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TWO-FIGURE TABLE LOAN PAYMENT RETURN FOR NIGERIAN AGRICULTURAL COOPERATIVE SOCIETIES: AN ENGINEERING PROJECTS PROCUREMENT TOOL

[1]OLAYEMI, O. D.; [2]AWONIYI, G. O[2].; & AWONIYI O. O[3].
[1]Department of Computer Science, Federal Polytechnic, Bida, Niger State, Nigeria. [2]Department of Agricultural and Bio-environmental Engineering, Federal Polytechnic, Bida, Niger State, Nigeria. [3]Department of Quality Control and Assuarance, TwinsFaja Group of Companies, Lagos, Nigeria.

ABSTRACT
This research came about on the thought of how to assist farmers and engineers on payment plan schedule for payment return on agricultural incentives and machinery procurement loans. The paper work aimed at generating Two-Figure Table handbook for the membership of the Nigerian Co-operative Societies for any loan obtained at various interest rates. It later generated to generalizing it to the various Nigeria workers' cooperative societies since most of the societies are operating on the same styles and principles. The generated results from the principal loan made use of standard figures which break at every 10th multiple while the interest were generally computed on the basis of simple interest at any given interest rate with selection bases of 0.5% interval up to 30%. The research package had a loan payment return schedule ranges from 3 Months to 36 Months.

Introduction

Farmers being the primary producers and "Messiah" on food security of all nations are constantly face with the challenges of capital from financial institutions and investors own firms (IOFs) to embark on commercial farming because of the presume high risks involved in farming. The risks involve in farming are believed to due to the various environmental hazards such as flood, drought, invasion of pest and diseases, and seasonal variation and non-steadiness of weather as a result of climatic change. Most times, when IOFs agree to provide a capital base, the services provided are always at disadvantageous terms to the farmers i.e. the services are available but the profit motivated prices are too high for the farmers (Andrew, 2006; Brown, 2006).

Keywords: Agriculture, Cooperative Society, Loan, Payment return, Handbook.

The non-willingness of the financial institutions and FIOs to provide affordable services to the farmers and the drive by the farmers to maximize profits lead to the formation of Agricultural Cooperative Society (Brown, 2006; John, 1987). Farmers are widely dependent on credit from the cooperatives as a source of finance for both working capital and investment hence the need to device a tool for easy planning on loan procurement and payment return.

A cooperative ("coop") or co-operative ("co-op") is a self-governing association of persons who voluntarily agreed to cooperate for their mutual social, economic, and cultural benefit (International Cooperative Alliance; 2006). Cooperatives include non-profit community organizations and businesses that are owned and managed and controlled by the people who use its services (a consumer cooperative) or by the people who work there (a worker cooperative) or by the people who live there (a housing cooperative), hybrids such as worker cooperatives that are also consumer cooperatives or credit unions, multi-stakeholder cooperatives such as those that bring together civil society and local actors to deliver community needs, and second and third tier cooperatives whose members are other cooperatives (Gregory et al., 2020; Winbren & James; 2005). Generally, cooperatives are characterized with the values of openness, social responsibility and caring for others. They are typically based on the cooperative values of "self-help, self-responsibility, democracy and equality, equity and solidarity" and the seven cooperative principles (Reddy & Ravishanker, 2020). These seven principles include: voluntary and open membership, democratic member control, economic participation by members, autonomy and independence, education, training and information, cooperation among cooperatives and concern for community.

Agricultural cooperatives also known as farmers' cooperatives are cooperatives where farmers pool their resources for mutual economic benefit. Agricultural cooperatives are broadly divided into *agricultural service cooperatives*, which provide various services to their individual farming members, and *agricultural production cooperatives*, where production resources such as land or machinery are pooled and members farm jointly (Mejeha et al., 2018). Examples of agricultural production cooperatives include Collective Farms in former socialist countries, the Kibbutzim in Israel, Collectively Governed Community Shared Agriculture, Longo Mai co-operatives and Nicaraguan production co-operatives

(New Generation Cooperative, 2011; Longo, 2011; Ruerd & Zvi, 2005,). Worker cooperatives provide an example of production cooperatives outside agriculture. Agricultural supply cooperatives aggregate purchases, storage, and distribution of farm inputs for their members. By taking advantage of volume discounts and utilizing other economies of scale, supply cooperatives bring down members' costs. Supply cooperatives may provide seeds, fertilizers, chemicals, fuel, and farm machinery. Some supply cooperatives also operate machinery pools that provide mechanical field services (e.g., ploughing, harvesting) to their members. Agricultural marketing cooperatives provide the services involved in moving a product from the point of production to the point of consumption (Olowofeso et al., 2017). Agricultural marketing includes a series of inter-connected activities involving planning production, growing and harvesting, grading, packing, transport, storage, food processing, distribution and sale. Agricultural marketing cooperatives are often formed to promote specific commodities. These are evidences incorporated in agricultural loan repayment determinants as affirmed by Anigbogu et al. (2014).

