

# **APPENDICES**

## **Appendix A: Decomposition of Household Monthly Income into Farm, Non-farm and Transfer Income Components**

Monthly farm income includes crop income and non-crop farm income. Crop income comprises of net income from all crop production activities. Gross value of product and total cost of production was calculated for each crop and finally total cost of crop production was deducted from the gross value of output to arrive at the net incomes from crop production. Non-crop farm income includes income from livestock (sales and purchases) and livestock products (gross income) and income from rental of agricultural assets (farm machinery etc). Monthly net crop income was estimated by allocating production costs over the crop growing months and allocating gross value of product over the harvesting months (for instance, costs of wheat production were distributed over the period from November – May, while GVP was distributed over May to June). Similarly, non-crop income was separately estimated for each of the three survey periods. Non-crop income from the first survey was distributed evenly over months from December through to May while non-crop income from second and third surveys was evenly distributed over months from June through to November. In addition to this, yearly land rent was also evenly distributed over 12 months.

Table 1 and Figure 1 and 2 below show monthly farm income for each stratum and category. The table shows that on an overall basis, the average monthly farm income from all strata emerged as Rs. 359 representing the highest average monthly income (Rs. 640) for rice-wheat non-perennial block followed by rainfed area (Rs. 630). The lowest average monthly income was observed in mixed-wheat perennial block, which was Rs. – 71. On an average, the annual farm income stood at Rs. 4312 for all strata reflecting the same maximum and minimum trends among the four strata. An analysis of improved and unimproved categories the results show that average monthly farm income of sample households located at improved channels (Rs. 154) was less than half of the income (i.e., Rs. 385) of sample households located at unimproved water channels.

The table shows that farm income remained more or less in negative figure among all strata and categories during the months of December, June, August, September, October and November with the following exceptions;

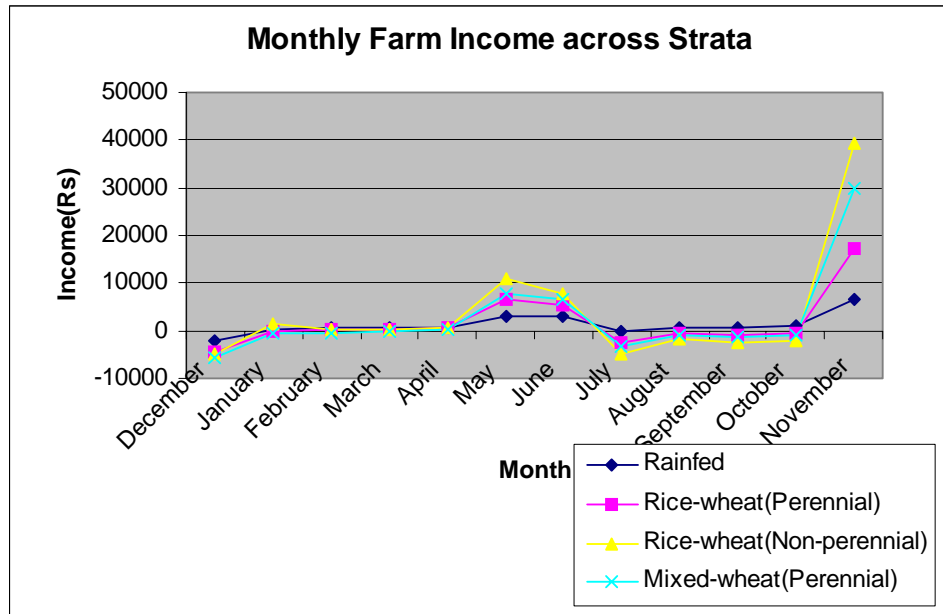
- Average monthly farm income of non-farmers remained positive throughout the year ranging from Rs. 197 to Rs. 272 per month,
- During June average monthly farm income for rice-wheat non-perennial was positive and high as compared to other three strata,
- During September, October and November average monthly farm income was positive in case of rainfed area.

It is evident from the table that average monthly income was maximum in the month of May followed by July and rice-wheat non-perennial was the area where monthly farm income was the highest following mixed-wheat perennial, rice-wheat perennial and rainfed areas during these two months.

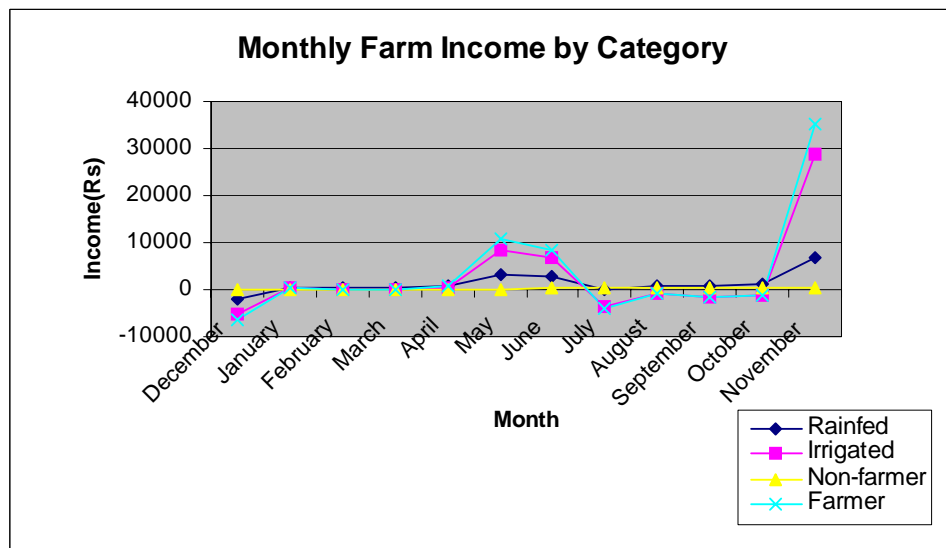
**Table A1: Total Monthly Farm Income by Strata and Category (Rs)**

	Rainfed	Rice-wheat (Perennial)	Rice-wheat (Non-perennial)	Wheat (Perennial)	Irrigated	Non-farmer	Farmer	Unimproved	Improved	Non-perennial	Perennial	All
December	-1992	-4653	-4812	-5606	-5019	197	-6597	-4937	-5101	-4812	-5125	-5019
January	234	18	1326	-540	277	199	301	105	446	1326	-259	277
February	582	189	433	-619	6	199	125	80	-67	433	-211	6
March	592	183	179	-238	43	199	171	125	-38	179	-26	43
April	770	670	795	306	593	199	867	655	531	795	489	593
May	3048	6646	10817	7793	8431	199	10689	7973	8882	10817	7215	8431
June	2977	5521	7760	6541	6612	266	8549	6571	6652	7760	6027	6612
July	-190	-2545	-4769	-3128	-3487	264	-4194	-2749	-4215	-4769	-2834	-3487
August	676	-551	-1531	-751	-948	269	-965	-525	-1364	-1531	-650	-948
September	810	-935	-2455	-1500	-1634	266	-1696	-1131	-2129	-2455	-1215	-1634
October	1068	-712	-2062	-1093	-1293	270	-1211	-783	-1795	-2062	-901	-1293
November	6639	17079	39196	29902	28759	274	35238	21013	36388	39196	23436	28759
Avg Monthly Income	1268	1742	3740	2589	2695	233	3440	2200	3183	3740	2162	2695
Annual income	15215	20909	44877	31067	32339	2799	41277	26398	38191	44877	25945	32339

**Figure A1. Monthly income by strata**



**Figure A2**



Transfer income includes all income transfers from government and private sectors, relatives and friends from inside or outside the country. Monthly transfer income of all strata and categories remained constant between December and May. This is due to the way this income was calculated, as explained earlier. Table 3 and Figure 5 & 6 show the distribution of transfer income by strata and category. The highest transfer income was observed in the rice wheat perennial area and the lowest in the mixed wheat perennial area. The second highest transfer income was in the rainfed area followed by rice wheat non-perennial area. High transfer incomes in rice wheat perennial area suggest that this was due to the necessity as the income from other farm and non farm sources was lower in this area. Furthermore, in rice wheat perennial area, the bulk of the transfers came from relatives working outside, because this area is more developed, with better education facilities and greater opportunities for obtaining permanent jobs. Rainfed area also had higher levels of transfer incomes throughout the year which was due to the fact that bulk of the population was serving in the army and majority of the remaining were abroad due to less landholding and reliance of farming on rain water. Mixed wheat perennial area had the lowest transfer as well as farm income but the second highest non-farm income suggesting that the area is relatively backward and having less education and other facilities.

**Table A2: Total Monthly Transfer Income (Rs)**

Item	Rainfed	Rice-wheat (Perennial)	Rice-wheat (Non-perennial)	Mixed-wheat (Perennial)	Irrigated	Non-farmer	Farmer	Unimproved	Improved	Non-perennial	Perennial	Group Total
December	1826	1868	1571	1481	1641	464	2327	1504	1775	1571	1676	1687
January	1826	1868	1571	1481	1641	464	2327	1504	1775	1571	1676	1687
February	1826	1868	1571	1481	1641	464	2327	1504	1775	1571	1676	1687
March	1826	1868	1571	1481	1641	464	2327	1504	1775	1571	1676	1687
April	1826	1868	1571	1481	1641	464	2327	1504	1775	1571	1676	1687
May	1826	1868	1571	1481	1641	464	2327	1504	1775	1571	1676	1687
June	1619	1907	1038	811	1253	526	1774	1013	1490	1038	1363	1345
July	1619	1907	1038	811	1253	526	1774	1013	1490	1038	1363	1345
August	1619	1907	1038	811	1253	526	1774	1013	1490	1038	1363	1345
September	1619	1907	1038	811	1253	526	1774	1013	1490	1038	1363	1345
October	1619	1907	1038	811	1253	526	1774	1013	1490	1038	1363	1345
November	1619	1907	1038	811	1253	526	1774	1013	1490	1038	1363	1345
Avg Monthly Income	1722	1887	1304	1146	1447	495	2050	1259	1632	1304	1520	1516
Yearly Farm income	20668	22646	15651	13752	17364	5942	24606	15104	19590	15651	18237	18191

