FARMER ID	LOCATION	LAND SIZE(ACRE)	FERTILIZER USED (KG)	RAINFALL(MM)	TRAINING ATTENDED	MAIZE YIELD(KG)
F1000	Matayos		0	400		631
F1001	Butula	0	30	350		0
F1002	Teso North	2.65	0	420		1029
F1003	Funyula	0	50	0		761
F1004	Funyula	1.71	0	0	No	932
F1005	Nambale	2.31	40	400	Yes	1181
F1006	Matayos	1.94	50	420		653
F1008	Matayos	0.74	0	0		878
F1010	Matayos	2.66	0	0	No	1052
F1011	Butula		40	0	No	820
F1012	Butula	0.75	0	0		716
F1013	Matayos	1.35	30	0	No	713
F1014	Funyula	1.12	40	0		1098
F1015	Funyula	1.62	50	400		915
F1018	Butula	2.65	40	0	No	0
F1020	Funyula	2.59	0	400	Yes	896
F1022	Matayos	0.92	0	350	No	1040
F1023	Funyula	1.03	0	0		989
F1024	Butula	0.65	0	400	No	835
F1026	Teso North	2.46	60	400		0
F1027	Butula	1.56	50	0	No	0
F1028	Nambale	2.99	50	400	No	679
F1029	Matayos	2.3	30	0		1189
F1030	Teso South	1.24	60	350		1014
F1031	Teso North	1.95	0	0	Yes	1027
F1032	Nambale	2.37	50	0	No	1014
F1033	Funyula		0	350		0
F1034	Teso South	2.8	40	390	No	1071
F1035	Matayos	0.64	50	0		970
F1036	Matayos	2.63	0	0	Yes	0
F1037	Matayos	0	0	0		1010
F1038	Matayos	1.09	50	350	No	1005
F1039	Teso South	2.73	40	390		947
F1040	Teso South	1.99	0	400	Yes	772
F1042	Teso North	1.81	50	400	Yes	1122
F1043	Butula	1.01	60	0		957
F1044	Butula	1.1	50	0	No	751
F1046	Matayos	1.29	60	350		777
F1047	Matayos	0.68	0	390		677
F1048	Matayos	3	0	420		1105
F1050	Teso North	1.16	50	350	No	1059
F1052	Teso South	1.42	50	400		930
F1054	Funyula	2.03	0	400	No	669
F1055	Matayos	2.13	0	0		910
F1056	Butula		50	400		657
F1057	Funyula	2.16	0	420	Yes	675
F1058	Teso North	0.84	0	0	Yes	1062
F1059	Matayos	0.77	0	400	No	0
F1060	Funyula	1.18	0	400		678
F1061	Matayos	2.29	30	0		692
F1062	Matayos	2.09	60	0		1119
F1063	Teso North	1.72	50	0		1194
F1064	Butula	2.62	40	390	No	642
F1065	Teso South		50	0	No	1185
F1066	Nambale	0.61	60	420	No	929
F1067	Teso South	0.83	50	0	No	1113
F1068	Teso South	0.9	0	390	Yes	663
F1069	Funyula	2.26	0	420		951
F1070	Teso North	0.78	0	400	Yes	686
F1071	Matayos	2.23	50	400		776