In the final year of the 20th century, cooperatives came together to establish a number of social enterprise agencies which have moved to adopt the multi-stakeholder cooperative model (Ridly-Duff , 2008; Ridly-Duff , 2007; Brown, 2006). Within 1994 to 2009, the EU and its member nations have gradually revised national accounting systems to "make visible" the increasing contribution of social economy organizations (Monzon & Chaves, 2008).

In summary, all cooperative societies are having the same focal agenda which is to protect the interest of their members hence, the result of this work would generate Two-Figure Table handbook on monthly installment payment on flat interest-rate loans which would sensitize local farmers on affordable loan capacity, provide a guide on loan procurement and payment return, enable an access to a tool for future planning on income, reduce financial recklessness of the cooperative members and sensitize the members of the cooperative society on payment plan schedule.

METHODOLOGY

This Two Figure Table payment return paper includes both non-interest on loan payment return basis and interest on loan payment return basis.

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Selection of Interest Basis

The table made use of standard annual interest of interval 0.5 % starting from 0.5 %. It goes along 0.5 %, 1.0 %, 1.5 %, 2.0 %, and so on.

Selection of Principal Loan for Computation

Multiples of some standard figures bases were adopted for the principals of every loan computation. These standard figures were 10, 100, 1,000, 1,000,000 and 1,000,000,000; and break at every 10th multiple. The principal loans shown on the table goes as highlighted below:

- 50 (i.e. 10 x 5), 100 (i.e. 10 x 10).
- 200 (i.e. 100 x 2), …….., 1,000 (i.e. 100 x 10).
- 2,000 (i.e. 1,000 x 2), 3,000 (1,000 x 3), ……., 10,000 (1,000 x 10).
- 20,000 (i.e. 10,000 x 2), 30,000 (i.e. 10,000 x 3), …….., 100,000 (i.e. 10,000 x 10).
- 200,000 (i.e. 100,000 x 2), 300,000 (i.e. 100,000 x 3), ……., 1,000,000 (i.e. 100,000 x 10).
- 2,000,000 (i.e. 1,000,000 x 2), 3,000,000 (i.e. 1,000,000 x 3), ……, 10,000,000 (i.e. 1,000,000 x 10).
- 20,000,000 (i.e. 10,000,000 x 2), 30,000,000 (i.e. 10,000,000 x 3), ….., 100,000,000 (i.e. 10,000,000 x 10).
- 200,000,000 (i.e. 100,000,000 x 2), 300,000,000 (i.e. 100,000,000 x 3), ….., 1,000,000,000 (i.e. 100,000,000 x 10).

  This goes on in the format highlighted depending on the principal loan obtained.

Calculation/Computation

The amount payable per monthly installment was computed from the basis of simple interest at any given per annum interest-rate. Equation 1 shows the formula basis involved.

$$A = \frac{P(1 + r)}{m} \ldots \ldots \ldots (1)$$

where

A = Amount payable per monthly installment

P = Pricipal loan obtained

r = interest rate in percentage

m = Agreed number of month for principal loan plus interest return

Vol. 2, No. 2
Berkeley Journal of Entomology and Agronomy Studies

RESULTS AND DISCUSSION

The results for the payment return generated were given in the proposed Two Figure Table handbook.

In a situation whereby the principal loan obtained does not reflect in the table, the said principal loan would be broken into individual standard figure base. The result of the amount payable per month for every standard figure is obtained from the table and then added together. For instance, given that 2,520,000 is the principal loan obtained, the amount payable per monthly installment is obtained from the table following the procedures below:

1. Break the principal loan into the maximum obtainable multiple of the standard figure base i.e. 2,000,000, 500,000, and 20,000.
2. Obtain the amount payable per monthly installment for the values obtained in 1.
3. Obtain the amount payable per monthly installment for 2,520,000 by adding the values obtained in 2.

Table 1 and Table 2 show a typical 15 months and 18 months installment payment returns on loans respectively.