Figure A3

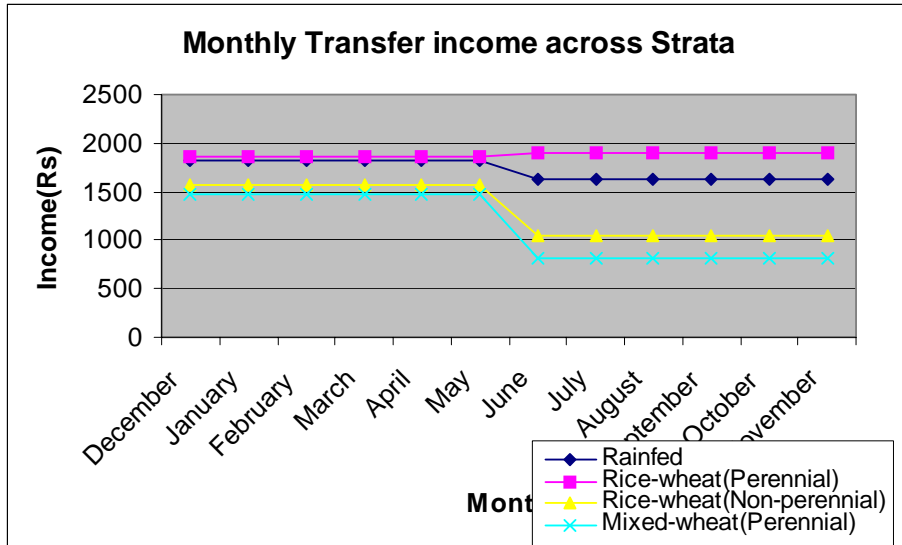
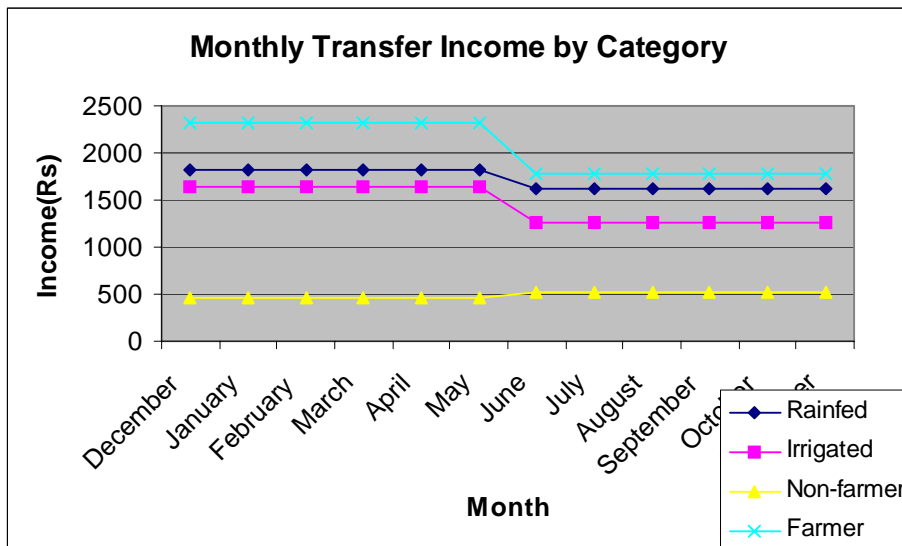


Figure A4



Monthly transfer income by category is shown in figure 5. It is clear from the figure that farmer households in the rice wheat perennial and rainfed area had the highest transfer income followed by non-farm households. With the exception of non farmers all other categories had the higher transfer income throughout the year especially during the period between December and May.

Monthly non farm income comprises wage income and income from all other sources except transfer and farm income. Wage income includes income from wage earnings obtained from primary and secondary occupations of all working members of the households who worked outside of their own farms while other income includes income from self-employment activities (gross income), income from interest, lotteries, and gifts, etc.

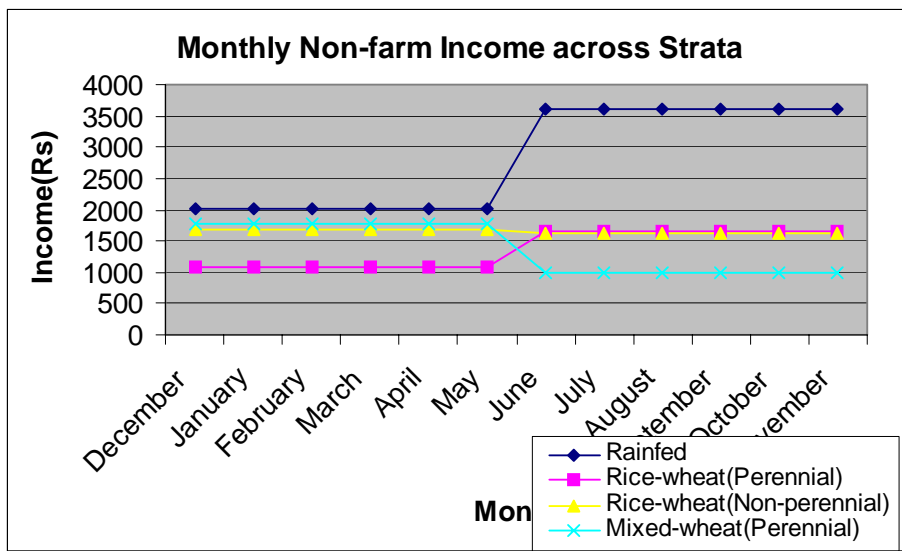
Monthly distribution of non farm income is shown in Table 2 and Figure 3. Monthly incomes between December and May are constant in all strata. This was because of the way in which this component was calculated. Data on income was obtained only on a seasonal basis in the first survey. Thus, the total non-farm income for the Rabi season (December to May), was divided by six to obtain monthly income for this period. Similarly, again the total non-farm income for the Kharif season (June to November) was divided by six to arrive at the monthly income for the period from June to November. Monthly non-farm income remained the same between December and May and increased sharply during June and remained the same till November in all strata.

**Table A3: Total Monthly Non-farm Income by Strata and Category (Rs)**

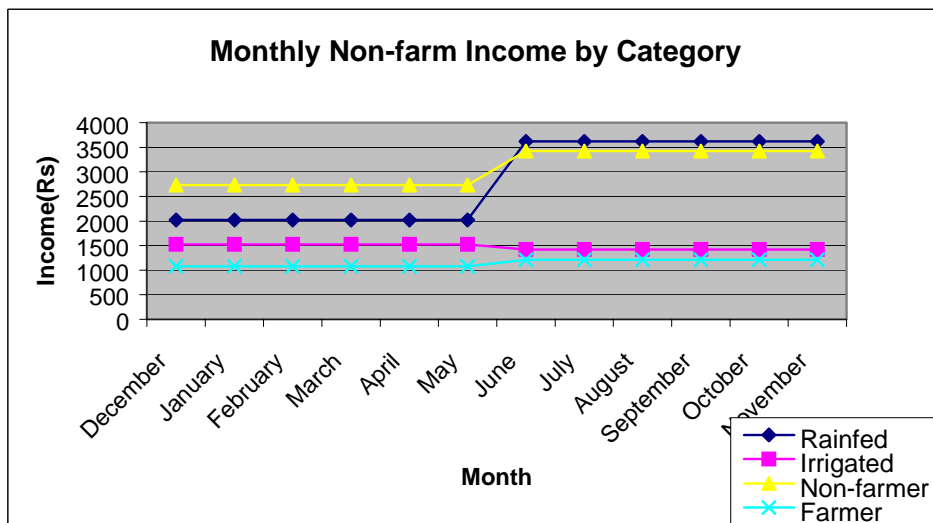
Item	Rainfed	Rice-wheat (Perennial)	Rice-wheat (Non-perennial)	Mixed-wheat (Perennial)	Irrigated	Non-farmer	Farmer	Un-improved	Improved	Non-perennial	Perennial	All
December	2021	1088	1695	1787	1523	2734	1078	1621	1426	1695	1435	1647
January	2021	1088	1695	1787	1523	2734	1078	1621	1426	1695	1435	1647
February	2021	1088	1695	1787	1523	2734	1078	1621	1426	1695	1435	1647
March	2021	1088	1695	1787	1523	2734	1078	1621	1426	1695	1435	1647
April	2021	1088	1695	1787	1523	2734	1078	1621	1426	1695	1435	1647
May	2021	1088	1695	1787	1523	2734	1078	1621	1426	1695	1435	1647
June	3622	1643	1618	990	1420	3422	1212	1574	1268	1618	1319	1971
July	3622	1643	1618	990	1420	3422	1212	1574	1268	1618	1319	1971
August	3622	1643	1618	990	1420	3422	1212	1574	1268	1618	1319	1971
September	3622	1643	1618	990	1420	3422	1212	1574	1268	1618	1319	1971
October	3622	1643	1618	990	1420	3422	1212	1574	1268	1618	1319	1971
November	3622	1643	1618	990	1420	3422	1212	1574	1268	1618	1319	1971
Avg. Monthly Income	2821	1365	1656	1388	1471	3078	1145	1597	1347	1656	1377	1809
Yearly Farm income	33857	16385	19877	16662	17655	36935	13739	19169	16164	19877	16522	21711

Data in table 2 show that monthly non-farm income was the highest in the rainfed area as compared to the remaining strata throughout the year, which might be due to the fact that most of the household members of this area were engaged in government as well as private service due to small landholding without irrigation infrastructure, ultimately earning more as compared to the remaining strata. An analysis of irrigated blocks show that during the Rabi season (December to May), the sample households residing in mixed wheat block earned the highest from non farm sources followed by rice wheat non-perennial and rice wheat perennial. The reason is that during wheat harvesting more household members earned wages from wheat harvesting. The situation was exactly the reverse during Kharif season (June to November) where the households of rice wheat perennial earned the highest non-farm income as compared to the remaining two irrigated blocks.

**Figure A5**



**Figure A6**



**Table A4: Household Average Monthly Total Incomes**

	Rainfed	Rice-wheat (Perennial)	Rice-wheat (Non- perennial)	Mixed-wheat (Perennial)	Irrigated	Non-farmer	Farmer	Unimproved	Improved	Non- perennial	Perennial	All
December	1854	-1697	-1546	-2338	-1856	3395	-3191	-1811	-1900	-1546	-2015	-927
January	4081	2974	4592	2728	3440	3397	3707	3231	3646	4592	2852	3600
February	4428	3145	3699	2649	3169	3397	3530	3206	3133	3699	2899	3484
March	4438	3139	3445	3030	3206	3397	3576	3251	3162	3445	3085	3515
April	4616	3626	4061	3574	3756	3397	4272	3781	3731	4061	3600	3971
May	6894	9602	14083	11061	11594	3397	14095	11099	12083	14083	10325	10418
June	8218	9070	10415	8342	9285	4214	11534	9158	9411	10415	8709	9018
July	5052	1004	-2113	-1327	-814	4212	-1209	-163	-1456	-2113	-151	-654
August	5917	2998	1124	1050	1726	4217	2020	2061	1395	1124	2032	2775
September	6052	2614	201	301	1040	4214	1289	1455	630	201	1467	2294
October	6309	2838	593	708	1381	4218	1774	1804	963	593	1782	2614
November	11881	20628	41852	31703	31432	4222	38224	23600	39147	41852	26118	26537
Avg Monthly Income	5812	4995	6701	5123	5613	3806	6635	5056	6162	6701	5059	5663
Yearly Farm income	69740	59940	80406	61481	67358	45676	79622	60672	73945	80406	60704	67955

## **Appendix B: Decomposition of Household Monthly Expenditures into Food and Non-food Expenditure Components**

Total monthly expenditure was decomposed into food, non-food and durables. Data on expenditure were gathered on monthly basis for each category of expenditure (food, non-food and others). In the first survey, expenditure data were obtained for each of the Rabi months, in the second survey for the months between Rabi and Kharif and in the third survey for Kharif months.

