-0.16	-0.13*	-0.13*	-0.21*	-0.23*
2448	Total	-0.71	-0.71	-0.59	-0.64	-0.65	-0.02*	-0.84	-0.86
2448	Red	-0.69	-0.70	-0.58	-0.62	-0.64	-0.05*	-0.82	-0.84
2448	Green	-0.72	-0.72	-0.59	-0.64	-0.66	-0.09*	-0.85	-0.85
2448	Blue	-0.72	-0.72	-0.60	-0.65	-0.66	-0.02*	-0.84	-0.85

* Not significantly different from zero at .01 level of probability.

Table 25. Estimated Correlation Coefficients of Photographic Densities of Two Color Films Taken With a MacBeth Densitometer Between August and May Clear Days

Film 2443 Density		May				August			
Reflected Light	Densitometer Filter	Total	IR	Red	Green	Total	IR	Red	Green
		Neutral	Red	Green	Blue	Neutral	Red	Green	Blue
May - Total	Neutral	1	.76	.97	.94	.53	.54	.45	.37
- IR	Red		1	.86	.80	.45	.50	.36	.35
- Red	Green			1	.95	.48	.49	.40	.34
- Green	Blue				1	.40	.46	.31	.40
Aug - Total	Neutral					1	.96	.97	.77
- IR	Red						1	.87	.78
- Red	Green							1	.75
- Green	Blue								1

Film 2448 Density		Total	Red	Green	Blue	Total	Red	Green	Blue
Reflected Light	Densitometer Filter	Neutral	Red	Green	Blue	Neutral	Red	Green	Blue
		Neutral	Red	Green	Blue	Neutral	Red	Green	Blue
May - Total	Neutral	1	.91	.84	.68	.74	.61	.73	.50
- Red	Red		1	.56	.37	.79	.81	.60	.38
- Green	Green			1	.95	.49	.20*	.72	.56
- Blue	Blue				1	.40	.74	.70	.65
Aug - Total	Neutral					1	.92	.89	.78
- Red	Red						1	.64	.52
- Green	Green							1	.93
- Blue	Blue								1

* This value not significantly different from zero at the .01 level. All other values are significantly different from zero.

Table 26. Multiple Linear Regression of August Cloudy Day Photographic Densities and Solameter Readings on August Clear Day Photographic Densities to Produce Correction Coefficients for the Total Band of Light as Digitized from Film 2443 by the Neutral Densitometer Filter

Variable	Mean	Standard Deviation	Correlation X VS Y	Regression Coefficient	Std. Error of Reg. Coef.
Independent					
Cloudy Densities Neutral	2.25499	0.78229	0.74867	0.71513	0.09539
Incoming Solameter Total	0.59093	0.20488	-0.26648	0.24630	0.34055
Reflected Solameter Total	0.18583	0.04732	-0.34040	-2.00507	0.95191
Dependent					
Clear Densities Neutral	1.40083	0.76552			
Intercept		0.01528			
Multiple Correlation Squared		0.57175			

Analysis of Variance

	Degrees of Freedom	Sum of Squares	Mean Squares	F Value
Attributable to Regression	3	31.83046	10.61015	40.94213*
Deviation from Regression	92	23.84153	0.25915	
Total	95	55.67198		

* Significant at the .01 level of probability.

Table 27. Multiple Linear Regression of August Cloudy Day Photographic Densities and Solameter Readings on August Clear Day Photographic Densities to Produce Correction Coefficients for the Infrared Band of Light as Digitized from Film 2443 by the Red Densitometer Filter

Variable	Mean	Standard Deviation	Correction X VS Y	Regression Coefficient	Std. Error of Reg. Coef.
Independent					
Cloudy Densities Red	2.08697	0.68721	0.66372	0.64450	0.12905
Incoming Solameter Infrared	0.45437	0.12183	-0.26369	-0.21116	0.44583
Reflected Solameter Infrared	0.01729	0.00900	0.14433	-4.88840	0.92908
Dependent					
Clear Densities Red	1.26593	0.66080			
Intercept		0.10136			
Multiple Correlation Squared		0.44552			
Analysis of Variance					
	Degrees of Freedom	Sum of Squares	Mean Squares	F Value	
Attributable to Regression	3	18.85621	6.28540	24.64040*	
Deviation from Regression	92	23.46783	0.25509		
	95	42.43404			

*. Significant at the .01 level of probability.

Table 28. Multiple Linear Regression of August Cloudy Day Photographic Densities and Solameter Readings on August Clear Day Photographic Densities to Produce Correction Coefficients for the Red Band of Light as Digitized from Film 2443 by the Green Densitometer Filter

Variable	Mean	Standard Deviation	Correction X VS Y	Regression Coefficient	Std. Error of Reg. Coef.
Independent					
Cloudy Densities Green	2.31572	0.74407	0.79083	0.99312	0.09978
Incoming Solameter Red	0.53479	0.19899	-0.21746	0.60749	0.30268
Reflected Solameter Red	0.02562	0.01168	-0.02377	2.95924	1.03017
Dependent					
Clear Densities Green	1.62447	0.86521			
Intercept		-1.07604			
Multiple Correlation Squared		0.64410			
Analysis of Variance					
	Degrees of Freedom	Sum of Squares	Mean Squares	F Value	
Attributable to Regression	3	39.41247	13.13749	55.50036*	
Deviation from Regression	92	21.77727	0.23671		
Total	95	61.18974			

* Significant at the .01 level of probability.

Table 29. Multiple Linear Regression of August Cloudy Day Photographic Densities and Solameter Readings on August Clear Day Photographic Densities to Produce Correction Coefficients for the Green Band of Light as Digitized from Film 2443 by the Blue Densitometer Filter

Variable	Mean	Standard Deviation	Correction X VS Y	Regression Coefficient	Std. Error of Reg. Coef.
Independent					
Cloudy Densities Blue	2.96268	0.61553	0.71989	1.13211	0.11715
Incoming Solameter Green	0.31989	0.19568	-0.06602	1.05821	1.11601
Reflected Solameter Green	0.02458	0.01549	-0.16128	-2.10773	603.60669
Dependent					
Clear Densities Blue	2.39562	0.86471			
Intercept		-1.24516			
Multiple Correlation Squared		0.57042			
Analysis of Variance					
	Degrees of Freedom	Sum of Squares	Mean Squares	F Value	
Attributable to Regression	3	30.91075	10.30358	40.72080 *	
Deviation from Regression	92	23.27893	0.25303		
Total	95				

* Significant at the .01 level of probability.

Table 30. Analysis of Variance of Cameras, F Stops, Day, and Target Block for Film 2443 in the August Run Using Photographic Density as Measured by the MacBeth Densitometer Neutral Filter in a Controlled Experiment With Cloudy Day Densities Corrected By Regressing Concomitant Readings on Clear Day Densities

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F Test
Camera (C)	5.25	3	1.75	156.91*
F Stop (S)	36.13	2	18.06	1618.75*
C x S	1.82	6	0.30	27.23*
Days (T)	0.00	1	0.00	0.00
C x T	3.81	3	1.27	113.78*
S x T	1.66	2	0.83	74.42*
C x S x T	1.20	6	0.20	17.92*
Target Block (B)	31.10	3	10.37	928.87*
C x B	0.16	9	0.02	1.63
S x B	0.76	6	0.13	11.38*
C x S x B	0.29	18	0.16	1.42
T x B	3.53	3	1.18	105.35*
C x T x B	0.09	9	0.01	0.93
S x T x B	1.50	6	0.25	22.39*
C x S x T x B	0.20	18	0.01	482.82*
Sampling Error	0.00	96	0.00	
Total	87.51	191		

* All values significantly different than zero at the .01 level of probability.

Table 31. Analysis of Variance of Cameras, F Stops, Day, and Target Block for Film 2443 in the August Run Using Photographic Density as Measured by the MacBeth Densitometer Red Filter in a Controlled Experiment With Cloudy Day Densities Corrected By Regressing Concomitant Readings on Clear Day Densities

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F Test
Camera (C)	3.26	3	1.09	172.38*
F Stop (S)	32.68	2	16.34	2589.19*
C x S	1.59	6	0.26	41.99*
Days (T)	0.00	1	0.00	0.00
C x T	2.98	3	0.99	157.31*
S x T	3.51	2	1.76	278.23*
C x S x T	1.98	6	0.33	52.41*
Target Block (B)	10.35	3	3.45	546.56*
C x B	0.08	9	0.09	1.47
S x B	0.21	6	0.35	5.50*
C x S x B	0.16	18	0.01	1.39
T x B	2.11	3	0.70	111.31*
C x T x B	0.04	9	0.00	0.00
S x T x B	0.65	6	0.11	17.28*
C x S x T x B	0.11	18	0.01	2.39*
Sampling Error	0.25	96	0.00	
Total	59.96	191		

* All values significantly different than zero at the .01 level of probability.

Table 32. Analysis of Variance of Cameras, F Stops, Day, and Target Block for Film 2443 in the August Run Using Photographic Density as Measured by the MacBeth Densitometer Green Filter in a Controlled Experiment With Cloudy Day Densities Corrected By Regressing Concomitant Solameter Readings on Clear Day Densities

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F Test
Camera (C)	3.90	3	1.30	42.94*
F Stop (S)	27.94	2	13.97	461.73*
C x S	2.06	6	0.34	11.37*
Days (T)	0.00	1	0.00	0.00
C x T	2.61	3	0.87	28.70*
S x T	0.83	2	0.42	13.79*
C x S x T	1.76	6	0.29	9.70*
Target Block (B)	64.63	3	21.54	711.89*
C x B	0.96	9	0.11	3.52
S x B	4.04	6	0.67	22.28*
C x S x B	0.62	18	0.34	1.13
T x B	3.83	3	1.27	42.13*
C x T x B	0.60	9	0.07	2.21
S x T x B	2.37	6	0.39	13.05*
C x S x T x B	0.55	18	0.30	432.28*
Sampling Error	0.01	96	0.00	
Total	116.92	191		

* All values significantly different than zero at the .01 level of probability.