Table 1: 15 Months Installment Payment Return on a Flat Interest-Rate Basis

	150,000	200,000	300,000	400,000	500,000	1,500,000	700,000	800,000	900,000	1,500,000	2,000,000
0.0	10,000.00	13,333.33	20,000.00	26,666.67	33,333.33	100,000.00	46,666.67	53,333.33	60,000.00	100,000.00	133,333.33
0.5	10,050.00	13,400.00	20,100.00	26,800.00	33,500.00	100,500.00	46,900.00	53,600.00	60,300.00	100,500.00	134,000.00
1.0	10,100.00	13,466.67	20,200.00	26,933.33	33,666.67	101,000.00	47,133.33	53,866.67	60,600.00	101,000.00	134,666.67
1.5	10,150.00	13,533.33	20,300.00	27,066.67	33,833.33	101,500.00	47,366.67	54,133.33	60,900.00	101,500.00	135,333.33
2.0	10,200.00	13,600.00	20,400.00	27,200.00	34,000.00	102,000.00	47,600.00	54,400.00	61,200.00	102,000.00	136,000.00
2.5	10,250.00	13,666.67	20,500.00	27,333.33	34,166.67	102,500.00	47,833.33	54,666.67	61,500.00	102,500.00	136,666.67
3.0	10,300.00	13,733.33	20,600.00	27,466.67	34,333.33	103,000.00	48,066.67	54,933.33	61,800.00	103,000.00	137,333.33
3.5	10,350.00	13,800.00	20,700.00	27,600.00	34,500.00	103,500.00	48,300.00	55,200.00	62,100.00	103,500.00	138,000.00
4.0	10,400.00	13,866.67	20,800.00	27,733.33	34,666.67	104,000.00	48,533.33	55,466.67	62,400.00	104,000.00	138,666.67
4.5	10,450.00	13,933.33	20,900.00	27,866.67	34,833.33	104,500.00	48,766.67	55,733.33	62,700.00	104,500.00	139,333.33
5.0	10,500.00	14,000.00	21,000.00	28,000.00	35,000.00	105,000.00	49,000.00	56,000.00	63,000.00	105,000.00	140,000.00
5.5	10,550.00	14,066.67	21,100.00	28,133.33	35,166.67	105,500.00	49,233.33	56,266.67	63,300.00	105,500.00	140,666.67
6.0	10,600.00	14,133.33	21,200.00	28,266.67	35,333.33	106,000.00	49,466.67	56,533.33	63,600.00	106,000.00	141,333.33
6.5	10,650.00	14,200.00	21,300.00	28,400.00	35,500.00	106,500.00	49,700.00	56,800.00	63,900.00	106,500.00	142,000.00
7.0	10,700.00	14,266.67	21,400.00	28,533.33	35,666.67	107,000.00	49,933.33	57,066.67	64,200.00	107,000.00	142,666.67
7.5	10,750.00	14,333.33	21,500.00	28,666.67	35,833.33	107,500.00	50,166.67	57,333.33	64,500.00	107,500.00	143,333.33
8.0	10,800.00	14,400.00	21,600.00	28,800.00	36,000.00	108,000.00	50,400.00	57,600.00	64,800.00	108,000.00	144,000.00
8.5	10,850.00	14,466.67	21,700.00	28,933.33	36,166.67	108,500.00	50,633.33	57,866.67	65,100.00	108,500.00	144,666.67
9.0	10,900.00	14,533.33	21,800.00	29,066.67	36,333.33	109,000.00	50,866.67	58,133.33	65,400.00	109,000.00	145,333.33
9.5	10,950.00	14,600.00	21,900.00	29,200.00	36,500.00	109,500.00	51,100.00	58,400.00	65,700.00	109,500.00	146,000.00