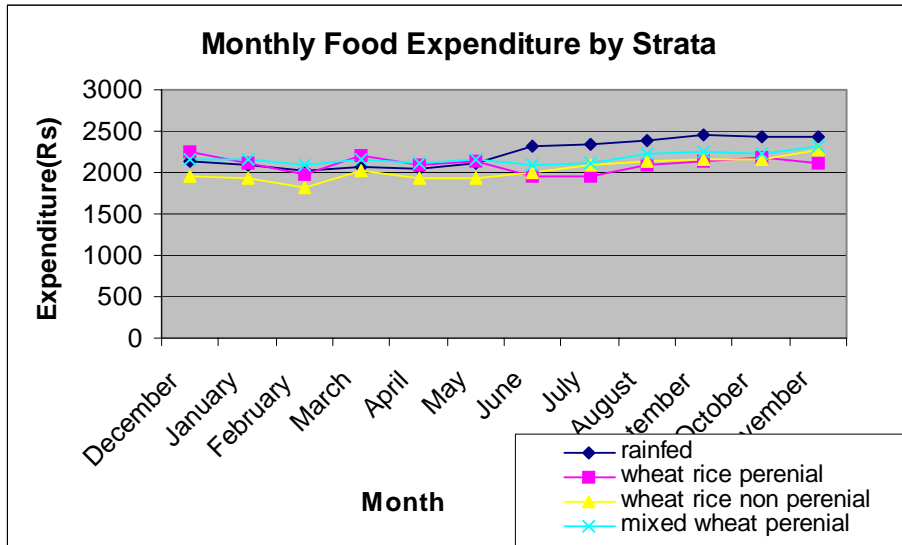
Household average monthly food expenditure by strata and category is provided in Table 4. The highest average monthly food expenditure was observed in Rainfed area, followed by mixed wheat perennial, and rice wheat perennial areas. The lowest food expenditure was in the rice wheat non-perennial area. On an overall basis rainfed areas had higher levels of food expenditure compared to the irrigated areas throughout the year except the months of March, April and May in which the average monthly food expenditure in irrigated areas was slightly higher as compared to rainfed areas. Likewise, the farmers' category had higher food expenditure than non farmers. Graphically it is represented in Figure 7. The highest expenditure on food was in November for all strata and the lowest was in February for all strata. The highest expenditure in November coincides with the Ramadan and Eid-ul-Fitar celebrations. The lower expenditures on food in February is probably due to Eid-ul-Azha during this period, which enable the people to store enough meat for 10-20 days. There is no significant difference in average monthly food expenditures in improved and un-improved areas.

**Table B1: Household Average Monthly Food Expenditures by Strata and Category**

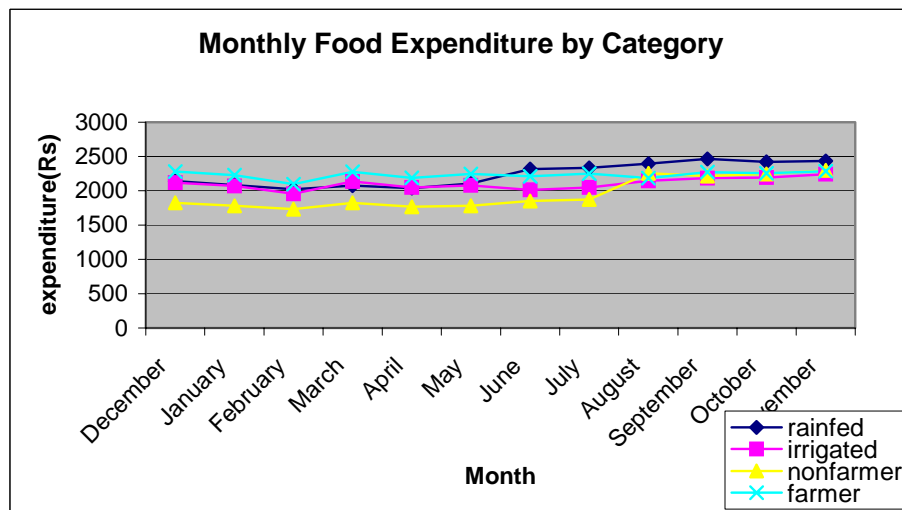
	Rainfed	Wheat rice perennial	Wheat rice non perennial	Mixed wheat perennial	Irrigated	Non-perennial	perennial	nonfarmer	Farmer	Unimproved	Improved	All
December	2138	2247	1950	2160	2118	1950	2204	1826	2279	2167	2071	2123
January	2083	2115	1935	2167	2071	1935	2141	1780	2228	2085	2058	2074
February	2020	1972	1819	2085	1957	1819	2028	1734	2099	1969	1946	1973
March	2075	2214	2024	2168	2135	2024	2191	1824	2274	2163	2107	2120
April	2041	2089	1931	2122	2046	1931	2105	1769	2189	2071	2022	2045
May	2105	2147	1933	2161	2079	1933	2154	1781	2245	2129	2030	2086
June	2316	1951	2004	2082	2012	2004	2016	1852	2211	2044	1980	2088
July	2336	1950	2089	2108	2049	2089	2028	1872	2251	2096	2002	2121
August	2394	2081	2140	2219	2146	2140	2150	2254	2185	2115	2178	2208
September	2464	2141	2149	2259	2182	2149	2199	2215	2273	2184	2181	2253
October	2423	2193	2153	2236	2194	2153	2214	2245	2254	2205	2182	2251
November	2436	2119	2282	2324	2241	2282	2221	2297	2287	2134	2347	2290
Avg Monthly Expenditure	2236	2102	2034	2174	2103	2034	2138	1954	2231	2113	2092	2136
Annual Expenditure	26831	25220	24410	26090	25232	24410	25651	23450	26775	25361	25105	25632

The figure below show that the pattern of food expenditure is the same for rainfed and irrigated farms as well as farm and non farm households. The food expenditure remains more or less constant from December up to May and then rises sharply in June. This rise was more pronounced in the rainfed area suggesting that rainfed farms and farm households spend more on food than irrigated farms or non-farm households. Monthly food expenditure of irrigated farms and farm households was almost equal for all months and greater than non-farms but from August through to November food expenditures were observed almost equal for both farmers and non-farmers.

**Figure B1**



**Figure B2**

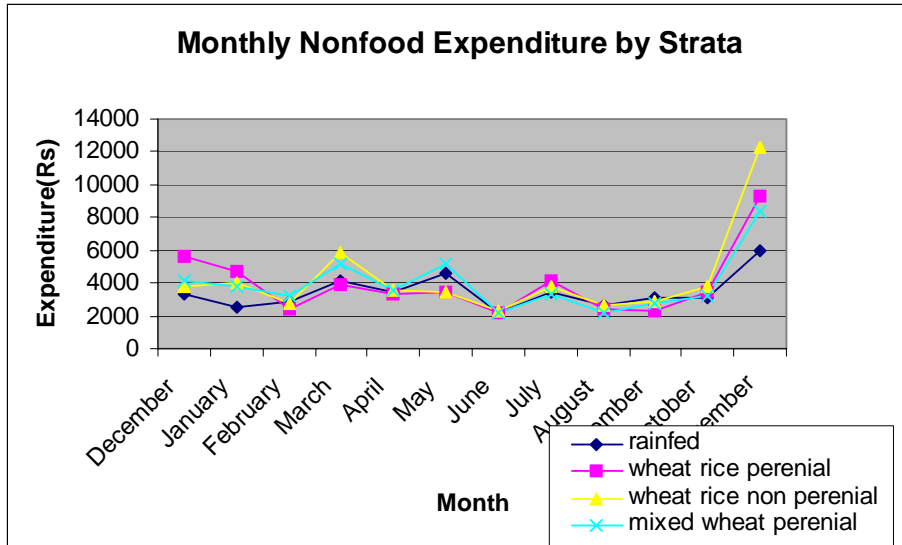


Monthly non food expenditure is shown in Table 5 and Figure 9. The monthly pattern shows four peaks, in November, December, January and March. The highest non-food expenditure was observed in November, which was almost the same for all strata and categories. The high non food expenditure in November, December, January, and March probably coincides with expenses related to Ramadan, Eid-ul-fitar and Eid-ul-Azha Ceremonies on which new cloth, shoes and other necessary items are purchased. Non food expenditure for irrigated farms and farm households was similar, with the same trend.

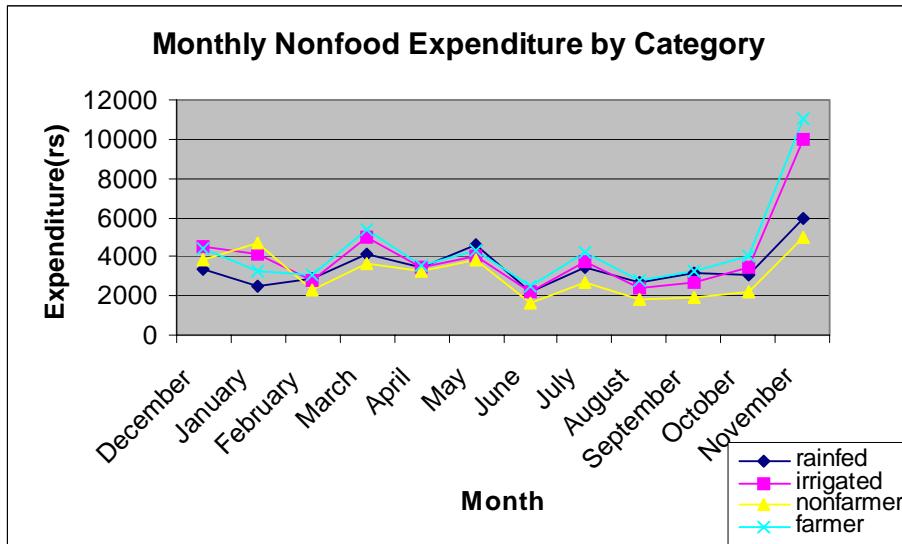
**Table B2: Household Average Monthly Non Food Expenditures by Strata and Category**