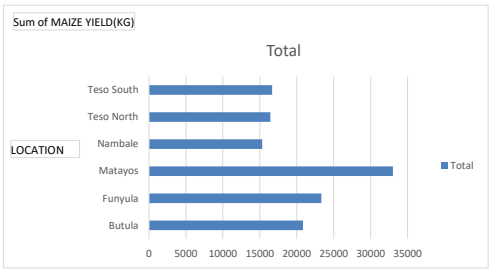
F1073	Nambale	1.88	0	0		1049
F1075	Funyula	2.83	50	350		889
F1076	Nambale	0.6	0	400	Yes	946
F1077	Butula	2.21	60	400	Yes	653
F1078	Matayos	1.38	60	0	No	942
F1079	Teso North	2.69	60	420		0
F1081	Funyula	1.09	30	0		753
F1082	Teso South	2.5	50	0	No	1196
F1083	Butula	1.53	50	0		958
F1084	Funyula	2.81	30	0		1001
F1085	Butula	1.53	0	0		686
F1086	Teso South	2.34	40	0	No	985
F1087	Matayos	0.9	50	390		936
F1088	Teso North	1.46	50	390	Yes	1139
F1089	Matayos		0	0	Yes	0
F1090	Funyula	2.54	60	390		970
F1092	Teso South	1.07	60	350	Yes	819
F1093	Funyula	0	30	0		1097
F1094	Butula	1.2	50	0	No	740
F1095	Matayos		60	0	Yes	902
F1096	Butula	1.77	50	0		703
F1097	Nambale	2.61	50	420	Yes	1152
F1098	Teso North	0.57	40	0	No	1139
F1099	Nambale	1.15	60	350		0
F1100	Funyula	2.96	0	420	No	734
F1103	Teso North	2.02	60	0	Yes	644
F1105	Matayos	1.14	0	0		891
F1107	Matayos	1.85	60	420	No	844
F1108	Teso South	2.35	40	0	No	1080
F1109	Funyula	1.41	0	420		798
F1110	Nambale		30	400		1184
F1112	Butula	0.81	60	400	No	991
F1113	Matayos	1.77	0	0		1028
F1114	Butula	1.32	0	0		804
F1115	Matayos	1.89	0	400	Yes	741
F1116	Nambale	2.16	50	0	Yes	653
F1117	Nambale	2.37	40	0		980
F1118	Matayos	1.92	0	0	Yes	705
F1120	Matayos	1.03	0	350		891
F1121	Matayos	2.02	30	400		0
F1122	Matayos	1.6	30	390		1125
F1124	Butula	2.9	0	390		0
F1126	Teso North	2.16	0	0	No	1024
F1128	Butula	1.09	40	400	No	995
F1129	Matayos	2.52	60	0		983
F1131	Teso North	2.03	50	400		943
F1132	Teso South	1.64	30	350	Yes	740
F1133	Matayos	1.94	0	350	No	0
F1134	Teso North	1.46	40	0		742
F1135	Matayos	0.87	50	350	Yes	1080
F1136	Nambale	2.73	0	400		605
F1137	Butula	2.71	40	0		619
F1138	Butula	1.05	0	0	No	753
F1139	Teso North	2.24	0	0	No	1140
F1141	Nambale	0.8	40	390		724
F1143	Matayos	1.9	0	420		1068
F1144	Teso North	2.39	30	420		0
F1147	Funyula	1.61	60	0		747
F1148	Nambale	2.65	30	390		601
F1149	Teso South	2.38	40	0	No	846
F1150	Nambale	1.19	50	420	No	791