Table 33. Analysis of Variance of Cameras, F Stops, Day, and Target Block for Film 2443 in the August Run Using Photographic Density as Measured by the MacBeth Densitometer Blue Filter in a Controlled Experiment With Cloudy Day Densities Corrected By Regressing Concomitant Solameter Readings on Clear Day Densities

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F Test
Camera (C)	2.68	3	0.89	13.22*
F Stop (S)	33.30	2	16.65	246.02*
C x S	2.00	6	0.33	4.94*
Days (T)	0.00	1	0.00	0.00
C x T	2.53	3	0.84	12.45*
S x T	1.91	2	0.95	14.11*
C x S x T	2.00	6	0.33	4.92*
Target Block (B)	42.63	3	14.21	209.98*
C x B	2.55	9	0.28	4.18*
S x B	11.55	6	1.92	28.45*
C x S x B	1.43	18	0.08	1.17
T x B	4.87	3	1.62	23.97*
C x T x B	1.61	9	0.18	2.64
S x T x B	0.97	6	0.16	2.38*
C x S x T x B	1.22	18	0.07	690.74*
Sampling Error	0.01	96	0.00	
Total	111.55	191		

* All values significantly different than zero at the .01 level of probability.

Table 34. Analysis of Variance for Data From the Neutral Densitometer Filter From the MacBeth Densitometer for Film 2443 for Altitudes, Dates, Fields, and Plots Within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	0**	1	0	0
Dates (T)	78.38	8	9.80	523.96*
A x T	5.89	8	0.74	47.50*
Fields (F)	0.56	3	0.19	3.76
A x F	0.44	3	0.14	4.42*
T x F	5.91	24	0.25	13.16*
A x T x F	4.81	24	0.20	12.92*
Plots/Fields (P/F)	2.18	44	0.05	3.20*
A x P/F	1.44	44	0.03	2.12*
T x P/F	6.60	352	0.02	1.21
A x T x P/F	5.46	352	0.02	

* Significant at .01 level of probability

** Less than .5

Table 35. Analysis of Variance for Data From the Red Densitometer
Filter From the MacBeth Densitometer for Film 2443 for
Altitudes, Dates, Fields, and Plots Within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	0.30	1	0.30	12.76*
Dates (T)	180.50	8	22.56	1239.70*
A x T	7.03	8	0.88	58.61*
Fields (F)	0.98	3	0.33	7.10*
A x F	0.20	3	0.07	2.73
T x F	6.39	24	0.27	14.62*
A x T x F	4.10	24	0.17	11.38*
Plots/Fields (P/F)	2.03	44	0.05	3.07*
A x P/F	1.44	44	0.02	1.59*
T x P/F	6.41	352	0.02	1.21
A x T x P/F	5.30	352	0.02	

* Significant at .01 level of probability

Table 36. Analysis of Variance for Data From the Green Densitometer Filter From the MacBeth Densitometer for Film 2443 for Altitudes, Dates, Fields, and Plots Within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	3.64	1	3.64	88.44*
Dates (T)	50.06	8	6.26	247.35*
A x T	6.39	8	0.80	43.88*
Fields (F)	0.93	3	0.31	3.55
A x F	0.82	3	0.31	3.55
T x F	8.45	24	0.35	13.91*
A x T x F	5.99	24	0.25	13.72*
Plots/Fields (P/F)	3.84	44	0.09	4.80*
A x P/F	1.82	44	0.04	2.26*
T x P/F	8.91	352	0.03	1.39*
A x T x P/F	6.41	352	0.02	

* Significant at .01 level of probability

Table 37. Analysis of Variance for Data From the Blue Densitometer Filter From the MacBeth Densitometer for Film 2443 for Altitudes, Dates, Fields, and Plots within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	4.76	1	4.76	48.21*
Dates (T)	55.04	8	6.88	138.99*
A x T	11.23	8	1.40	35.62*
Fields (F)	2.51	3	0.84	6.10*
A x F	1.94	3	0.65	6.55*
T x F	15.90	24	0.66	13.38*
A x T x F	14.06	24	0.59	14.87*
Plots/Fields (P/F)	6.04	44	0.14	3.48*
A x P/F	4.34	44	0.10	2.51*
T x P/F	17.45	352	0.05	1.26
A x T x P/F	13.89	352	0.04	

* Significant at .01 level of probability

Table 38. Analysis of Variance for Data From the Neutral Densitometer Filter From the MacBeth Densitometer for Film 2402 for Altitudes, Dates, Fields, and Plots Within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	3.66	1	3.66	131.35*
Dates (T)	36.55	8	4.57	283.80*
A x T	1.83	8	0.23	27.94*
Fields (F)	0.89	3	0.30	4.23
A x F	0.52	3	0.17	6.15*
T x F	6.24	24	0.26	16.14*
A x T x F	3.32	24	0.14	16.87*
Plots/Fields (P/F)	3.09	44	0.07	8.57*
A x P/F	1.23	44	0.03	3.40*
T x P/F	5.90	352	0.02	1.96*
A x T x P/F	2.90	352	0.01	

* Significant at .01 level of probability

Table 39. Analysis of Variance for Data From the Neutral Densitometer Filter From the MacBeth Densitometer for Film 2424 for Altitudes, Dates, Fields, and Plots Within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	1.04	1	1.04	45.09*
Dates (T)	32.68	8	4.09	575.39*
A x T	1.19	8	0.15	30.98*
Fields (F)	0.82	3	0.27	11.12*
A x F	0.22	3	0.07	3.13
T x F	2.74	24	0.11	16.04*
A x T x F	1.28	24	0.53	11.08*
Plots/Fields (P/F)	1.09	44	0.02	5.15*
A x P/F	1.02	44	0.23	4.81*
T x P/F	2.80	352	0.01	1.48*
A x T x P/F	1.72	352	0.00	

* Significant at .01 level of probability

Table 40. Analysis of Variance for Data From the Neutral Densitometer Filter From the MacBeth Densitometer for Film 2448 for Altitudes, Dates, Fields, and Plots Within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	1.80	1	1.80	146.67*
Dates (T)	200.86	8	25.11	2324.79*
A x T	3.10	8	0.39	53.01*
Fields (F)	0.43	3	0.14	4.36*
A x F	0.43	3	0.14	11.69*
T x F	3.50	24	0.15	13.52*
A x T x F	2.37	24	0.10	13.55*
Plots/Fields (P/F)	1.45	44	0.03	4.52*
A x P/F	0.55	44	0.01	1.68*
T x P/F	3.81	352	0.01	1.48*
A x T x P/F	2.60	352	0.01	

* Significant at .01 level of probability

Table 41. Analysis of Variance for Data From the Red Densitometer Filter From the MacBeth Densitometer for Film 2448 for Altitudes, Dates, Fields, and Plots Within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	1.10	1	1.10	128.41*
Dates (T)	150.32	8	18.79	2723.16*
A x T	1.49	8	0.19	140.61*
Fields (F)	0.30	3	0.10	4.80*
A x F	0.29	3	0.10	11.40*
T x F	2.55	24	0.11	15.41*
A x T x F	1.78	24	0.07	16.11*
Plots/Fields (P/F)	0.93	44	0.02	4.57*
A x P/F	0.38	44	0.01	1.87*
T x P/F	2.43	352	0.01	1.50*
A x T x P/F	1.65	352	0.00	

* Significant at .01 level of probability

Table 42. Analysis of Variance for Data From the Green Filter
From the MacBeth Densitometer for Film 2448 for
Altitudes, Dates, Fields, and Plots Within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	3.15	1	3.15	320.94*
Dates (T)	130.49	8	16.31	2146.16*
A x T	1.40	8	0.18	32.48*
Fields (F)	0.39	3	0.13	6.10*
A x F	0.27	3	0.09	9.19*
T x F	2.66	24	0.11	14.58*
A x T x F	1.70	24	0.07	13.07*
Plots/Fields (P/F)	0.94	44	0.02	3.96*
A x P/F	0.43	44	0.01	1.81*
T x P/F	2.68	352	0.01	1.41*
A x T x P/F	1.92	352	0.01	

* Significant at .01 level of probability

Table 43. Analysis of Variance for Data From the Blue Filter
From the MacBeth Densitometer for Film 2448 for
Altitudes, Dates, Fields, and Plots Within Fields.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Test
Altitude (A)	5.11	1	5.11	349.83*
Dates (T)	115.93	8	14.49	1704.80*
A x T	2.65	8	0.33	53.40*
Fields (F)	0.68	3	0.23	8.62*
A x F	0.27	3	0.09	6.16*
T x F	3.04	24	0.13	14.91*
A x T x F	1.82	24	0.08	12.23*
Plots/Fields (P/F)	1.15	44	0.03	4.21*
A x P/F	0.64	44	0.01	2.35*
T x P/F	3.01	352	0.01	1.37*
A x T x P/F	2.20	352	0.01	

* Significant at .01 level of probability.