	Rainfed	Wheat rice perennial	Wheat rice non perennial	Mixed wheat perennial	Irrigated	Non-perennial	perennial	nonfarmer	Farmer	Unimproved	Improved	All
December	3374	5638	3812	4143	4530	3812	4897	3862	4439	5122	3948	4241
January	2499	4742	3996	3757	4167	3996	4254	4705	3249	4135	4198	3750
February	2910	2404	2708	3264	2789	2708	2830	2294	3094	2667	2909	2819
March	4102	3902	5904	5188	5000	5904	4539	3648	5366	4462	5531	4775
April	3413	3350	3502	3557	3469	3502	3452	3300	3536	3881	3063	3455
May	4622	3437	3457	5170	4013	3457	4296	3870	4320	3767	4255	4165
June	2230	2199	2294	2131	2209	2294	2165	1616	2527	2146	2270	2214
July	3493	4133	3826	3274	3748	3826	3708	2648	4226	3572	3921	3683
August	2670	2438	2617	2171	2411	2617	2306	1807	2826	2460	2363	2476
September	3128	2337	2915	2773	2675	2915	2553	1919	3244	2564	2785	2788
October	3072	3479	3802	3194	3495	3802	3338	2167	4028	3186	3798	3389
November	5957	9294	12298	8339	9995	12298	8820	4996	11072	10062	9929	8984
Avg Monthly Expenditure	3456	3946	4261	3913	4042	4261	3930	3069	4327	4002	4081	3895
Annual Expenditure	41468	47352	51132	46960	48500	51132	47158	36832	51928	48025	48968	46740

**Figure B3**



**Figure B4**



**Table B3: Household Average Monthly Non-food Expenditures by Strata and Category (i.e. Category 3—Non-durable)**

	rainfed	Wheat rice perennial	Wheat rice non perennial	Mixed wheat perennial	Irrigated	Non- perennial	perennial	nonfarmer	Farmer	Unimproved	Improved	All
December	892	997	878	870	915	878	934	700	1018	885	944	
January	888	946	884	869	900	884	908	679	1011	871	928	
February	873	929	865	852	882	865	891	668	991	859	905	
March	898	1000	908	887	931	908	944	694	1043	898	964	
April	887	930	896	875	901	896	903	681	1011	875	926	
May	913	953	889	885	909	889	919	695	1022	878	939	
June	1147	1091	1030	1073	1064	1030	1082	853	1206	1054	1074	
July	1161	1125	1082	1084	1097	1082	1105	872	1239	1091	1103	
August	993	992	926	962	960	926	977	792	1061	958	962	
September	971	1015	920	951	962	920	983	774	1064	943	980	
October	1033	984	918	963	955	918	974	784	1074	952	958	
November	1050	1025	918	997	980	918	1011	806	1097	964	995	
Avg Monthly Expenditure	975.5	998.9167	926.1667	939	954.6667	926.1667	969.25	749.8333	1069.75	935.6667	973.1667	
Annual Expenditure	11706	11987	11114	11268	11456	11114	11631	8998	12837	11228	11678	

**Table B4: Household Average Monthly Other Expenditures by Strata and Category (i.e. Category 4—Durable Expenditures)**

	rainfed	Wheat rice perennial	Wheat rice non perennial	Mixed wheat perennial	Irrigated	Non- perennial	perennial	Nonfarmer	Farmer	Unimproved	Improved	All
December	2483	4642	2934	3272	3615	2934	3963	3162	3421	4236	3004	
January	1611	3796	3112	2888	3267	3112	3346	4026	2238	3264	3270	
February	2037	1475	1843	2411	1907	1843	1939	1625	2103	1808	2004	
March	3203	2902	4997	4302	4069	4997	3596	2954	4322	3564	4567	
April	2525	2420	2606	2681	2568	2606	2549	2619	2526	3006	2137	
May	3709	2484	2568	4285	3104	2568	3377	3174	3298	2889	3316	
June	1083	1107	1264	1058	1144	1264	1083	763	1321	1092	1196	
July	2332	3008	2744	2190	2650	2744	2603	1775	2987	2480	2818	
August	1677	1446	1691	1209	1451	1691	1328	1015	1765	1503	1400	
September	2157	1321	1995	1822	1713	1995	1570	1145	2180	1621	1805	
October	2039	2495	2884	2230	2540	2884	2364	1383	2954	2234	2840	
November	4907	8269	11381	7342	9015	11381	7809	4190	9975	9098	8934	
Avg Monthly Expenditure	2480.25	2947.083	3334.917	2974.167	3086.917	3334.917	2960.583	2319.25	3257.5	3066.25	3107.583	
Annual Expenditure	29763	35365	40019	35690	37043	40019	35527	27831	39090	36795	37291	

**Table B5: Household Average Monthly Total Expenditures by Strata and Category**

	rainfed	Wheat rice perennial	Wheat rice non perennial	Mixed wheat perennial	Irrigated	Non- perennial	perennial	nonfarmer	Farmer	Unimproved	Improved	All
December	5513	7885	5762	6303	6649	5762	7101	5688	6718	7288	6019	6364
January	4582	6858	5931	5923	6238	5931	6395	6486	5477	6220	6256	5824
February	4930	4376	4527	5349	4746	4527	4858	4027	5193	4636	4855	4792
March	6177	6115	7929	7356	7135	7929	6730	5472	7640	6624	7638	6895
April	5454	5438	5433	5679	5515	5433	5557	5069	5726	5952	5085	5500
May	6727	5584	5390	7331	6092	5390	6450	5651	6565	5896	6285	6251
June	4546	4150	4298	4213	4220	4298	4181	3468	4738	4190	4250	4302
July	5828	6084	5915	5382	5796	5915	5736	4519	6477	5667	5923	5804
August	5063	4519	4758	4390	4557	4758	4455	4061	5011	4575	4540	4684
September	5592	4477	5064	5032	4858	5064	4752	4134	5517	4747	4966	5041
October	5495	5672	5955	5430	5688	5955	5552	4412	6283	5391	5980	5640
November	8393	11413	14580	10663	12236	14580	11041	7293	13359	12197	12276	11274
Avg Monthly Expenditure	5692	6048	6295	6088	6144	6295	6067	5023	6559	6115	6173	6031
Annual Expenditure	68299	72572	75542	73050	73732	75542	72809	60282	78703	73386	74073	72372