10.0	11,000.00	14,666.67	22,000.00	29,333.33	36,666.67	110,000.00	51,333.33	58,666.67	66,000.00	110,000.00	146,666.67
10.5	11,050.00	14,733.33	22,100.00	29,466.67	36,833.33	110,500.00	51,566.67	58,933.33	66,300.00	110,500.00	147,333.33
11.0	11,100.00	14,800.00	22,200.00	29,600.00	37,000.00	111,000.00	51,800.00	59,200.00	66,600.00	111,000.00	148,000.00
11.5	11,150.00	14,866.67	22,300.00	29,733.33	37,166.67	111,500.00	52,033.33	59,466.67	66,900.00	111,500.00	148,666.67
12.0	11,200.00	14,933.33	22,400.00	29,866.67	37,333.33	112,000.00	52,266.67	59,733.33	67,200.00	112,000.00	149,333.33
12.5	11,250.00	15,000.00	22,500.00	30,000.00	37,500.00	112,500.00	52,500.00	60,000.00	67,500.00	112,500.00	150,000.00
13.0	11,300.00	15,066.67	22,600.00	30,133.33	37,666.67	113,000.00	52,733.33	60,266.67	67,800.00	113,000.00	150,666.67
13.5	11,350.00	15,133.33	22,700.00	30,266.67	37,833.33	113,500.00	52,966.67	60,533.33	68,100.00	113,500.00	151,333.33
14.0	11,400.00	15,200.00	22,800.00	30,400.00	38,000.00	114,000.00	53,200.00	60,800.00	68,400.00	114,000.00	152,000.00
14.5	11,450.00	15,266.67	22,900.00	30,533.33	38,166.67	114,500.00	53,433.33	61,066.67	68,700.00	114,500.00	152,666.67
15.0	11,500.00	15,333.33	23,000.00	30,666.67	38,333.33	115,000.00	53,666.67	61,333.33	69,000.00	115,000.00	153,333.33
15.5	11,550.00	15,400.00	23,100.00	30,800.00	38,500.00	115,500.00	53,900.00	61,600.00	69,300.00	115,500.00	154,000.00
16.0	11,600.00	15,466.67	23,200.00	30,933.33	38,666.67	116,000.00	54,133.33	61,866.67	69,600.00	116,000.00	154,666.67
16.5	11,650.00	15,533.33	23,300.00	31,066.67	38,833.33	116,500.00	54,366.67	62,133.33	69,900.00	116,500.00	155,333.33
17.0	11,700.00	15,600.00	23,400.00	31,200.00	39,000.00	117,000.00	54,600.00	62,400.00	70,200.00	117,000.00	156,000.00
17.5	11,750.00	15,666.67	23,500.00	31,333.33	39,166.67	117,500.00	54,833.33	62,666.67	70,500.00	117,500.00	156,666.67
18.0	11,800.00	15,733.33	23,600.00	31,466.67	39,333.33	118,000.00	55,066.67	62,933.33	70,800.00	118,000.00	157,333.33
18.5	11,850.00	15,800.00	23,700.00	31,600.00	39,500.00	118,500.00	55,300.00	63,200.00	71,100.00	118,500.00	158,000.00
19.0	11,900.00	15,866.67	23,800.00	31,733.33	39,666.67	119,000.00	55,533.33	63,466.67	71,400.00	119,000.00	158,666.67
19.5	11,950.00	15,933.33	23,900.00	31,866.67	39,833.33	119,500.00	55,766.67	63,733.33	71,700.00	119,500.00	159,333.33
20.0	12,000.00	16,000.00	24,000.00	32,000.00	40,000.00	120,000.00	56,000.00	64,000.00	72,000.00	120,000.00	160,000.00
20.5	12,050.00	16,066.67	24,100.00	32,133.33	40,166.67	120,500.00	56,233.33	64,266.67	72,300.00	120,500.00	160,666.67
21.0	12,100.00	16,133.33	24,200.00	32,266.67	40,333.33	121,000.00	56,466.67	64,533.33	72,600.00	121,000.00	161,333.33
21.5	12,150.00	16,200.00	24,300.00	32,400.00	40,500.00	121,500.00	56,700.00	64,800.00	72,900.00	121,500.00	162,000.00
22.0	12,200.00	16,266.67	24,400.00	32,533.33	40,666.67	122,000.00	56,933.33	65,066.67	73,200.00	122,000.00	162,666.67
22.5	12,250.00	16,333.33	24,500.00	32,666.67	40,833.33	122,500.00	57,166.67	65,333.33	73,500.00	122,500.00	163,333.33
23.0	12,300.00	16,400.00	24,600.00	32,800.00	41,000.00	123,000.00	57,400.00	65,600.00	73,800.00	123,000.00	164,000.00
23.5	12,350.00	16,466.67	24,700.00	32,933.33	41,166.67	123,500.00	57,633.33	65,866.67	74,100.00	123,500.00	164,666.67
24.0	12,400.00	16,533.33	24,800.00	33,066.67	41,333.33	124,000.00	57,866.67	66,133.33	74,400.00	124,000.00	165,333.33
24.5	12,450.00	16,600.00	24,900.00	33,200.00	41,500.00	124,500.00	58,100.00	66,400.00	74,700.00	124,500.00	166,000.00
25.0	12,500.00	16,666.67	25,000.00	33,333.33	41,666.67	125,000.00	58,333.33	66,666.67	75,000.00	125,000.00	166,666.67
25.5	12,550.00	16,733.33	25,100.00	33,466.67	41,833.33	125,500.00	58,566.67	66,933.33	75,300.00	125,500.00	167,333.33
26.0	12,600.00	16,800.00	25,200.00	33,600.00	42,000.00	126,000.00	58,800.00	67,200.00	75,600.00	126,000.00	168,000.00
26.5	12,650.00	16,866.67	25,300.00	33,733.33	42,166.67	126,500.00	59,033.33	67,466.67	75,900.00	126,500.00	168,666.67
27.0	12,700.00	16,933.33	25,400.00	33,866.67	42,333.33	127,000.00	59,266.67	67,733.33	76,200.00	127,000.00	169,333.33
27.5	12,750.00	17,000.00	25,500.00	34,000.00	42,500.00	127,500.00	59,500.00	68,000.00	76,500.00	127,500.00	170,000.00
28.0	12,800.00	17,066.67	25,600.00	34,133.33	42,666.67	128,000.00	59,733.33	68,266.67	76,800.00	128,000.00	170,666.67
28.5	12,850.00	17,133.33	25,700.00	34,266.67	42,833.33	128,500.00	59,966.67	68,533.33	77,100.00	128,500.00	171,333.33
29.0	12,900.00	17,200.00	25,800.00	34,400.00	43,000.00	129,000.00	60,200.00	68,800.00	77,400.00	129,000.00	172,000.00
29.5	12,950.00	17,266.67	25,900.00	34,533.33	43,166.67	129,500.00	60,433.33	69,066.67	77,700.00	129,500.00	172,666.67
30.0	13,000.00	17,333.33	26,000.00	34,666.67	43,333.33	130,000.00	60,666.67	69,333.33	78,000.00	130,000.00	173,333.33