Table 44. Correlation Between Densitometer Data From the Appropriate Filters and Corn Yield Measurements by Date and Altitude

Densitometer Filters Band of Light	Film 2443				Film 2448				Film 2424	Film 2402	
	Neutral Total	Red Infrared	Green Red	Blue Green	Neutral Total	Red Red	Green Green	Blue Blue	Neutral Infrared	Neutral Red	
July 8, 1971	610m	-0.191	-0.079	-0.304	-0.205	-0.188	-0.245	-0.151	-0.193	0.064	0.338*
	1220m	0.085	0.140	0.018	0.086	0.174	0.108	0.246	0.172	-0.129	-0.094
July 16, 1971	610m	-0.104	0.010	-0.251	-0.033	-0.105	-0.144	-0.031	-0.135	0.048	0.223
	1220m	-0.035	0.132	-0.214	-0.172	-0.021	-0.121	0.088	-0.026	-0.288	0.310
July 22, 1971	610m	-0.259	-0.366*	-0.115	-0.035	0.011	-0.028	0.041	0.068	0.315	0.139
	1220m	0.036	0.049	0.019	0.008	0.086	0.039	0.121	0.206	-0.086	-0.100
July 30, 1971	610m	0.287	0.274	0.235	0.274	0.296	0.250	0.314	0.281	-0.079	-0.186
	1220m	-0.383*	-0.345*	-0.402*	-0.402*	-0.516*	-0.524*	-0.504*	-0.478*	0.378*	0.499*
Aug 5, 1971	610m	0.192	-0.032	0.408*	0.447*	0.128	0.401*	0.368*	0.530*	-0.039	-0.538*
	1220m	0.691*	0.520*	0.747*	0.758*	0.810*	0.825*	0.764*	0.863*	-0.202	-0.792*
Aug 11, 1971	610m	0.048	-0.288	0.299	0.246	0.486*	0.539*	0.440*	0.452*	0.170	-0.540*
	1220m	-0.272	-0.620*	0.154	-0.145	0.404*	0.335*	0.438*	0.048	0.708*	-0.405*
Aug 20, 1971	610m	0.050	-0.296	0.321	0.080	0.100	0.296	-0.053	-0.013	0.065	-0.423*
	1220m	-0.334*	-0.468*	-0.078	-0.185	-0.130	-0.048	-0.195	-0.058	0.576*	0.021
Aug 27, 1971	610m	0.220	0.035	0.335*	0.256	0.249	0.401*	0.127	0.161	0.100	-0.408*
	1220m	0.027	-0.078	0.183	-0.051	-0.050	0.199	-0.230	-0.120	0.188	-0.284
Sept 14, 1971	610m	-0.169	-0.505*	-0.042	-0.229	0.082	0.057	0.084	0.350*	0.352*	-0.341*
	1220m	0.323	0.089	0.368*	0.207	0.316	0.338*	0.303	0.355*	0.169	-0.313

N = 48

* Significantly different than zero at the .01 level of probability

Table 45. Percent Correct Identification of Spot Densities
Distinguishing Between Four Different Corn Fields*

<u>Date</u>	<u>Film</u>	<u>Altitude</u>	
		610 meters	1220 meters
07/08/71	2443	<u>85.4**</u>	<u>83.3</u>
	2448	<u>67.4</u>	<u>75.0</u>
07/16/71	2443	<u>66.7</u>	<u>77.1</u>
	2448	<u>68.8</u>	<u>70.8</u>
07/22/71	2443	<u>64.6</u>	<u>66.7</u>
	2448	<u>58.3</u>	<u>56.2</u>
07/30/71	2443	<u>52.1</u>	<u>62.5</u>
	2448	<u>47.9</u>	<u>79.2</u>
08/05/71	2443	<u>77.1</u>	<u>75.0</u>
	2448	<u>70.8</u>	<u>70.8</u>
08/11/71	2443	<u>70.8</u>	<u>77.1</u>
	2448	<u>62.5</u>	<u>72.9</u>
08/20/71	2443	<u>68.8</u>	<u>87.5</u>
	2448	<u>64.5</u>	<u>66.7</u>
08/27/71	2443	<u>62.5</u>	<u>83.3</u>
	2448	<u>72.9</u>	<u>72.9</u>
09/14/71	2443	<u>64.6</u>	<u>91.7</u>
	2448	<u>68.8</u>	<u>70.8</u>

* Mapping 48 spot densities into four corn fields for each film and date.

** Highest percentage underlined in each case.

Table 46. Classification of Photographic Densities According to Yield Using A Priori and Equal Probabilities With Number of Correct Classifications Shown for Film 2448

Date	Altitude	A Priori Probability				Equal Probability			
		Low	Medium	High	Total	Low	Medium	High	Total
07/08	610 m	9	16	6	31	10	14	6	30
	1220 m	9	9	7	25	13	6	10	29
07/16	610 m	6	14	5	25	7	11	5	23
	1220 m	9	12	8	29	11	7	10	29
07/22	610 m	9	13	9	31	10	11	10	31
	1220 m	5	16	6	27	8	12	6	26
07/30	610 m	9	14	5	28	10	11	8	29
	1220 m	8	14	2	24	10	8	6	24
08/05	610 m	9	17	7	33	9	13	10	32
	1220 m	12	13	11	36	12	5	13	30
08/11	610 m	7	15	6	28	10	13	10	33
	1220 m	10	15	6	31	11	7	10	28
08/20	610 m	9	13	12	34	9	6	13	28
	1220 m	6	15	13	34	9	10	14	33
08/27	610 m	8	15	12	35	10	10	13	33
	1220 m	11	8	12	31	11	7	13	31
09/14	610 m	11	12	7	30	12	11	10	33
	1220 m	10	16	11	37	11	12	11	34
Total		157	247	145	549	183	174	178	535

Correct Classification: Low = 14 Medium = 20 High = 14

Table 47. Classification of Photographic Densities According to Yield Using A Priori and Equal Probabilities With Number of Correct Classifications Shown for Film 2443

Date	Altitude	A Priori Probability				Equal Probability			
		Low	Medium	High	Total	Low	Medium	High	Total
07/08	610 m	12	14	3	29	13	9	9	31
	1220 m	10	15	5	30	13	13	6	32
07/16	610 m	7	15	8	30	8	14	8	30
	1220 m	10	17	2	29	11	10	6	27
07/22	610 m	9	13	2	24	12	4	10	26
	1220 m	6	14	9	29	6	10	6	22
07/30	610 m	5	14	6	25	7	13	7	27
	1220 m	12	14	1	27	12	10	7	29
08/05	610 m	11	17	3	31	11	12	5	28
	1220 m	11	10	11	32	12	5	12	29
08/11	610 m	11	15	9	35	11	12	9	32
	1220 m	10	14	8	32	10	6	11	27
08/20	610 m	10	11	2	23	11	5	13	29
	1220 m	10	15	10	35	10	5	12	27
08/27	610 m	4	17	12	33	8	13	12	33
	1220 m	11	14	11	36	12	7	14	33
09/14	610 m	11	14	6	31	12	11	8	31
	1220 m	10	14	10	34	10	9	11	30
Total		170	257	118	545	189	168	166	523

Correct Classification: Low = 14 Medium = 20 High = 14

Table 48. A Table of Residuals of the Predicted Values Using the Equations From the Control Experiment and Subtracting the Data for Film 2443 From Flight of July 22, 1971, by Field and Plot.

Field	Plot	Altitude 2000'			
		Neutral	Red	Green	Blue
1	1	2.15	.33	1.09	1.40
1	2	2.16	.39	1.09	1.41
1	3	2.15	.34	1.09	1.41
1	4	2.14	.34	1.09	1.41
1	5	2.09	.30	1.09	1.45
1	6	2.11	.31	1.09	1.44
1	7	2.13	.33	1.09	1.42
1	8	1.45	.37	1.09	1.38
1	9	1.43	.34	1.09	1.39
1	10	1.45	.37	1.09	1.38
1	11	1.47	.36	1.09	1.34
1	12	1.48	.39	1.09	1.35
2	1	1.43	.34	1.09	1.40
2	2	1.42	.30	1.09	1.41
2	3	1.93	.31	.42	1.33
2	4	1.94	.31	.42	1.32
2	5	1.92	.29	.42	1.33
2	6	1.92	.29	.42	1.31
2	7	1.94	.31	.42	1.31
2	8	1.97	.36	.42	1.30
2	9	1.97	.33	.42	1.28
2	10	1.99	.33	.45	1.25
2	11	1.98	.35	.45	1.28
2	12	1.97	.35	.45	1.28

Table 48 Continued.

Altitude 2000'					
Field	Plot	Neutral	Red	Green	Blue
3	1	2.00	.36	.45	1.25
3	2	1.98	.33	.45	1.25
3	3	1.96	.31	.45	1.28
3	4	1.97	.33	.45	1.26
3	5	1.98	.34	.32	1.38
3	6	1.98	.36	.32	1.38
3	7	1.98	.34	.32	1.36
3	8	1.96	.33	.32	1.40
3	9	1.94	.30	.32	1.40
3	10	1.97	.32	.32	1.39
3	11	1.96	.31	.32	1.39
3	12	9.90	.31	.32	1.26
4	1	9.93	.35	.32	1.23
4	2	9.92	.34	.32	1.25
4	3	9.90	.33	.32	1.27
4	4	9.92	.35	.32	1.25
4	5	9.89	.33	.32	1.27
4	6	9.88	.31	.32	1.28
4	7	2.09	.28	-.21	1.51
4	8	2.09	.25	-.21	1.51
4	9	2.10	.28	-.21	1.50
4	10	2.13	.30	-.21	1.47
4	11	2.14	.30	-.21	1.46
4	12	2.15	.32	-.21	1.45

Table 48 Continued.