Figure B5

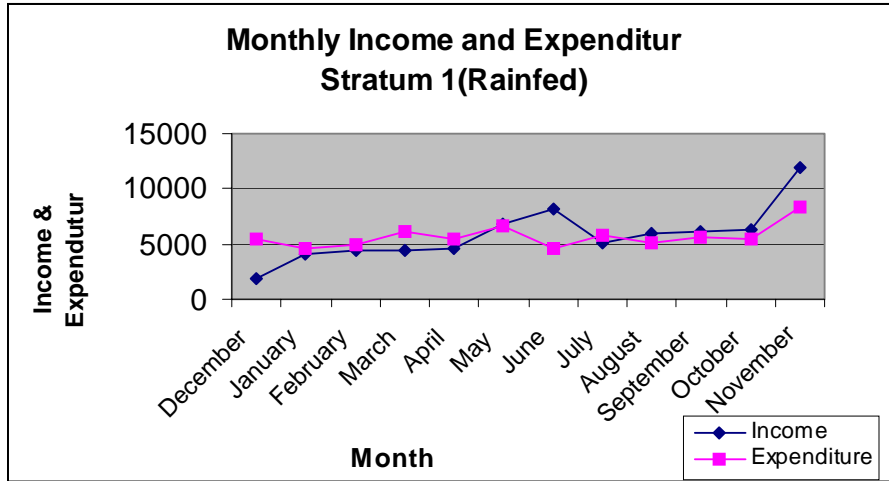


Figure B6

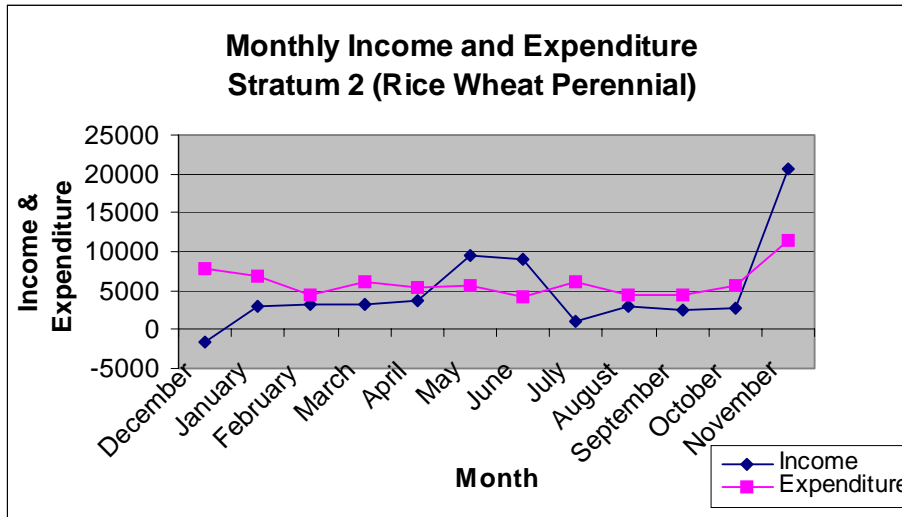


Figure B6

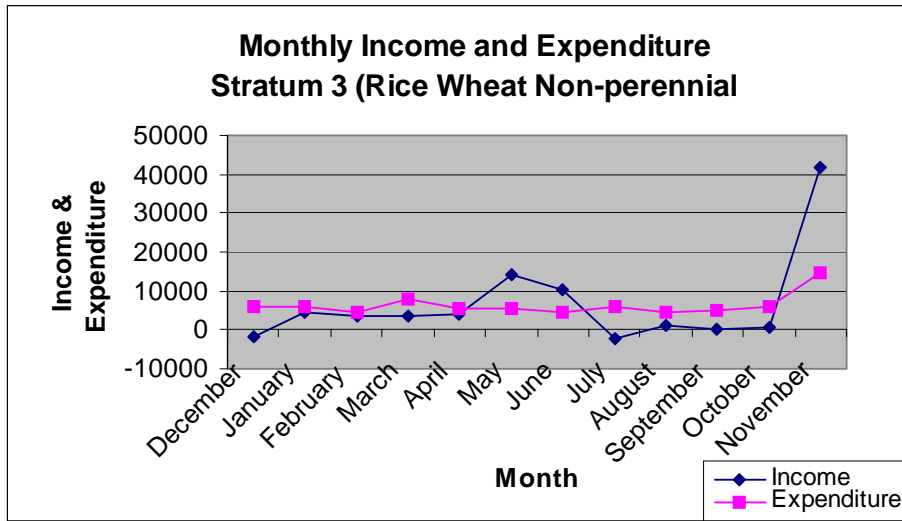


Figure B6

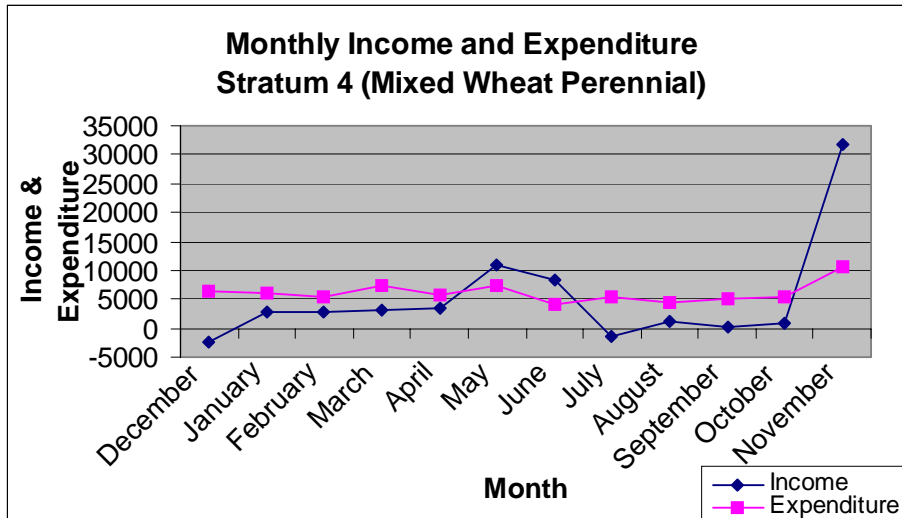


Figure B7

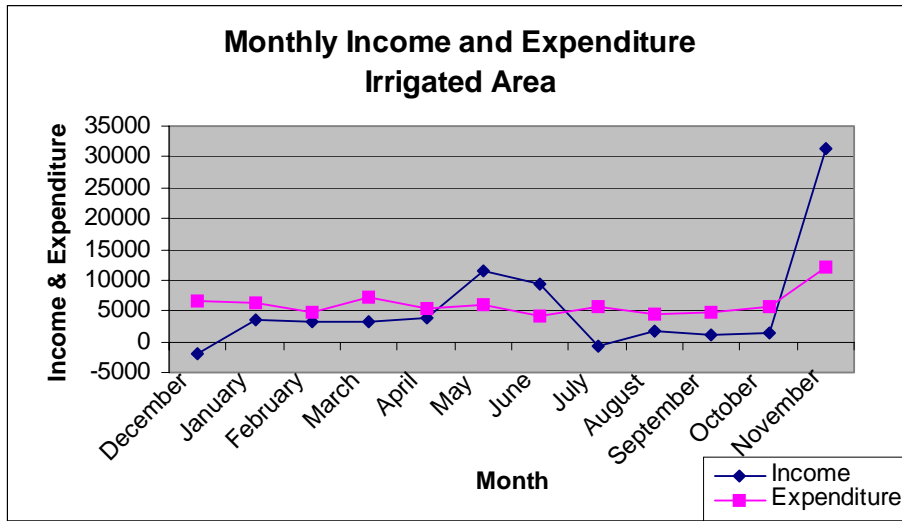


Figure B7

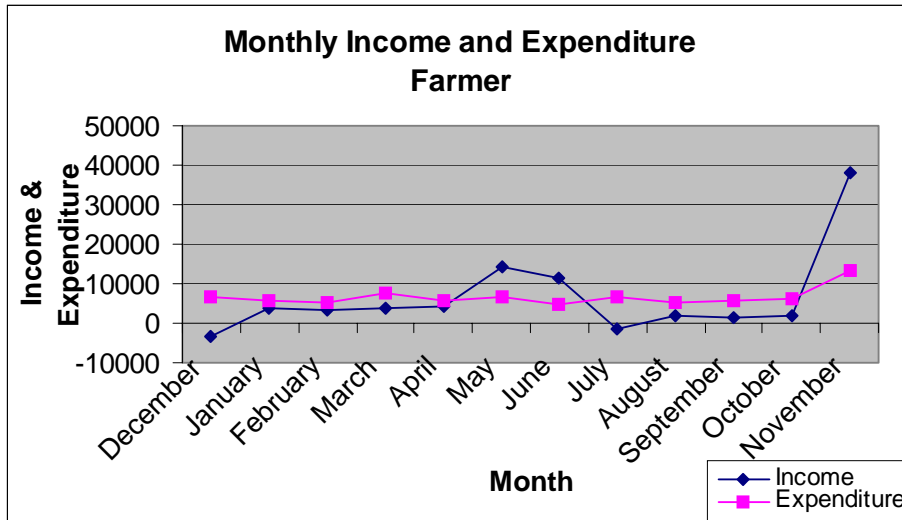


Figure B8

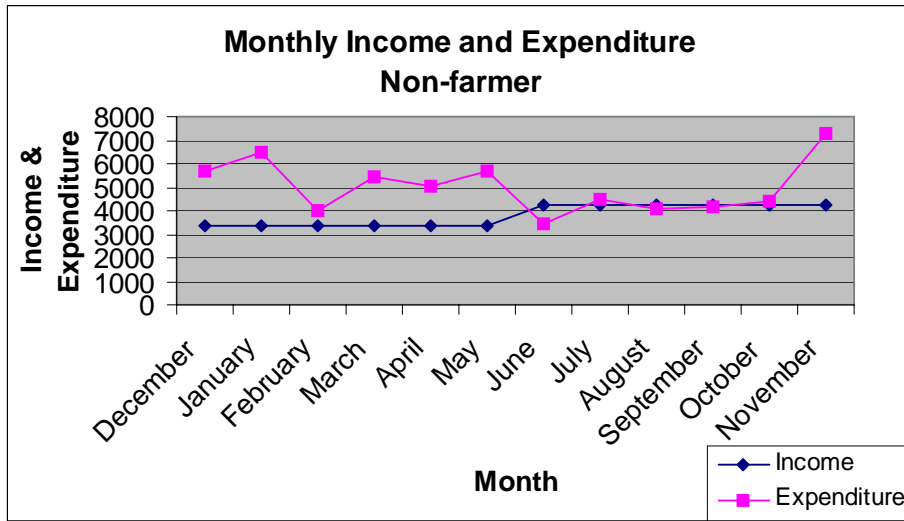


Figure B9

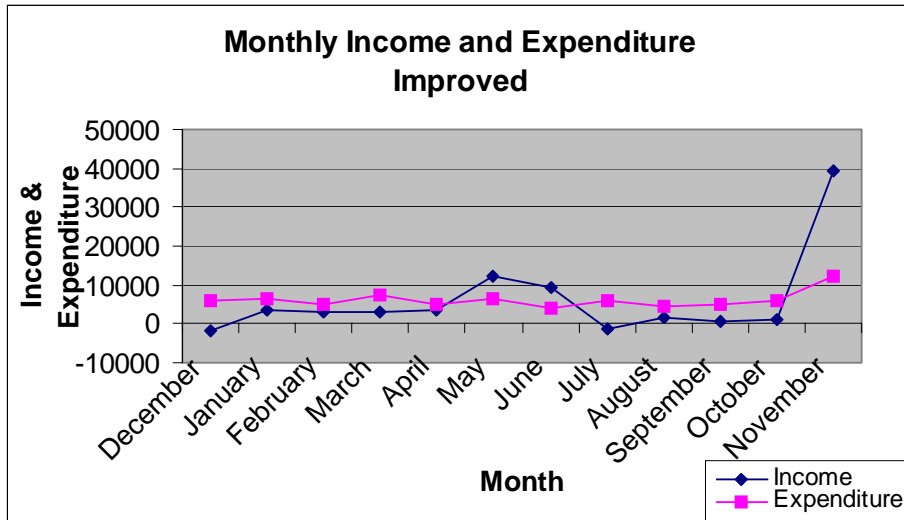
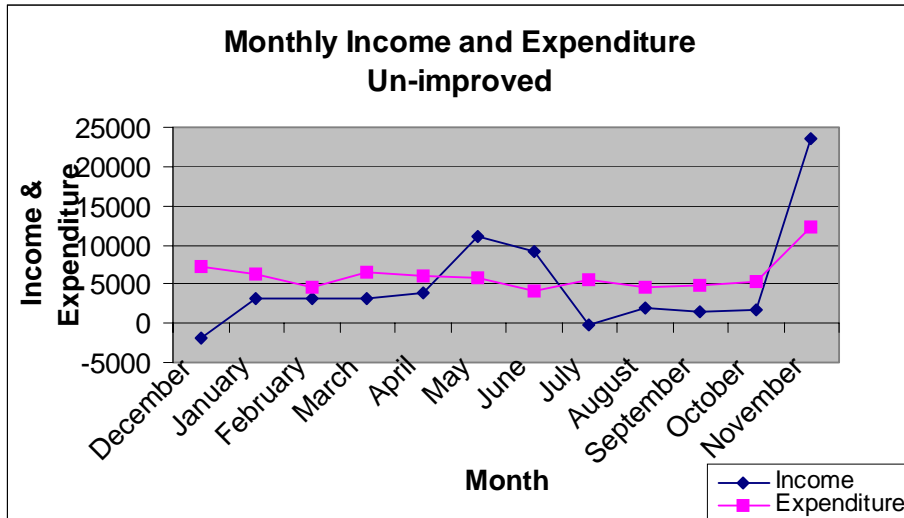