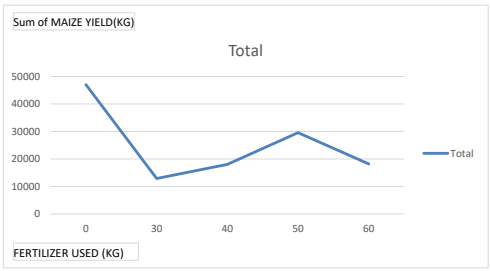
F1153	Butula	1.09	30	400	Yes	0
F1155	Teso South	0	0	400		999
F1156	Butula	2.23	40	350		644
F1157	Butula	0.66	0	0	No	982
F1158	Matayos	1.86	0	400	No	616
F1159	Teso South	1.02	60	420	No	669
F1160	Teso North	2.76	0	400	No	706
F1161	Funyula	2.24	50	0		940
F1162	Butula	2.41	60	0	No	960
F1163	Funyula	0.51	60	400	No	779
F1165	Matayos	2.88	30	400	Yes	1090
F1166	Matayos	2.37	50	0	No	738
F1167	Butula	2.01	60	400	No	0
F1168	Matayos	1.05	50	390		0
F1170	Nambale	2.2	30	0		923
F1171	Nambale	0.91	0	400	Yes	1127
F1172	Butula	0.82	50	390	Yes	1156
F1174	Nambale	1.91	60	0	No	795
F1175	Teso North		40	400	No	648
F1178	Matayos	1.64	40	0		1009
F1179	Funyula	2.7	60	400		995
F1181	Funyula	2.59	0	350	No	1109
F1182	Teso North	2.37	30	0	No	1131
F1183	Matayos		0	400	No	684
F1184	Teso South	0.67	60	390	Yes	680
F1185	Butula	0.6	40	0		784
F1187	Butula	0.55	0	390	Yes	935
F1188	Matayos	0.82	0	400	Yes	913
F1189	Funyula	1.91	0	420	Yes	1036
F1190	Funyula	2.25	0	400		1054
F1191	Matayos	0.92	30	350	Yes	643
F1192	Teso South	2.37	0	400	Yes	961
F1193	Butula	2.55	40	0	No	1045
F1196	Funyula	2.77	0	420		1125
F1198	Funyula	1.98	50	400		746
F1199	Butula	1.11	0	0	No	1048

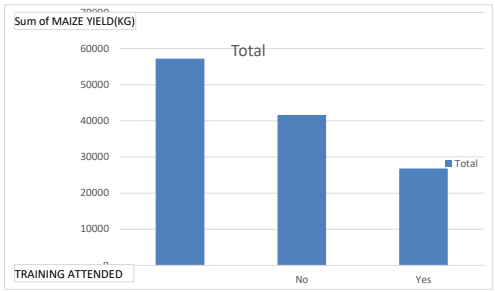
Row Labels	Sum of MAIZE YIELD(KG)
Butula	20834
Funyula	23337
Matayos	33026
Nambale	15333
Teso North	16435
Teso South	16670
Grand Total	**125635**

Row Labels	Sum of MAIZE YIELD(KG)
0	47041
30	12882
40	17999
50	29544
60	18169
Grand Total	**125635**

Row Labels	Sum of MAIZE YIELD(KG)
	57217
No	41619
Yes	26799
Grand Total	**125635**







Maize Yield Data Analysis – Summary Report
BY NGAIWA PHOSTINE|DATA ANALYST|2025

1. Overview

This analysis explores the relationship between maize yield and various factors such as farmer training, fertilizer usage, rainfall, and location. The dataset contains information from 200 smallholder farmers in Busia County, Kenya.

2. Data Cleaning Summary

Standardized location names using =PROPER(TRIM(...))
Removed 43 rows due to missing location data (essential for regional analysis)
Cleaned Fertilizer and Rainfall columns by removing units (kg, mm) and converting text to numeric format
Replaced blank cells in numeric columns with 0 to ensure consistency in calculations
Standardized Training Attended responses to consistent "Yes" or "No"
Ensured no duplicate Farmer IDs

3. Key Findings

a) Training vs. Yield

Unexpectedly, farmers who attended training had lower average maize yield compared to those who did not.
Possible reasons:
Training may have been targeted toward underperforming or struggling farmers
Trained farmers may lack resources to implement new knowledge
Other stronger factors (e.g., rainfall or input levels) could be influencing yield more than training alone

b) Fertilizer Use

Higher fertilizer use generally correlates with increased maize yield
There is a trend of diminishing returns at very high levels of fertilizer

c) Rainfall

Yield appears to increase with rainfall up to a point, but too much or too little rain also negatively impacts performance

d) Location Differences

Yield performance varied across locations
Some regions like Butula and Matayos showed consistently higher averages
Others were lower, possibly due to climate, soil, or access to resources

4. Recommendations

Review training delivery: Consider follow-up support, practical demos, or targeting farmers who can quickly apply training
Support resource access: Ensure trained farmers also receive support in fertilizer and seed inputs
Tailor interventions by location: Invest more in regions with lower yield but high potential