Altitude 4000'					
Field	Plot	Neutral	Red	Green	Blue
1	1	2.17	.36	1.09	1.37
1	2	2.21	.42	1.09	1.37
1	3	2.18	.38	1.09	1.38
1	4	2.17	.38	1.09	1.39
1	5	2.13	.33	1.09	1.42
1	6	2.14	.32	1.09	1.39
1	7	2.13	.33	1.09	1.42
1	8	1.45	.35	1.09	1.38
1	9	1.47	.37	1.09	1.36
1	10	1.49	.40	1.09	1.35
1	11	1.49	.40	1.09	1.35
1	12	1.48	.37	1.09	1.34
2	1	1.50	.42	1.09	1.34
2	2	1.47	.39	1.09	1.36
2	3	2.00	.39	.42	1.26
2	4	1.99	.36	.42	1.26
2	5	1.98	.35	.42	1.28
2	6	1.94	.30	.42	1.31
2	7	1.94	.30	.42	1.30
2	8	1.96	.33	.42	1.29
2	9	1.97	.33	.42	1.27
2	10	2.00	.36	.45	1.24
2	11	2.03	.41	.45	1.22
2	12	2.04	.43	.45	1.22

Table 48 Continued.

Altitude 4000'					
Field	Plot	Neutral	Red	Green	Blue
3	4	1.94	.30	.45	1.30
3	5	1.93	.29	.32	1.42
3	6	1.94	.30	.32	1.42
3	7	1.92	.28	.32	1.42
3	8	1.89	.24	.31	1.45
3	9	1.90	.26	.31	1.45
3	10	1.92	.28	.31	1.44
3	11	1.92	.28	.32	1.43
3	12	9.86	.27	.32	1.31
4	1	9.96	.40	.32	1.24
4	2	9.98	.44	.32	1.23
4	3	9.96	.40	.32	1.25
4	4	9.97	.42	.32	1.23
4	5	9.93	.36	.32	1.26
4	6	9.90	.34	.32	1.29
4	7	2.14	.35	-.21	1.51
4	8	2.13	.30	-.21	1.50
4	9	2.15	.34	-.21	1.49
4	10	2.18	.37	-.21	1.47
4	11	2.19	.38	-.21	1.46
4	12	2.19	.39	-.21	1.45

Table 49. Means by Mission of the Energy ($\text{cal/cm}^2/\text{min}$) Recorded by the Aircraft Solameters.

Date	Incoming	Reflected		
		89B	58	25A
7/16	1.291	.080	.097	.0
7/22	1.042	.069	.087	.074
7/30	.807	.055	.073	.0
8/5	1.173	.077	.098	.077
9/14	.899	.046	.065	.053

Table 50. Correlations Between Black and White Spot Film Densities as Read by MacBeth Densitometer for the August 20 Flight and Some Ground Truth Variables Measured on August 20 for 48 Plots.

	Film 2402 Filter 25A	
	Neutral Density	
	<u>610 meters</u>	<u>1220 meters</u>
Soil Moisture	-.112	-.075
Number leaves	-.346	-.623*
(Leaves x Width/144)/23 ² x π	-.308	-.680*
Plants x leaves x width x 10 ⁻⁶	-.334	-.681*

	Film 2424 Filter 89B	
	Neutral Density	
	<u>610 meters</u>	<u>1220 meters</u>
Soil Moisture	-.039	-.073
Number of leaves	.102	.099
(Leaves x width/144)23 ² x π	.184	.085
Plants x leaves x width x 10 ⁻⁶	.166	.045

*Significantly different than zero at the .01 level of probability

Table 50. Correlations Between Black and White Spot Film Densities as Read by MacBeth Densitometer for the August 20 Flight and Some Ground Truth Variables Measured on August 20 for 48 Plots.

	Film 2402 Filter 25A	
	Neutral Density	
	610 meters	1220 meters
Soil Moisture	-.112	-.075
Number leaves	-.346	-.623*
(Leaves x Width/144)/23 ² x π	-.308	-.680*
Plants x leaves x width x 10 ⁻⁶	-.334	-.681*

	Film 2424 Filter 89B	
	Neutral Density	
	610 meters	1220 meters
Soil Moisture	-.039	-.073
Number of leaves	.102	.099
(Leaves x width/144)23 ² x π	.184	.085
Plants x leaves x width x 10 ⁻⁶	.166	.045

*Significantly different than zero at the .01 level of probability

Table 50. Correlations Between Black and White Spot Film Densities as Read by MacBeth Densitometer for the August 20 Flight and Some Ground Truth Variables Measured on August 20 for 48 Plots.

	Film 2402 Filter 25A	
	Neutral Density	
	<u>610 meters</u>	<u>1220 meters</u>
Soil Moisture	-.112	-.075
Number leaves	-.346	-.623*
(Leaves x Width/144)/23 ² x π	-.308	-.680*
Plants x leaves x width x 10 ⁻⁶	-.334	-.681*

	Film 2424 Filter 89B	
	Neutral Density	
	<u>610 meters</u>	<u>1220 meters</u>
Soil Moisture	-.039	-.073
Number of leaves	.102	.099
(Leaves x width/144)23 ² x π	.184	.085
Plants x leaves x width x 10 ⁻⁶	.166	.045

*Significantly different than zero at the .01 level of probability

Table 51. Correlations Between Spot Densities on Films 2443 and 2448 for the August 20 Flights as Read by the Macbeth Densitometer and Some Ground Truth Variables Measured on August 20 for 48 Plots.

Light Band	Film 2448							
	Filter HF3				Filter HF4			
	610 meters				1220 meters			
	<u>N</u>	<u>R</u>	<u>G</u>	<u>B</u>	<u>N</u>	<u>R</u>	<u>G</u>	<u>B</u>
Soil moisture	.089	-.025	.076	.092	-.020	-.051	.009	-.001
Number leaves	.017	-.220	.246	.190	.607*	.464*	.645*	.676*
(Leaves x width/144)/23 ² x	-.037	-.293	.233	.195	.706*	.563*	.739*	.770
Plants x leaves x width x 10 ⁻⁶	-.030	-.288	.247	.246	.685*	.541*	.718*	.751*

Light Band	Film/Filter 2443/G15 30M							
	610 meters				1220 meters			
	<u>Total</u>	<u>IR</u>	<u>R</u>	<u>G</u>	<u>Total</u>	<u>IR</u>	<u>R</u>	<u>G</u>
Soil moisture	-.139	-.035	-.078	.009	.079	.121	.079	.170
Number leaves	.172	.472*	.399*	.344	.623*	.637*	.584*	.688*
(Leaves x width/144)/23 ² x	.228	.532*	.454*	.367	.628*	.638*	.597*	.695*
Plants x leaves x width x 10 ⁻⁶	.240	.491*	.476*	.416*	.633*	.645*	.606*	.694*

*Significantly different than zero at the .01 level of probability

TABLE 52. PERCENT CORRECT RECOGNITION FOR JULY 8, 1971 USING FILM TYPE 2443 AT ALTITUDE 1220 M.

Class No.,	Class Description	Number of Samples Used	Class No.	Class Description	Number Samples Used
1	Corn	143	5	Alfalfa	36
2	Beans	12	6	Pasture	15
3	Barley	5	7	Flax	6
4	Oats	110	8	Farmsteads, trees	26

PERCENTAGE MATRIX

Class	CLASSIFIED AS							
	1	2	3	4	5	6	7	8
1	$\frac{77}{16}$	$\frac{13}{13}$	$\frac{28}{28}$	$\frac{23}{14}$			$\frac{24}{24}$	$\frac{05}{05}$
2	$\frac{75}{16}$	$\frac{17}{17}$	$\frac{83}{83}$	$\frac{25}{25}$				
3	$\frac{40}{40}$		$\frac{100}{100}$	$\frac{40}{40}$	$\frac{20}{20}$			
4	$\frac{44}{05}$	$\frac{07}{07}$	$\frac{31}{31}$	$\frac{56}{27}$		$\frac{01}{01}$	$\frac{25}{25}$	$\frac{04}{04}$
5	$\frac{69}{22}$	$\frac{08}{08}$	$\frac{39}{39}$	$\frac{17}{08}$	$\frac{14}{14}$		$\frac{44}{44}$	
6	$\frac{87}{87}$	$\frac{13}{13}$	$\frac{40}{40}$	$\frac{13}{13}$			$\frac{40}{40}$	$\frac{07}{07}$
7	$\frac{33}{33}$				$\frac{67}{67}$		$\frac{100}{100}$	
8	$\frac{65}{65}$	$\frac{23}{23}$	$\frac{12}{12}$	$\frac{35}{35}$			$\frac{38}{38}$	$\frac{27}{27}$

Overall Percentage = 50.14/20.68. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 53. PERCENT CORRECT RECOGNITION FOR JULY 16, 1971 USING FILM TYPE 2443 AT ALTITUDE 1220 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Pasture-Native	21	6	Alfalfa	22
2	Corn	183	7	Hayland-Bluegrass	4
3	Soybeans	3	8	Flax	7
4	Barley	10	9	Farmsteads, trees	19
5	Oats	90			