Figure B10



**Figure B11**

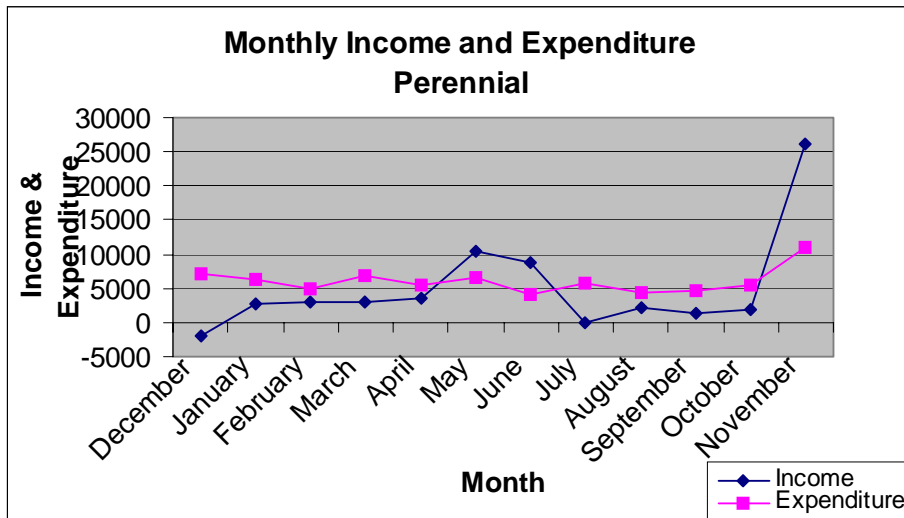
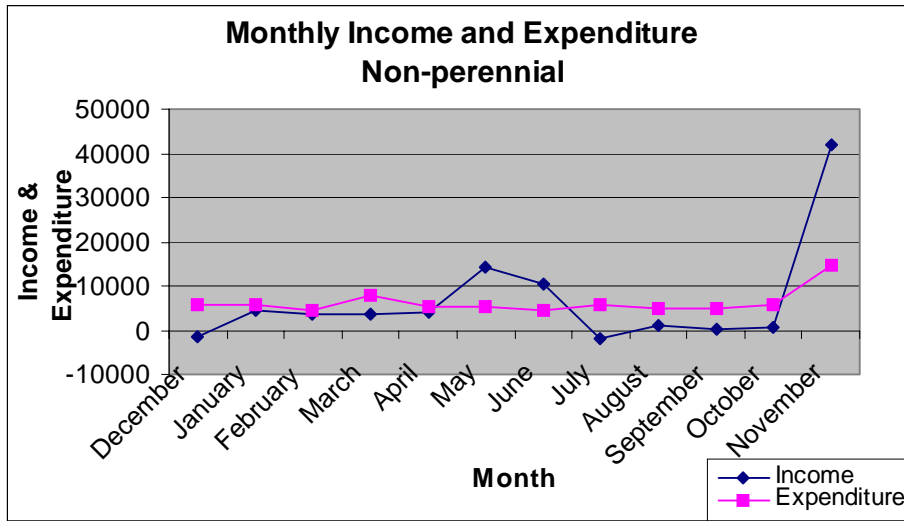


Figure B11





## Appendix C: Poverty Indices – Using Monthly Data

Appendix Table C1: Poverty Head Count – Based on Monthly Expenditure

Items	Rain fed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Un-improved	Improved	All 4-Strata
(No. of Observations)	177	177	179	174	530	243	464	263	267	707
Overall Poverty	0.927	0.910	0.950	0.943	0.934	0.971	0.912	0.939	0.929	0.932
Chronic Poverty	0.096	0.090	0.078	0.109	0.092	0.152	0.063	0.095	0.090	0.093
Transient Poverty	0.831	0.819	0.872	0.833	0.842	0.819	0.849	0.844	0.839	0.839
No. of non-poor	0.073	0.090	0.050	0.057	0.066	0.029	0.088	0.061	0.071	0.068
<b>Poverty Gap</b>										
Overall Poverty	0.256	0.293	0.282	0.295	0.29	0.312	0.258	0.282	0.298	0.281
Chronic Poverty	0.455	0.498	0.488	0.507	0.498	0.491	0.482	0.5	0.497	0.487
Transient Poverty	0.205	0.236	0.24	0.23	0.236	0.246	0.215	0.219	0.25	0.228
<b>Squared Poverty Gap</b>										
Overall Poverty	0.093	0.12	0.125	0.129	0.125	0.136	0.106	0.113	0.136	0.117
Chronic Poverty	0.23	0.281	0.274	0.291	0.283	0.27	0.268	0.283	0.282	0.269
Transient Poverty	0.077	0.103	0.112	0.108	0.107	0.112	0.094	0.094	0.121	0.100

**Appendix Table C2: Poverty Head Count – Based on Monthly Expenditure Categories I & II**

Item	Rain fed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Un-improved	Improved	All 4-Strata
(No. of Observations)	177	177	179	174	530	243	464	263	267	707
Category I (1)	0.096	0.090	0.078	0.109	0.092	0.152	0.063	0.095	0.090	0.093
Category I (3)	0.458	0.497	0.486	0.477	0.487	0.403	0.519	0.513	0.461	0.479
Category I (4)	0.073	0.090	0.050	0.057	0.066	0.029	0.088	0.061	0.071	0.068
Category II (1)	0.023	0.056	0.034	0.098	0.062	0.091	0.032	0.049	0.075	0.052
Category II (2)	0.209	0.169	0.218	0.167	0.185	0.263	0.153	0.175	0.195	0.191
Category II (3)	0.237	0.186	0.212	0.201	0.200	0.214	0.207	0.202	0.199	0.209
Category II (4)	0.192	0.198	0.173	0.184	0.185	0.177	0.192	0.186	0.184	0.187
Category II (5)	0.339	0.390	0.363	0.351	0.368	0.255	0.416	0.388	0.348	0.361

**Appendix Table C3: Poverty Gap – Based on Monthly Expenditure Categories I & II**

Item	Rain fed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Un-improved	Improved	All 4-Strata
(No. of Observations)	177	177	179	174	530	243	464	263	267	707
Category I (1)	0.46	0.50	0.49	0.51	0.50	0.49	0.48	0.50	0.50	0.49
Category I (3)	0.12	0.13	0.15	0.15	0.14	0.14	0.13	0.13	0.15	0.14
Category I (4)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Category II (1)	0.56	0.57	0.59	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Category II (2)	0.39	0.42	0.42	0.38	0.41	0.41	0.40	0.41	0.42	0.40
Category II (3)	0.22	0.29	0.27	0.28	0.28	0.25	0.27	0.27	0.28	0.26
Category II (4)	0.15	0.17	0.18	0.18	0.17	0.15	0.17	0.17	0.18	0.17
Category II (5)	0.09	0.11	0.14	0.12	0.12	0.13	0.11	0.11	0.14	0.12

**Appendix Table C4: Poverty Gap Squared – Based on Monthly Expenditure Categories I & II**

Item	Rain fed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Un-improved	Improved	All 4-Strata
(No. of Observations)	177	177	179	174	530	243	464	263	267	707
Category I (1)	0.23	0.28	0.27	0.29	0.28	0.27	0.27	0.28	0.28	0.27
Category I (3)	0.04	0.05	0.06	0.06	0.06	0.06	0.05	0.06	0.06	0.05
Category I (4)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Category II (1)	0.32	0.36	0.38	0.35	0.36	0.36	0.35	0.35	0.37	0.36
Category II (2)	0.19	0.23	0.23	0.20	0.22	0.21	0.21	0.21	0.23	0.21
Category II (3)	0.09	0.13	0.13	0.13	0.13	0.11	0.12	0.12	0.13	0.12
Category II (4)	0.06	0.07	0.07	0.08	0.07	0.06	0.07	0.07	0.07	0.07
Category II (5)	0.03	0.04	0.06	0.05	0.05	0.05	0.04	0.04	0.06	0.05

**Appendix Table C5: Poverty Head Count – Based on Monthly Expenditure (Monthly Indices)**

Items	Rain fed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Un-improved	Improved	All 4-Strata
(No. of Observations)	177	177	179	174	530	243	464	263	267	707
December	0.554	0.492	0.620	0.580	0.564	0.638	0.522	0.521	0.607	0.562
January	0.734	0.621	0.687	0.678	0.662	0.761	0.638	0.620	0.704	0.680
February	0.661	0.672	0.737	0.701	0.704	0.741	0.668	0.681	0.727	0.693
March	0.559	0.525	0.564	0.546	0.545	0.626	0.509	0.502	0.588	0.549
April	0.638	0.588	0.648	0.621	0.619	0.683	0.593	0.570	0.667	0.624
May	0.605	0.554	0.670	0.586	0.604	0.667	0.571	0.567	0.640	0.604
June	0.638	0.689	0.704	0.747	0.713	0.790	0.644	0.700	0.727	0.694
July	0.520	0.452	0.536	0.580	0.523	0.654	0.453	0.521	0.524	0.522
August	0.599	0.638	0.687	0.718	0.681	0.704	0.638	0.692	0.670	0.661
September	0.616	0.644	0.698	0.678	0.674	0.749	0.612	0.688	0.659	0.659
October	0.616	0.559	0.559	0.638	0.585	0.708	0.532	0.601	0.569	0.593
November	0.424	0.356	0.374	0.466	0.398	0.539	0.334	0.376	0.419	0.405

**Appendix Table C6: Poverty Gap – Based on Monthly Expenditure (Monthly Indices)**

Items	Rain fed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Un-improved	Improved	All 4-Strata
(No. of Observations)	177	177	179	174	530	243	464	263	267	707
December	0.33	0.37	0.39	0.37	0.37	0.39	0.35	0.37	0.38	0.36
January	0.35	0.40	0.41	0.39	0.40	0.41	0.37	0.39	0.42	0.39
February	0.36	0.43	0.43	0.38	0.41	0.42	0.39	0.40	0.43	0.40
March	0.34	0.37	0.41	0.37	0.38	0.39	0.37	0.39	0.38	0.37
April	0.33	0.41	0.40	0.39	0.40	0.40	0.37	0.40	0.40	0.38
May	0.35	0.42	0.38	0.37	0.39	0.40	0.37	0.37	0.41	0.38
June	0.37	0.39	0.38	0.41	0.39	0.44	0.35	0.37	0.41	0.39
July	0.30	0.35	0.34	0.36	0.35	0.37	0.31	0.33	0.37	0.34
August	0.33	0.40	0.40	0.42	0.41	0.40	0.39	0.39	0.42	0.39
September	0.33	0.39	0.38	0.42	0.39	0.37	0.38	0.39	0.40	0.38
October	0.29	0.38	0.37	0.41	0.39	0.35	0.37	0.37	0.40	0.36
November	0.31	0.37	0.32	0.38	0.36	0.32	0.36	0.34	0.38	0.35

**Appendix Table C7: Poverty Gap Squared – Based on Monthly Expenditure (Monthly Indices)**

Items	Rain fed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Un-improved	Improved	All 4-Strata
(No. of Observations)	177	177	179	174	530	243	464	263	267	707
December	0.14	0.17	0.18	0.17	0.18	0.19	0.15	0.17	0.18	0.17
January	0.16	0.20	0.21	0.19	0.20	0.21	0.18	0.19	0.21	0.19
February	0.17	0.22	0.22	0.19	0.21	0.22	0.19	0.20	0.22	0.20
March	0.15	0.18	0.21	0.17	0.19	0.19	0.17	0.19	0.19	0.18
April	0.14	0.20	0.20	0.18	0.20	0.20	0.17	0.20	0.20	0.18
May	0.16	0.22	0.19	0.18	0.19	0.20	0.18	0.18	0.20	0.18
June	0.17	0.20	0.19	0.20	0.20	0.23	0.16	0.18	0.21	0.19
July	0.12	0.16	0.16	0.17	0.16	0.18	0.14	0.15	0.18	0.15
August	0.14	0.20	0.19	0.22	0.21	0.19	0.19	0.19	0.22	0.19
September	0.14	0.20	0.19	0.21	0.20	0.18	0.19	0.19	0.21	0.18
October	0.12	0.19	0.17	0.21	0.19	0.16	0.18	0.18	0.21	0.17
November	0.13	0.18	0.15	0.20	0.18	0.14	0.18	0.16	0.19	0.16