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9
1		$\frac{76}{10}$	$\frac{10}{10}$	$\frac{05}{10}$	$\frac{24}{10}$			$\frac{76}{10}$	
2	$\frac{01}{10}$	$\frac{99}{38}$	$\frac{31}{10}$	$\frac{01}{10}$	$\frac{01}{10}$		$\frac{01}{10}$	$\frac{28}{10}$	
3		$\frac{100}{10}$	$\frac{100}{10}$						
4		$\frac{10}{10}$	$\frac{10}{10}$	$\frac{90}{10}$	$\frac{90}{10}$				
5		$\frac{02}{10}$	$\frac{09}{10}$	$\frac{53}{10}$	$\frac{98}{29}$			$\frac{09}{10}$	
6		$\frac{41}{09}$	$\frac{18}{10}$	$\frac{05}{10}$	$\frac{59}{10}$		$\frac{14}{10}$	$\frac{55}{10}$	
7		$\frac{75}{10}$	$\frac{50}{10}$	$\frac{25}{10}$	$\frac{25}{25}$				
8		$\frac{100}{10}$						$\frac{100}{10}$	
9		$\frac{58}{11}$	$\frac{32}{10}$	$\frac{11}{10}$	$\frac{42}{10}$			$\frac{47}{10}$	

Overall Percentage = 74.93/32.03. Upper value represent a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 54. PERCENT CORRECT RECOGNITION FOR AUGUST 11, 1971 USING FILM TYPE 2443 AT ALTITUDE 1220 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Hayland-Bromegrass	6	6	Alfalfa	21
2	Pasture-Native	14	7	Hayland-Bluegrass	4
3	Corn	181	8	Flax	7
4	Barley	11	9	Farmstead, trees	20
5	Oats	92			

PERCENTAGE MATRIX

Class	CLASSIFIED AS								
	1	2	3	4	5	6	7	8	9
1			<u>17</u>	<u>33</u>	<u>83</u>			<u>67</u>	
2		<u>07</u>	<u>07</u>	<u>29</u>	<u>93</u>			<u>57</u>	<u>07</u>
3		<u>02</u>	<u>96</u> <u>51</u>	<u>04</u>	<u>04</u>		<u>01</u>	<u>24</u>	<u>18</u>
4				<u>100</u>	<u>100</u>				
5		<u>22</u>	<u>03</u> <u>01</u>	<u>52</u>	<u>97</u>		<u>01</u>	<u>23</u>	<u>01</u>
6		<u>19</u>	<u>43</u> <u>10</u>		<u>57</u>			<u>71</u>	
7		<u>25</u>	<u>25</u>	<u>25</u>	<u>75</u>		<u>25</u>	<u>25</u>	
8					<u>100</u>			<u>100</u>	
9		<u>25</u>	<u>60</u> <u>25</u>	<u>05</u>	<u>40</u>			<u>20</u>	<u>25</u>

Overall Percentage = 73.88/33.15. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 55. PERCENT CORRECT RECOGNITION FOR AUGUST 27, 1971 USING FILM TYPE 2443 AT ALTITUDE 1220 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Hayland-Bromegrass	9	6	Oats	89
2	Pasture-Native	6	7	Alfalfa	25
3	Corn	166	8	Hayland-Bluegrass	4
4	Soybeans	7	9	Flax	7
5	Barley	10	10	Farmsteads, trees	32

PERCENTAGE MATRIX

Class	CLASSIFIED AS									
	1	2	3	4	5	6	7	8	9	10
1	<u>89</u>		<u>56</u>			<u>44</u>			<u>11</u>	
2		<u>100</u>	<u>33</u>			<u>67</u>				
3	<u>17</u>	<u>33</u>	<u>91</u>	<u>30</u>	<u>02</u>	<u>09</u> <u>02</u>			<u>02</u>	<u>14</u>
4			<u>100</u>	<u>100</u>						
5		<u>50</u>				<u>100</u>				
6	<u>15</u>	<u>09</u>	<u>01</u>	<u>02</u>	<u>10</u>	<u>99</u> <u>07</u>		<u>13</u>	<u>44</u>	
7	<u>36</u>	<u>12</u>	<u>56</u>	<u>40</u>		<u>44</u>				<u>12</u>
8	<u>25</u>	<u>25</u>				<u>100</u>		<u>25</u>	<u>25</u>	
9		<u>43</u>				<u>100</u> <u>14</u>			<u>43</u>	
10	<u>16</u>	<u>28</u>	<u>81</u>	<u>34</u>		<u>19</u>		<u>03</u>	<u>06</u>	<u>13</u>

Overall Percentage = 67.32/9.86. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 56. PERCENT CORRECT RECOGNITION FOR SEPTEMBER 14, 1971 USING FILM TYPE 2443 AT ALTITUDE 1220 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Harvested Corn	70	7	Alfalfa	22
2	Hayland-Bromegrass	6	8	Hayland-Bluegrass	5
3	Corn-grain	106	9	Pasture-Native	4
4	Soybeans	7	10	Flax	9
5	Barley	8	11	Fallow	37
6	Harvested Oats	51	12	Farmsteads, trees	24

PERCENTAGE MATRIX

Class	CLASSIFIED AS											
	1	2	3	4	5	6	7	8	9	10	11	12
1	$\frac{53}{01}$	24	$\frac{39}{01}$		20	$\frac{06}{04}$	04	01	03	07	$\frac{03}{34}$	
2	$\frac{17}{01}$	$\frac{67}{01}$	$\frac{83}{01}$				33					
3	$\frac{22}{02}$	13	$\frac{75}{01}$	02	08	$\frac{02}{03}$	31	01	14	03	$\frac{02}{24}$	
4			$\frac{100}{01}$	29			71					
5	$\frac{13}{01}$		$\frac{63}{01}$		75	$\frac{25}{01}$			13		13	
6	$\frac{47}{12}$	04	$\frac{41}{01}$		35	$\frac{12}{10}$	08		08	06	16	02
7			$\frac{91}{01}$	05			$\frac{09}{77}$	05	09		05	
8	$\frac{20}{01}$		$\frac{80}{01}$				60		20	20		
9	$\frac{25}{01}$	25	$\frac{75}{01}$				25		50			
10	$\frac{33}{01}$	22	$\frac{67}{01}$						44	22	11	
11	$\frac{30}{01}$	08	$\frac{11}{01}$		19	$\frac{11}{03}$					$\frac{49}{70}$	
12	$\frac{04}{01}$	25	$\frac{83}{01}$		04	$\frac{04}{04}$	$\frac{08}{29}$		29	04	04	

Overall Percentage = 40.69/18.62. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 57. PERCENT CORRECT RECOGNITION FOR JULY 8, 1971 USING FILM TYPE 2448 AT ALTITUDE 1220 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Corn	175	5	Alfalfa	26
2	Beans	6	6	Pasture-Native	17
3	Barley	10	7	Flax	7
4	Oats	93	8	Farmsteads, trees	26

PERCENTAGE MATRIX

Class	CLASSIFIED AS							
	1	2	3	4	5	6	7	8
1	$\frac{97}{26}$	37	04	$\frac{03}{01}$	14	01	14	03
2	$\frac{100}{}$	$\frac{100}{}$						
3			$\frac{100}{}$	$\frac{100}{}$				
4	$\frac{06}{}$		47	$\frac{94}{18}$			34	
5	$\frac{96}{12}$	08		04	$\frac{04}{23}$		50	04
6	$\frac{59}{}$	06	41	41	12	12	29	
7				$\frac{86}{}$	$\frac{14}{}$		$\frac{100}{}$	
8	$\frac{85}{08}$	23	04	$\frac{15}{04}$	04	04	46	08

Overall Percentage = 71.67/26.67. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 58. PERCENT CORRECT RECOGNITION FOR JULY 16, 1971 USING FILM TYPE 2448 AT ALTITUDE 1220 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Corn	178	5	Alfalfa	24
2	Beans	9	6	Pasture-Native	18
3	Barley	10	7	Flax	5
4	Oats	92	8	Farmsteads, Trees	24

PERCENTAGE MATRIX

Class	CLASSIFIED AS							
	1	2	3	4	5	6	7	8
1	$\frac{98}{63}$	30	$\frac{02}{02}$	$\frac{02}{01}$		01	$\frac{02}{02}$	
2	$\frac{78}{78}$	78	22	$\frac{22}{22}$				
3			90	$\frac{100}{10}$				
4	$\frac{01}{01}$		52	$\frac{99}{48}$				
5	$\frac{50}{21}$	08	42	$\frac{50}{17}$		13		
6	$\frac{28}{11}$	11	22	$\frac{72}{56}$				
7	$\frac{100}{100}$							$\frac{100}{100}$
8	$\frac{63}{33}$	21	17	$\frac{38}{21}$				$\frac{08}{08}$

Overall Percentage = 73.61/49.44. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 59. PERCENT CORRECT RECOGNITION FOR AUGUST 11, 1971 USING FILM TYPE 2448 AT ALTITUDE 1220 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Hayland-Bluegrass	5	6	Oats	18
2	Flax	6	7	Harvested Oats	76
3	Corn	174	8	Alfalfa	21
4	Beans	8	9	Pasture-Native	21
5	Barley	10	10	Farmstead, trees	20

PERCENTAGE MATRIX

Class	CLASSIFIED AS									
	1	2	3	4	5	6	7	8	9	10
1		40				60				100
2		100								100
3		04	97	53	02	06	03		01	20
4			100	100						
5		40	10		20	30	90			10
6		17	44	06		22	33			06
7		12	08		04	07	91		01	78
8		29	67	14		19	14		05	05
9		57	71			38	29			05
10		10	80	10		05	15			35

Overall Percentage = 67.13/31.48. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 60. PERCENT CORRECT RECOGNITION FOR AUGUST 27, 1971 USING FILM TYPE 2448 AT ALTITUDE 1220 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Harvested Corn	32	6	Oats	18
2	Flax	6	7	Harvested Oats	78
3	Corn	137	8	Alfalfa	18
4	Beans	8	9	Pasture-Native	27
5	Barley	10	10	Farmstead, trees	25

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9	10
1		$\frac{34}{50}$	$\frac{50}{13}$			$\frac{16}{50}$	$\frac{25}{17}$			$\frac{13}{16}$
2	$\frac{17}{50}$				$\frac{33}{17}$					
3	$\frac{01}{05}$	$\frac{05}{40}$	$\frac{91}{29}$	$\frac{01}{04}$		$\frac{04}{02}$	$\frac{07}{02}$		$\frac{01}{02}$	$\frac{01}{16}$
4		$\frac{13}{100}$	$\frac{13}{38}$			$\frac{13}{100}$				$\frac{25}{100}$
5		$\frac{70}{10}$			$\frac{10}{10}$	$\frac{10}{100}$				
6		$\frac{06}{89}$				$\frac{61}{22}$				$\frac{17}{06}$
7		$\frac{13}{04}$	$\frac{04}{01}$	$\frac{01}{01}$		$\frac{05}{15}$	$\frac{90}{69}$		$\frac{01}{01}$	
8	$\frac{06}{06}$	$\frac{06}{17}$	$\frac{61}{17}$		$\frac{11}{44}$	$\frac{06}{28}$	$\frac{28}{06}$			$\frac{06}{11}$
9		$\frac{19}{04}$	$\frac{41}{04}$		$\frac{07}{48}$	$\frac{07}{52}$	$\frac{52}{07}$			$\frac{15}{07}$
10			$\frac{52}{04}$		$\frac{04}{32}$		$\frac{08}{04}$		$\frac{04}{36}$	$\frac{36}{64}$

Overall Percentage = 59.89/41.23. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 61. PERCENT CORRECT RECOGNITION FOR SEPTEMBER 14, 1971 USING FILM TYPE 2448 AT ALTITUDE 1220 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Harvested Corn	78	7	Harvested Oats	59
2	Hayland Mixture	6	8	Alfalfa	19
3	Flax	8	9	Pasture-Native	19
4	Corn	114	10	Fallow	22
5	Beans	7	11	Farmsteads, trees	19
6	Barley	8			

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9	10	11
1	$\frac{45}{21}$		$\frac{09}{09}$	$\frac{40}{24}$			$\frac{14}{12}$		$\frac{05}{05}$	$\frac{01}{26}$	$\frac{04}{04}$
2		$\frac{83}{83}$		$\frac{50}{50}$			$\frac{17}{17}$	$\frac{33}{33}$		$\frac{17}{17}$	
3	$\frac{25}{25}$		$\frac{88}{88}$	$\frac{50}{50}$			$\frac{25}{25}$		$\frac{13}{13}$		
4	$\frac{10}{02}$	$\frac{09}{09}$	$\frac{07}{07}$	$\frac{89}{02}$	$\frac{53}{53}$		$\frac{01}{01}$	$\frac{07}{07}$	$\frac{12}{12}$	$\frac{04}{04}$	$\frac{05}{05}$
5				$\frac{100}{100}$	$\frac{100}{100}$						
6	$\frac{50}{13}$		$\frac{50}{50}$	$\frac{50}{50}$						$\frac{38}{38}$	
7	$\frac{56}{10}$	$\frac{02}{02}$	$\frac{15}{15}$	$\frac{27}{08}$	$\frac{08}{08}$		$\frac{12}{08}$		$\frac{03}{03}$	$\frac{05}{41}$	$\frac{03}{03}$
8	$\frac{05}{05}$	$\frac{53}{53}$		$\frac{68}{68}$				$\frac{11}{37}$	$\frac{11}{11}$	$\frac{05}{05}$	
9	$\frac{05}{05}$	$\frac{42}{42}$		$\frac{47}{47}$			$\frac{11}{11}$	$\frac{11}{11}$	$\frac{21}{37}$	$\frac{05}{05}$	$\frac{05}{05}$
10	$\frac{09}{09}$						$\frac{41}{41}$		$\frac{05}{05}$	$\frac{50}{95}$	
11	$\frac{26}{26}$	$\frac{53}{53}$	$\frac{11}{11}$	$\frac{37}{37}$			$\frac{05}{05}$	$\frac{05}{05}$	$\frac{05}{05}$	$\frac{11}{11}$	$\frac{26}{11}$

Overall Percentage = 46.24/22.01. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 62. PERCENT CORRECT RECOGNITION FOR JULY 8, 1971 USING FILM TYPE 2448 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Flax	7	5	Oats	89
2	Corn	175	6	Alfalfa	22
3	Beans	11	7	Pasture-Native	28
4	Barley	8	8	Farmsteads, trees	19

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8
1	<u>100</u>				<u>100</u>			
2	<u>04</u>	<u>99</u> <u>21</u>	<u>37</u>	<u>05</u>	<u>01</u> <u>03</u>	<u>27</u>		<u>04</u>
3		<u>100</u>	<u>91</u>	<u>09</u>				
4				<u>100</u>	<u>100</u>			
5	<u>26</u>	<u>06</u>		<u>60</u>	<u>94</u> <u>13</u>	<u>01</u>		
6	<u>18</u>	<u>95</u> <u>05</u>	<u>09</u>	<u>05</u>	<u>05</u>	<u>64</u>		
7	<u>25</u>	<u>64</u>	<u>14</u>	<u>36</u>	<u>36</u>	<u>14</u>		<u>11</u>
8	<u>16</u>	<u>95</u>	<u>21</u>	<u>32</u>	<u>05</u>	<u>32</u>		

Overall Percentage = 71.87/24.23. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 63. PERCENT CORRECT RECOGNITION FOR JULY 16, 1971 USING FILM TYPE 2448 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Flax	9	6	Harvested Oats	13
2	Corn	189	7	Alfalfa	20
3	Beans	11	8	Pasture-Native	27
4	Barley	6	9	Farmstead, trees	12
5	Oats	73			

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9
1	<u>100</u>	<u>11</u>			<u>89</u>				
2	<u>22</u>	<u>98</u> <u>29</u>	<u>01</u>	<u>01</u>	<u>02</u>	<u>03</u>	<u>19</u>	<u>01</u>	<u>25</u>
3	<u>18</u>	<u>55</u> <u>09</u>		<u>18</u>	<u>45</u> <u>27</u>		<u>18</u>		<u>09</u>
4				<u>50</u>	<u>100</u> <u>17</u>	<u>17</u>	<u>17</u>		
5	<u>27</u>	<u>04</u>		<u>29</u>	<u>96</u> <u>38</u>	<u>04</u>	<u>01</u>		
6	<u>23</u>	<u>08</u>		<u>08</u>	<u>92</u> <u>08</u>	<u>54</u>	<u>08</u>		
7	<u>10</u>	<u>95</u>	<u>05</u>		<u>05</u> <u>05</u>	<u>10</u>	<u>70</u>		
8	<u>37</u>	<u>100</u>			<u>04</u>	<u>07</u>	<u>41</u>		<u>11</u>
9	<u>42</u>	<u>83</u>			<u>17</u>	<u>08</u>	<u>25</u>		<u>25</u>

Overall Percentage = 71.11/33.06. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 64. PERCENT CORRECT RECOGNITION FOR AUGUST 11, 1971 USING FILM TYPE 2448 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Flax	6	6	Harvested Oats	73
2	Corn	177	7	Alfalfa	22
3	Beans	8	8	Pasture-Native	29
4	Barley	9	9	Farmsteads, trees	18
5	Oats	18			

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9
1	<u>100</u>	<u>17</u>				<u>83</u>			
2	<u>10</u>	<u>98</u> <u>42</u>	<u>27</u>		<u>08</u>	<u>02</u> <u>04</u>	<u>07</u>	<u>02</u>	
3		<u>88</u> <u>13</u>	<u>88</u>		<u>13</u>				
4	<u>22</u>			<u>33</u>		<u>100</u> <u>44</u>			
5		<u>67</u>	<u>28</u>		<u>17</u> <u>72</u>	<u>17</u>			
6	<u>18</u>	<u>07</u> <u>01</u>		<u>03</u>	<u>10</u>	<u>93</u> <u>68</u>			
7	<u>09</u>	<u>86</u> <u>14</u>	<u>14</u>		<u>55</u>	<u>09</u> <u>05</u>	<u>05</u>		
8	<u>21</u>	<u>83</u> <u>07</u>		<u>10</u>	<u>48</u>	<u>17</u> <u>03</u>	<u>03</u>	<u>07</u>	
9	<u>39</u>	<u>67</u> <u>11</u>	<u>11</u>		<u>06</u> <u>28</u>	<u>28</u> <u>11</u>			

Overall Percentage = 68.06/43.33. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 64. PERCENT CORRECT RECOGNITION FOR AUGUST 11, 1971 USING FILM TYPE 2448 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Flax	6	6	Harvested Oats	73
2	Corn	177	7	Alfalfa	22
3	Beans	8	8	Pasture-Native	29
4	Barley	9	9	Farmsteads, trees	18
5	Oats	18			

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9
1	$\frac{100}{100}$	$\frac{17}{17}$				$\frac{83}{83}$			
2	$\frac{10}{10}$	$\frac{98}{42}$	$\frac{27}{27}$		$\frac{08}{08}$	$\frac{02}{04}$	$\frac{07}{07}$	$\frac{02}{02}$	
3		$\frac{88}{13}$	$\frac{88}{88}$		$\frac{13}{13}$				
4	$\frac{22}{22}$			$\frac{33}{33}$		$\frac{100}{44}$			
5		$\frac{67}{28}$	$\frac{28}{28}$		$\frac{17}{72}$	$\frac{17}{17}$			
6	$\frac{18}{18}$	$\frac{07}{01}$		$\frac{03}{03}$	$\frac{10}{10}$	$\frac{93}{68}$			
7	$\frac{09}{09}$	$\frac{86}{14}$	$\frac{14}{14}$		$\frac{55}{55}$	$\frac{09}{05}$	$\frac{05}{05}$		
8	$\frac{21}{21}$	$\frac{83}{07}$		$\frac{10}{10}$	$\frac{48}{48}$	$\frac{17}{03}$	$\frac{03}{03}$	$\frac{07}{07}$	
9	$\frac{39}{39}$	$\frac{67}{11}$	$\frac{11}{11}$		$\frac{06}{28}$	$\frac{28}{11}$			