## Appendix D: Poverty Indices – Using Quarterly Data

Appendix Table D1: Poverty Head Count – Based on Household Income (Quarterly Indices)

Item	Rainfed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Unimproved	Improved	All 4-Strata
(No.of Observations)	177	177	179	174	530	243	464	263	267	707
Quarter 1	0.729	0.808	0.793	0.805	0.802	0.790	0.780	0.821	0.783	0.784
Quarter 2	0.667	0.672	0.553	0.649	0.625	0.790	0.554	0.608	0.640	0.635
Quarter 3	0.520	0.627	0.749	0.787	0.721	0.761	0.623	0.669	0.772	0.670
Quarter 4	0.480	0.486	0.408	0.569	0.487	0.761	0.341	0.483	0.491	0.485

Appendix Table D2: Poverty Head Count – Based on Household Income (Quarterly Indices)

Item	Rainfed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Unimproved	Improved	All 4-Strata
(NO.of Observations)	177	177	179	174	530	243	464	263	267	707
Quarter 1	0.605	0.559	0.642	0.575	0.592	0.679	0.552	0.567	0.618	0.595
Quarter 2	0.548	0.508	0.559	0.511	0.526	0.588	0.502	0.487	0.566	0.532
Quarter 3	0.537	0.559	0.620	0.672	0.617	0.708	0.539	0.620	0.614	0.597
Quarter 4	0.514	0.412	0.453	0.494	0.453	0.613	0.392	0.433	0.472	0.468

Appendix Table D3: Poverty Head Count – Based on Household Income (Quarterly Indices)

Item	Rainfed	Rice-wheat (Perennial)	Rice-wheat (Non-Perennial)	Mixed-wheat (Perennial)	Irrigated All	Non-Farmer	Farmer	Unimproved	Improved	All 4-Strata
(NO.of Observations)	177	177	179	174	530	243	464	263	267	707
Overall Poverty (N)	0.831	0.802	0.849	0.839	0.830	0.909	0.789	0.810	0.850	0.830
Chronic Poverty (N)	0.254	0.226	0.251	0.241	0.240	0.333	0.196	0.232	0.247	0.243
Transient Poverty (N)	0.576	0.576	0.598	0.598	0.591	0.576	0.593	0.578	0.603	0.587

No. Of non-poor (N)	0.169	0.198	0.151	0.161	0.170	0.091	0.211	0.190	0.150	0.170
Poverty Gap										
Overall Poverty	0.256	0.293	0.282	0.295	0.29	0.312	0.258	0.282	0.298	0.28
Chronic Poverty	0.342	0.409	0.384	0.418	0.403	0.41	0.366	0.401	0.405	0.39
Transient Poverty	0.154	0.153	0.161	0.163	0.16	0.172	0.15	0.139	0.177	0.16
Squared Poverty Gap										
Overall Poverty	0.081	0.098	0.104	0.114	0.105	0.118	0.088	0.097	0.113	0.1
Chronic Poverty	0.146	0.203	0.184	0.211	0.199	0.202	0.169	0.195	0.202	0.19
Transient Poverty	0.052	0.057	0.07	0.075	0.067	0.069	0.061	0.058	0.076	0.06

## **Appendix E: Body Mass Index (BMI)**

Table below shows the BMI by age category over the three survey periods. A slight increase in the BMI was observed from survey one (June) to survey three (December) almost in all age groups except the last age group category of 20 to 24 years that shows a slight decrease in BMI all over the irrigated as well as rainfed areas. It is also evident from the results shown in the table below that among all the age groups and categories the BMI decreased slightly during the second survey period (August) and increased in the last survey (December). This implies that in both rainfed as well as irrigated areas the nutrition level declined during the second survey period while increased slightly over the third period. Comparing the four strata it was observed that rice wheat non-perennial has the highest BMI among all the age groups and categories during all the survey periods, which shows the high nutrition levels in this strata.

Analyzing the BMI of farm and non-farm households the results show that BMI for non-farm households is lower than farm households for all age groups. The BMI declines and increases slightly over the three periods of the survey, in the case of non farm households for the first two age groups while continuously decreased from first to last survey among the remaining age categories. In farm households, the BMI tends to increase from period one to three, except in the first and last age groups, where it declines and then increases slightly in the last period. The results suggest that the nutritional levels are lower during the dry period (second survey period), especially for non-farmers, when there are less opportunities for work in agriculture.

Comparing the different strata and categories, no serious instances of underweight children were observed during all the survey periods. However, the 5-9 age group were found to have relatively low BMI among all the categories during all the survey periods. The BMI of sample households located at improved watercourses was observed to be slightly higher when compared with the households located at unimproved water channels and the level of increase was more prominent under the age group of 5-9. This situation may not be related 100 percent to the watercourse improvement but certainly some other factors leading to better food availability.

**Appendix Table E1: Body Mass Index**

Survey	Category	Rainfed	Rice-wheat Perennial	Rice-wheat Non-Perennial	Mixed Wheat Perennial	Irrigated Area	Unimproved	Improved	Non-Farmer	Farmer	Male	Female	All
Survey 1	01 to 04	16.38 (136)	16.07 (117)	16.57 (115)	16.44 (93)	16.35 (325)	15.87 (153)	16.78 (172)	15.93 (184)	16.65 (277)	16.48 (229)	16.24 (232)	16.36 (461)
	05 to 09	14.50 (158)	14.63 (151)	15.01 (148)	14.38 (147)	14.67 (446)	14.56 (221)	14.78 (225)	14.66 (236)	14.60 (368)	14.65 (305)	14.61 (298)	14.63 (604)
	10 to 14	17.01 (141)	15.91 (147)	17.09 (152)	16.80 (131)	16.60 (430)	16.56 (197)	16.63 (233)	16.43 (203)	16.85 (368)	16.17 (294)	17.27 (274)	16.70 (571)
	15 to 19	19.95 (148)	19.73 (130)	19.65 (161)	19.69 (109)	19.69 (400)	19.70 (181)	19.68 (219)	19.51 (182)	19.88 (366)	19.21 (268)	20.29 (278)	19.76 (548)
	20 to 24	20.77 (120)	21.22 (98)	21.48 (131)	20.82 (100)	21.20 (329)	20.87 (160)	21.52 (169)	20.84 (142)	21.20 (307)	20.52 (243)	21.75 (205)	21.09 (449)
Survey 2	01 to 04	16.17 (138)	15.57 (116)	16.28 (118)	15.47 (112)	15.78 (346)	15.77 (167)	15.78 (179)	15.43 (189)	16.18 (295)	15.89 (242)	15.88 (241)	15.89 (484)
	05 to 09	14.51 (161)	14.99 (159)	14.86 (153)	14.68 (166)	14.84 (478)	14.59 (242)	15.10 (236)	14.54 (252)	14.90 (387)	14.84 (320)	14.68 (318)	14.76 (639)
	10 to 14	16.90 (142)	15.82 (146)	16.96 (155)	17.04 (146)	16.61 (447)	16.47 (211)	16.74 (236)	16.12 (210)	16.99 (379)	16.02 (307)	17.41 (279)	16.68 (589)
	15 to 19	19.76 (148)	19.57 (131)	19.69 (157)	19.66 (126)	19.64 (414)	19.88 (194)	19.43 (220)	19.36 (187)	19.83 (375)	19.10 (277)	20.24 (283)	19.67 (562)
	20 to 24	20.43 (121)	21.20 (100)	21.18 (133)	20.55 (112)	20.98 (345)	20.35 (170)	21.60 (175)	20.27 (147)	21.10 (319)	20.12 (251)	21.67 (214)	20.84 (466)
Survey 3	01 to 04	16.97 (137)	16.39 (122)	17.20 (123)	16.17 (112)	16.60 (357)	16.59 (169)	16.61 (188)	16.43 (193)	16.88 (301)	16.99 (247)	16.41 (244)	16.70 (494)
	05 to 09	14.91 (161)	14.91 (157)	15.17 (154)	14.74 (164)	14.93 (475)	14.75 (240)	15.12 (235)	14.87 (247)	14.96 (389)	14.97 (318)	14.89 (317)	14.93 (636)
	10 to 14	17.34 (139)	16.07 (144)	17.06 (154)	17.04 (146)	16.73 (444)	16.68 (209)	16.78 (235)	16.35 (205)	17.17 (378)	16.14 (304)	17.70 (276)	16.88 (583)
	15 to 19	20.07 (146)	19.91 (125)	19.58 (156)	19.66 (123)	19.7 (4040)	19.96 (187)	19.49 (217)	19.44 (186)	19.99 (364)	19.24 (272)	20.37 (276)	19.80 (550)
	20 to 24	20.58 (115)	21.17 (93)	21.13 (134)	20.88 (109)	21.06 (336)	20.70 (163)	21.39 (173)	20.74 (142)	21.03 (309)	20.29 (243)	21.68 (207)	20.93 (451)

**Appendix F: Welfare Cost of Household Income and Expenditure Fluctuations**

Appendix Table F1: Welfare Cost of Fluctuations in Household Monthly Income – Based on Monthly Income Data

Items	N	STD	CV	m/y (RRA=2)	m/y (RRA=4)
Rain fed	177	4367.42	3.01	510.95	1021.91
Rice-Wheat Perennial	177	7898.99	1.41	60.38	120.77
Rice-Wheat Non-Perennial	179	13939.53	2.82	92.35	184.71
Mixed-Wheat Perennial	174	10998.60	1.55	1096.98	2193.97
Farmer	243	13279.98	1.92	605.20	1210.48
Non-Farmer	464	1720.90	0.52	110.08	220.16
Rain fed	177	4367.42	3.01	510.95	1021.91
Irrigated	530	10956.71	0.91	410.80	821.61
Improved	267	13214.40	1.15	706.04	1412.09
Un-improved	263	8664.67	0.67	108.78	217.56
Chronic Poor	186	1155.28	0.80	152.69	305.39
Transient Poor	476	12774.30	1.80	586.64	1173.29
Non-Poor	45	6325.26	0.29	0.14	0.29
All Strata	707	9307.05	1.44	435.95	871.90