Overall Percentage = 68.06/43.33. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 65. PERCENT CORRECT RECOGNITION FOR AUGUST 27, 1971 USING FILM TYPE 2448 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Flax	9	6	Alfalfa, Hayland	20
2	Corn	178	7	Pasture-Native	27
3	Beans	9	8	Fallow	16
4	Barley	7	9	Farmsteads, trees	19
5	Harvested Oats	73			

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9
1				$\frac{22}{33}$	$\frac{100}{33}$			$\frac{44}{33}$	
2	$\frac{02}{30}$	$\frac{88}{30}$	$\frac{29}{30}$	$\frac{01}{30}$	$\frac{12}{33}$	$\frac{01}{30}$	$\frac{02}{30}$	$\frac{10}{30}$	$\frac{14}{30}$
3		$\frac{100}{89}$							$\frac{11}{89}$
4		$\frac{29}{74}$		$\frac{14}{29}$	$\frac{71}{29}$			$\frac{57}{74}$	
5	$\frac{04}{74}$	$\frac{01}{74}$		$\frac{03}{74}$	$\frac{88}{74}$		$\frac{04}{74}$	$\frac{07}{74}$	
6		$\frac{70}{05}$	$\frac{05}{05}$		$\frac{10}{05}$		$\frac{10}{05}$	$\frac{10}{75}$	$\frac{15}{75}$
7		$\frac{48}{15}$	$\frac{15}{04}$	$\frac{04}{07}$	$\frac{48}{07}$		$\frac{04}{07}$	$\frac{67}{07}$	
8		$\frac{13}{100}$			$\frac{13}{100}$			$\frac{75}{100}$	
9		$\frac{89}{05}$	$\frac{42}{05}$		$\frac{11}{05}$		$\frac{05}{05}$	$\frac{26}{05}$	$\frac{16}{05}$

Overall Percentage = 65.08/38.27. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 66. PERCENT CORRECT RECOGNITION FOR SEPTEMBER 14, 1971 USING FILM TYPE 2448 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Harvested Corn	32	6	Harvested Oats	57
2	Flax	8	7	Alfalfa	18
3	Corn	140	8	Pasture-Native	27
4	Beans	10	9	Fallow	41
5	Barley	7	10	Farmsteads, trees	19

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9	10
1	$\frac{19}{19}$		$\frac{34}{26}$		$\frac{03}{16}$			$\frac{06}{69}$		$\frac{03}{03}$
2			$\frac{63}{25}$				$\frac{50}{13}$		$\frac{38}{13}$	$\frac{13}{13}$
3	$\frac{01}{26}$		$\frac{98}{24}$	$\frac{16}{16}$	$\frac{01}{04}$		$\frac{14}{01}$	$\frac{01}{02}$		$\frac{10}{10}$
4			$\frac{100}{10}$	$\frac{40}{10}$	$\frac{10}{20}$		$\frac{20}{20}$			$\frac{20}{20}$
5			$\frac{86}{57}$		$\frac{29}{14}$			$\frac{14}{14}$		
6	$\frac{12}{02}$	$\frac{02}{05}$	$\frac{79}{04}$	$\frac{18}{30}$	$\frac{16}{04}$	$\frac{04}{07}$		$\frac{05}{18}$		$\frac{02}{02}$
7			$\frac{22}{06}$				$\frac{06}{83}$	$\frac{61}{06}$	$\frac{06}{06}$	$\frac{06}{11}$
8			$\frac{22}{07}$			$\frac{59}{30}$		$\frac{48}{04}$	$\frac{22}{04}$	$\frac{07}{07}$
9	$\frac{05}{02}$		$\frac{02}{90}$		$\frac{02}{02}$			$\frac{95}{90}$		$\frac{02}{02}$
10	$\frac{05}{05}$		$\frac{63}{05}$		$\frac{16}{05}$	$\frac{32}{16}$		$\frac{16}{16}$		$\frac{05}{37}$

Overall Percentage = 55.71/37.60. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 67. PERCENT CORRECT RECOGNITION FOR JULY 8, 1971 USING FILM TYPE 2443 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Flax	7	5	Oats	91
2	Corn	172	6	Alfalfa	32
3	Beans	8	7	Pasture-Native	20
4	Barley	4	8	Farmsteads, trees	26

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8
1	$\frac{86}{86}$	$\frac{100}{86}$					$\frac{14}{86}$	
2	$\frac{31}{172}$	$\frac{91}{172}$	$\frac{01}{172}$	$\frac{30}{172}$	$\frac{09}{172}$	$\frac{03}{172}$	$\frac{06}{172}$	$\frac{02}{172}$
3	$\frac{12}{8}$	$\frac{88}{8}$		$\frac{88}{8}$	$\frac{12}{8}$			
4		$\frac{75}{4}$		$\frac{100}{4}$	$\frac{25}{4}$			
5	$\frac{08}{91}$	$\frac{36}{91}$	$\frac{03}{91}$	$\frac{27}{91}$	$\frac{63}{91}$	$\frac{01}{91}$	$\frac{01}{91}$	$\frac{01}{91}$
6	$\frac{50}{32}$	$\frac{69}{32}$		$\frac{31}{32}$	$\frac{12}{32}$	$\frac{19}{32}$	$\frac{03}{32}$	
7	$\frac{30}{20}$	$\frac{100}{20}$	$\frac{05}{20}$	$\frac{30}{20}$		$\frac{05}{20}$	$\frac{20}{20}$	
8	$\frac{62}{26}$	$\frac{58}{26}$	$\frac{04}{26}$	$\frac{23}{26}$	$\frac{35}{26}$	$\frac{08}{26}$	$\frac{08}{26}$	

Overall Percentage = 61.11/27.22. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 68. PERCENT CORRECT RECOGNITION FOR JULY 16, 1971 USING FILM TYPE 2443 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Pasture-Native	19	6	Oats	79
2	Flax	9	7	Harvested Oats	13
3	Corn	184	8	Alfalfa	25
4	Soybeans	9	9	Farmsteads, trees	13
5	Barley	7			

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9
1		$\frac{11}{11}$	$\frac{74}{11}$	$\frac{21}{11}$	$\frac{11}{11}$	$\frac{26}{16}$	$\frac{32}{11}$		
2		$\frac{33}{11}$	$\frac{78}{11}$		$\frac{11}{11}$	$\frac{22}{11}$	$\frac{44}{11}$		
3		$\frac{27}{56}$	$\frac{97}{56}$	$\frac{02}{02}$	$\frac{03}{02}$	$\frac{03}{02}$	$\frac{11}{11}$		
4	$\frac{22}{11}$		$\frac{100}{11}$	$\frac{22}{11}$		$\frac{11}{11}$	$\frac{33}{11}$		
5			$\frac{14}{11}$		$\frac{71}{11}$	$\frac{86}{14}$	$\frac{14}{11}$		
6			$\frac{04}{11}$		$\frac{19}{11}$	$\frac{96}{66}$	$\frac{15}{11}$		
7			$\frac{15}{11}$		$\frac{38}{11}$	$\frac{85}{11}$	$\frac{62}{11}$		
8		$\frac{04}{11}$	$\frac{24}{11}$		$\frac{28}{11}$	$\frac{76}{12}$	$\frac{56}{11}$		
9		$\frac{08}{11}$	$\frac{69}{38}$		$\frac{15}{11}$	$\frac{31}{15}$	$\frac{23}{11}$		

Overall Percentage = 71.23/48.32. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 69. PERCENT CORRECT RECOGNITION FOR AUGUST 11, 1971 USING FILM TYPE 2443 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Flax	6	5	Oats	94
2	Corn	175	6	Alfalfa	32
3	Beans	8	7	Pasture-Native	20
4	Barley	7	8	Farmsteads, trees	18

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8
1	<u>100</u>				<u>100</u>			
2	<u>02</u>	<u>99</u> <u>37</u>	<u>41</u>	<u>10</u>	<u>01</u>		<u>03</u>	<u>07</u>
3	<u>38</u>	<u>100</u>	<u>63</u>					
4				<u>100</u>	<u>100</u>			
5	<u>28</u>	<u>01</u>	<u>01</u>	<u>54</u>	<u>98</u> <u>01</u>	<u>01</u>	<u>16</u>	
6	<u>78</u>	<u>25</u>	<u>06</u>	<u>09</u>	<u>72</u>	<u>03</u>	<u>06</u>	
7	<u>40</u>	<u>20</u>		<u>20</u>	<u>75</u> <u>05</u>	<u>05</u>	<u>30</u>	<u>05</u>
8	<u>17</u>	<u>78</u> <u>11</u>	<u>28</u>	<u>17</u>	<u>22</u>		<u>11</u>	<u>17</u>

Overall Percentage = 73.89/25.56. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 70. PERCENT CORRECT RECOGNITION FOR AUGUST 27, 1971 USING FILM TYPE 2443 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Pasture-Native	17	6	Oats	18
2	Flax	10	7	Harvested Oats	71
3	Corn	180	8	Alfalfa	23
4	Soybeans	9	9	Farmsteads, trees	21
5	Barley	10			