Appendix Table F2: Welfare Cost of Fluctuations in Household Expenditure – Based on Quarterly Expenditure Data

Appendix Table F3: Welfare Cost of Fluctuations in Household Income– Based on Quarterly Income Data

## Appendix G: Regression Results

**Table G1: Determinant of Net Crop Income (All strata)**

<b>Dependent Variable: Net crop income</b>			
Independent Variables	B	Std. Error	t
Constant	-1859.52	544.441	-3.415
Annual GVP per ha	0.814	0.033	24.804
Cropping intensity	180.011	247.502	0.727
Dummy 1; Improved=1 and unimproved=0	-119.995	401.841	-0.299
Dummy 2; Head=1; 0 otherwise	-545.683	489.312	-1.115
Dummy 3; Middle=1 and 0 otherwise	343.48	491.919	0.698
Agriculture assets	0.12	0.039	3.056
Dummy 4; Rice-wheat-perennial = 1 and 0 otherwise	-89.928	492.72	-0.183
Dummy 5; Rice-wheat-nonperennial =1 and 0 otherwise	1237.5	494.621	2.502
Size of land holding (ha)	-565.811	85.71	-6.601
N = 524	Adj. R <sup>2</sup> = 0.687	df = 9	

**Table G2: Determinant of Net Crop Income (Rice-wheat-perennial stratum)**

<b>Dependent Variable: Net crop income</b>			
Independent Variables	B	Std. Error	t
Constant	-661.991	736.047	-0.899
Annual GVP per ha	0.716	0.048	14.911
Cropping intensity	581.709	335.4	1.734
Dummy 1; Improved=1 and unimproved=0	-28.404	625.795	-0.045
Dummy 2; Head=1; 0 otherwise	-1428.84	732.82	-1.95
Dummy 3; Middle=1 and 0 otherwise	-1532.42	719.559	-2.13
Agriculture assets	-0.527	0.199	-2.646
Size of land holding (ha)	-485.235	154.668	-3.137
N = 175	Adj. R <sup>2</sup> = 0.680	df = 7	

**Table G3: Determinant of Net Crop Income (Rice-wheat-nonperennial stratum)**

<b>Dependent Variable: Net crop income</b>			
Independent Variables	B	Std. Error	t
Constant	-2243.15	917.271	-2.445
Annual GVP per ha	0.793	0.062	12.783
Cropping intensity	935.026	532.623	1.756
Dummy 1; Improved=1 and unimproved=0	197.279	758.985	0.26
Dummy 2; Head=1; 0 otherwise	-169.42	923.011	-0.184
Dummy 3; Middle=1 and 0 otherwise	1916.884	944.802	2.029
Agriculture assets	0.118	0.069	1.707
Size of land holding (ha)	-495.974	183.608	-2.701
N = 178	Adj. R <sup>2</sup> = 0.708	df = 7	

**Table G4: Determinant of Net Crop Income (Mixed-wheat-perennial stratum)**

<b>Dependent Variable: Net crop income</b>			
Independent Variables	B	Std. Error	t
Constant	-1430.23	775.72	-1.844
Annual GVP per ha	0.885	0.059	14.906
Cropping intensity	-910.523	427.666	-2.129
Dummy 1; Improved=1 and unimproved=0	-183.826	708.818	-0.259
Dummy 2; Head=1; 0 otherwise	165.621	875.992	0.189
Dummy 3; Middle=1 and 0 otherwise	406.998	872.726	0.466
Agriculture assets	0.138	0.055	2.53
Size of land holding (ha)	-646.49	129.722	-4.984
N = 171	Adj. R <sup>2</sup> = 0.645	df = 7	

**Table G5: Determinant of Annual Expenditure (All Strata)**

<b>Dependent Variable: Log of annual expenditure</b>			
Independent Variables	B	Std. Error	t
Constant	10.66951	0.062	172.677
HHH schooling years	0.009625	0.007	1.406
HHH schooling years in improved areas	-0.00347	0.009	-0.367
HH workers	0.079981	0.024	3.3
HH workers in improved areas	-0.01324	0.025	-0.524
Annual GVP per ha	-0.000001	0	-0.383
GVP in improved areas	0.000004	0	0.79
Land holding	0.06598	0.015	4.517
Land holding in improved areas	-0.02046	0.019	-1.062
Agriculture assets	0.000004	0	0.51
Agric assets in improved areas	0.000000	0	-0.024
Remittance within country	0.000001	0	0.321
Remittance within the country in improved areas	0.000002	0	0.76
Remittance outside country	0.000001	0	1.427
Remittance outside the country in improved areas	0.000001	0	1.076
Average annual credit use	0.000000	0	1.361
Credit use in improved areas	0.000000	0	0.053
Dummy 4; Rice-wheat-perennial= 1 and 0 otherwise	0.00568	0.052	0.11
Dummy 5; Rice-wheat-nonperennial =1 and 0 otherwise	0.015866	0.052	0.306
N = 524	Adj.R <sup>2</sup> = 0.210	df = 18	

**Table G6: Determinant of Annual Expenditure (All Strata)**

Dependent Variable: Annual expenditure			
Independent Variables	B	Std. Error	t
Constant	45853.134	5342.979	8.582
HHH schooling years	194.131	591.919	0.328
HHH schooling years in improved areas	258.661	819.104	0.316
HH workers	4497.493	2095.822	2.146
HH workers in improved areas	-371.624	2182.557	-0.170
Annual GVP per ha	-0.111	0.338	-0.329
GVP in improved areas	-0.170	0.466	-0.365
Land holding	5209.322	1263.001	4.125
Land holding in improved areas	-727.751	1665.499	-0.437
Agriculture assets	0.494	0.668	0.739
Agric assets in improved areas	0.581	0.790	0.736
Remittance within country	-0.007	0.162	-0.042
Remittance within the country in improved areas	0.145	0.248	0.587
Remittance outside country	0.101	0.068	1.480
Remittance outside the country in improved areas	0.105	0.083	1.257
Average annual credit use	0.043	0.028	1.567
Credit use in improved areas	0.003	0.041	0.074
Dummy 4; Rice-wheat-perennial= 1 and 0 otherwise	3561.838	4472.370	0.796
Dummy 5; Rice-wheat-nonperennial =1 and 0 otherwise	2430.770	4479.962	0.543
N = 524	Adj.R <sup>2</sup> = 0.207		df = 18

**Table G7: Determinant of Annual Expenditure (Rice-wheat-perennial stratum)**

Dependent Variable: Annual expenditure			
Independent Variables	B	Std. Error	t
Constant	53391.57	8808.071	6.062
HHH schooling years	672.597	1005.939	0.669
HHH schooling years in improved areas	-267.716	1491.891	-0.179
HH workers	2351.232	4777.55	0.492
HH workers in improved areas	-7007.399	5185.766	-1.351
Annual GVP per ha	-0.89	0.667	-1.333
GVP in improved areas	0.14	0.979	0.143
Land holding	6134.664	2569.003	2.388
Land holding in improved areas	6187.076	4175.734	1.482
Agriculture assets	0.448	3.005	0.149
Agric assets in improved areas	-1.147	5.304	-0.216
Remittance within country	0.615	0.402	1.528
Remittance within the country in improved areas	-0.924	0.615	-1.503
Remittance outside country	0.318	0.126	2.523
Remittance outside the country in improved areas	-0.078	0.146	-0.533
Average annual credit use	0.05	0.094	0.535
Credit use in improved areas	0.008	0.121	0.065
N = 175	Adj.R <sup>2</sup> = 0.263		df = 16

**Table G8: Determinant of Annual Expenditure (Rice-wheat-nonperennial stratum)**

Dependent Variable: Annual expenditure			
Independent Variables	B	Std. Error	t
Constant	45544.41	8091.557	5.629
HHH schooling years	-527.542	1071.167	-0.492
HHH schooling years in improved areas	1081.051	1483.509	0.729
HH workers	5327.336	3726.965	1.429
HH workers in improved areas	-619.436	3794.441	-0.163
Annual GVP per ha	0.326	0.609	0.535
GVP in improved areas	-0.279	0.799	-0.349
Land holding	5257.892	2694.752	1.951
Land holding in improved areas	-2010.649	3245.211	-0.62
Agriculture assets	1.588	1.252	1.268
Agric assets in improved areas	-1.202	1.401	-0.858
Remittance within country	-0.17	0.198	-0.859
Remittance within the country in improved areas	0.503	0.305	1.647
Remittance outside country	0.121	0.162	0.746
Remittance outside the country in improved areas	0	0.199	-0.002
Average annual credit use	0.038	0.032	1.176
Credit use in improved areas	0.02	0.076	0.26
N = 178	Adj.R <sup>2</sup> = 0.132	df = 16	

**Table G9: Determinant of Annual Expenditure (Mixed-wheat-perennial stratum)**

Dependent Variable: Annual expenditure			
Independent Variables	B	Std. Error	t
Constant	46519.38	7357.035	6.323
HHH schooling years	261.992	1034.624	0.253
HHH schooling years in improved areas	216.172	1359.45	0.159
HH workers	4339.158	2891.501	1.501
HH workers in improved areas	3171.175	2952.527	1.074
Annual GVP per ha	0.23	0.523	0.439
GVP in improved areas	-0.404	0.795	-0.508
Land holding	2364.69	1864.113	1.269
Land holding in improved areas	290.041	2372.978	0.122
Agriculture assets	0.266	0.771	0.346
Agric assets in improved areas	1.829	0.951	1.922
Remittance within country	-0.146	0.392	-0.372
Remittance within the country in improved areas	0.463	0.81	0.572
Remittance outside country	-0.044	0.093	-0.473
Remittance outside the country in improved areas	0.148	0.126	1.179
Average annual credit use	0.112	0.085	1.325
Credit use in improved areas	-0.086	0.093	-0.919
N = 171	Adj.R <sup>2</sup> = 0.286	df = 16	

STE = Standard Error

HHSY= Household Head Schooling Years

NHHM= Number of Household Members

ANFM= Average Number of Family Workers

ALH = Average land holding (ha)

VAA= Value of Agric. Assets

GVP= Gross Value of Production

NCFI=Non crop farm income

NFIN=Non-farm income

FNF= Farm-Non-farm (Farm = 1 and Non-farm=0)

D1= Dummy for stratum 1(Stratum 1= 1, 0= otherwise)  
D2= Dummy for stratum 2 (Stratum 2= 1, 0= otherwise)  
D3= Dummy for stratum 3 (Stratum 3= 1, 0= otherwise)  
D4= Dummy for stratum 4 (Stratum 4=1, otherwise 0)  
D6= Dummy for stratum 6 (Stratum 6=1, otherwise 0)