PERCENTAGE MATRIX

CLASSIFIED AS

Class	1	2	3	4	5	6	7	8	9
1		$\frac{12}{12}$	$\frac{41}{17}$	$\frac{06}{17}$		$\frac{06}{47}$	$\frac{53}{24}$		$\frac{12}{17}$
2		$\frac{30}{10}$	$\frac{10}{10}$	$\frac{20}{10}$		$\frac{10}{10}$	$\frac{90}{40}$		
3	$\frac{01}{180}$	$\frac{03}{180}$	$\frac{93}{180}$	$\frac{35}{180}$	$\frac{01}{180}$	$\frac{14}{180}$	$\frac{07}{180}$		$\frac{28}{180}$
4			$\frac{100}{9}$	$\frac{100}{9}$					
5		$\frac{20}{10}$	$\frac{10}{10}$	$\frac{10}{10}$		$\frac{20}{10}$	$\frac{90}{40}$		$\frac{10}{10}$
6		$\frac{06}{18}$	$\frac{06}{18}$			$\frac{61}{94}$	$\frac{33}{40}$		
7		$\frac{24}{10}$	$\frac{04}{10}$	$\frac{06}{10}$		$\frac{04}{14}$	$\frac{92}{56}$		
8		$\frac{04}{21}$	$\frac{57}{21}$	$\frac{61}{21}$		$\frac{04}{13}$	$\frac{39}{17}$		$\frac{04}{21}$
9	$\frac{05}{180}$		$\frac{90}{180}$	$\frac{29}{180}$		$\frac{24}{180}$	$\frac{10}{180}$		$\frac{38}{180}$

Overall Percentage = 67.69/25.62. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 71. PERCENT CORRECT RECOGNITION FOR SEPTEMBER 14, 1971 USING FILM TYPE 2443 AT ALTITUDE 610 M.

Class No.	Class Description	Number of Samples Used	Class No.	Class Description	Number of Samples Used
1	Harvested Corn	59	7	Harvested Oats	61
2	Pasture-Native	13	8	Alfalfa	21
3	Corn	121	9	Flax	6
4	Beans	8	10	Fallow	28
5	Barley	8	11	Farmsteads, trees	28
6	Oats	7			

PERCENTAGE MATRIX

Class	CLASSIFIED AS										
	1	2	3	4	5	6	7	8	9	10	11
1	$\frac{02}{02}$	$\frac{10}{14}$	$\frac{58}{14}$		$\frac{05}{24}$	$\frac{39}{10}$	$\frac{02}{05}$			$\frac{31}{31}$	
2		$\frac{69}{92}$					$\frac{08}{31}$				
3	$\frac{02}{36}$	$\frac{36}{20}$	$\frac{93}{20}$		$\frac{03}{07}$	$\frac{06}{07}$	$\frac{02}{17}$			$\frac{07}{07}$	$\frac{01}{01}$
4		$\frac{13}{100}$	$\frac{13}{13}$		$\frac{13}{13}$			$\frac{63}{63}$			
5			$\frac{50}{63}$		$\frac{63}{13}$	$\frac{50}{13}$	$\frac{13}{13}$			$\frac{13}{13}$	
6			$\frac{14}{86}$			$\frac{57}{14}$	$\frac{29}{29}$				
7		$\frac{02}{64}$	$\frac{02}{02}$		$\frac{11}{21}$	$\frac{21}{13}$	$\frac{36}{13}$			$\frac{51}{51}$	
8			$\frac{67}{10}$					$\frac{24}{90}$			$\frac{10}{10}$
9			$\frac{100}{50}$		$\frac{50}{50}$			$\frac{50}{50}$			
10			$\frac{18}{36}$			$\frac{75}{18}$	$\frac{04}{07}$			$\frac{04}{39}$	
11	$\frac{04}{07}$	$\frac{07}{07}$	$\frac{75}{07}$		$\frac{07}{25}$	$\frac{25}{04}$	$\frac{11}{04}$	$\frac{07}{39}$		$\frac{07}{07}$	$\frac{04}{04}$

Overall Percentage = 39.44/23.33. Upper value represents a priori probability based upon number of samples in each class. Lower values represent equal probabilities. Blank areas are 0/0.

TABLE 72. AVERAGE PERCENT CLASSIFICATION FOR FIVE CROPS FOR
FILM 2443 TAKEN AT 1220 METERS ALTITUDE FOR FIVE
DATES.

	Classified as					
	Corn	Beans	Barley	Oats	Alfalpa	
ACTUAL	Corn	$\frac{87.6}{21.0}$	$\frac{0}{15.2}$	$\frac{0}{8.6}$	$\frac{7.8}{3.6}$	$\frac{0}{6.2}$
	Beans	$\frac{75.0}{0}$	$\frac{0}{49.2}$	$\frac{0}{16.6}$	$\frac{5.0}{0}$	$\frac{0}{14.2}$
	Barley	$\frac{27.6}{0}$	$\frac{0}{22.0}$	$\frac{20.0}{53.0}$	$\frac{51.0}{0}$	$\frac{4.0}{0}$
	Oats	$\frac{18.2}{1.2}$	$\frac{0}{3.6}$	$\frac{0}{36.2}$	$\frac{72.4}{14.6}$	$\frac{0}{1.6}$
	Alfalpa	$\frac{60.0}{3.8}$	$\frac{0}{14.2}$	$\frac{0}{8.8}$	$\frac{35.4}{1.6}$	$\frac{4.6}{15.4}$

Upper value represents a priori probability based upon number of samples. Lower values represent equal probabilities.

TABLE 73. AVERAGE PERCENT CLASSIFICATION FOR FIVE CROPS FOR FILM 2448 TAKEN AT 1220 METERS ALTITUDE FOR FIVE DATES.

	Classified as					
	Corn	Beans	Barley	Oats	Alfalfa	
ACTUAL	Corn	$\frac{94.4}{28.2}$	$\frac{0}{40.4}$	$\frac{0}{1.8}$	$\frac{1.2}{2.4}$	$\frac{0}{4.2}$
	Beans	$\frac{95.6}{2.6}$	$\frac{0}{83.2}$	$\frac{0}{4.4}$	$\frac{4.4}{2.6}$	$\frac{0}{0}$
	Barley	$\frac{12.0}{0}$	$\frac{0}{0}$	$\frac{0}{44.0}$	$\frac{40.0}{10.0}$	$\frac{0}{0}$
	Oats	$\frac{15.6}{1.6}$	$\frac{0}{2.8}$	$\frac{0}{19.8}$	$\frac{57.6}{47.0}$	$\frac{0}{0}$
	Alfalfa	$\frac{68.4}{10.0}$	$\frac{0}{6.0}$	$\frac{0}{10.6}$	$\frac{15.0}{22.6}$	$\frac{3.0}{12.0}$

Upper value represents a priori probability based upon number of samples. Lower values represent equal probabilities.

TABLE 74. AVERAGE PERCENT CLASSIFICATION FOR FIVE CROPS FOR FILM
2448 TAKEN AT 610 METERS ALTITUDE FOR FIVE DATES.

	Classified as					
	Corn	Beans	Barley	Oats	Alfalfa	
ACTUAL	Corn	$\frac{96.2}{29.6}$	$\frac{0}{23.6}$	$\frac{0}{4.6}$	$\frac{3.2}{5.6}$	$\frac{0}{13.6}$
	Beans	$\frac{88.6}{6.4}$	$\frac{0}{61.6}$	$\frac{0}{7.4}$	$\frac{11.6}{5.4}$	$\frac{0}{7.6}$
	Barley	$\frac{23.0}{0}$	$\frac{0}{0}$	$\frac{0}{50.8}$	$\frac{54.2}{9.2}$	$\frac{0}{9.2}$
	Oats	$\frac{31.4}{1.0}$	$\frac{0}{6.4}$	$\frac{0}{22.0}$	$\frac{62.2}{45.4}$	$\frac{0}{1.2}$
	Alfalfa	$\frac{73.6}{3.8}$	$\frac{0}{6.6}$	$\frac{0}{1.0}$	$\frac{4.0}{12.0}$	$\frac{2.2}{44.4}$

Upper value represents a priori probability based upon number of samples. Lower values represent equal probabilities.

TABLE 75. AVERAGE PERCENT CLASSIFICATION FOR FIVE CROPS FOR
FILM 2443 TAKEN AT 610 METERS ALTITUDE FOR FIVE DATES.

	Classified as					
	Corn	Beans	Barley	Oats	Alfalfa	
ACTUAL	Corn	$\frac{94.6}{27.6}$	$\frac{0}{15.8}$	$\frac{0}{9.4}$	$\frac{2.6}{6.6}$	$\frac{0.4}{5.0}$
	Beans	$\frac{97.6}{4.8}$	$\frac{0}{37.0}$	$\frac{0}{20.2}$	$\frac{2.4}{2.2}$	$\frac{0}{12.6}$
	Barley	$\frac{29.8}{0}$	$\frac{0}{2.0}$	$\frac{0}{66.8}$	$\frac{42.2}{9.4}$	$\frac{0}{2.6}$
	Oats	$\frac{12.2}{.2}$	$\frac{0}{0.8}$	$\frac{0}{20.0}$	$\frac{63.6}{60.6}$	$\frac{6.2}{0}$
	Alfalfa	$\frac{48.4}{0}$	$\frac{0}{13.4}$	$\frac{0}{13.6}$	$\frac{32.8}{7.6}$	$\frac{9.2}{20.4}$

Upper value represents a priori probability based upon number of samples. Lower values represent equal probabilities.