Table 2: 18 Months Installment Payment Return on a Flat Interest-Rate Basis

	100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000	1,000,000	2,000,000
0.0	5,555.56	11,111.11	16,666.67	22,222.22	27,777.78	33,333.33	38,888.89	44,444.44	50,000.00	55,555.56	111,111.11
0.5	5,583.33	11,166.67	16,750.00	22,333.33	27,916.67	33,500.00	39,083.33	44,666.67	50,250.00	55,833.33	111,666.67
1.0	5,611.11	11,222.22	16,833.33	22,444.44	28,055.56	33,666.67	39,277.78	44,888.89	50,500.00	56,111.11	112,222.22
1.5	5,638.89	11,277.78	16,916.67	22,555.56	28,194.44	33,833.33	39,472.22	45,111.11	50,750.00	56,388.89	112,777.78
2.0	5,666.67	11,333.33	17,000.00	22,666.67	28,333.33	34,000.00	39,666.67	45,333.33	51,000.00	56,666.67	113,333.33

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2.5	5,694.44	11,388.89	17,083.33	22,777.78	28,472.22	34,166.67	39,861.11	45,555.56	51,250.00	56,944.44	113,888.89
3.0	5,722.22	11,444.44	17,166.67	22,888.89	28,611.11	34,333.33	40,055.56	45,777.78	51,500.00	57,222.22	114,444.44
3.5	5,750.00	11,500.00	17,250.00	23,000.00	28,750.00	34,500.00	40,250.00	46,000.00	51,750.00	57,500.00	115,000.00
4.0	5,777.78	11,555.56	17,333.33	23,111.11	28,888.89	34,666.67	40,444.44	46,222.22	52,000.00	57,777.78	115,555.56
4.5	5,805.56	11,611.11	17,416.67	23,222.22	29,027.78	34,833.33	40,638.89	46,444.44	52,250.00	58,055.56	116,111.11
5.0	5,833.33	11,666.67	17,500.00	23,333.33	29,166.67	35,000.00	40,833.33	46,666.67	52,500.00	58,333.33	116,666.67
5.5	5,861.11	11,722.22	17,583.33	23,444.44	29,305.56	35,166.67	41,027.78	46,888.89	52,750.00	58,611.11	117,222.22
6.0	5,888.89	11,777.78	17,666.67	23,555.56	29,444.44	35,333.33	41,222.22	47,111.11	53,000.00	58,888.89	117,777.78
6.5	5,916.67	11,833.33	17,750.00	23,666.67	29,583.33	35,500.00	41,416.67	47,333.33	53,250.00	59,166.67	118,333.33
7.0	5,944.44	11,888.89	17,833.33	23,777.78	29,722.22	35,666.67	41,611.11	47,555.56	53,500.00	59,444.44	118,888.89
7.5	5,972.22	11,944.44	17,916.67	23,888.89	29,861.11	35,833.33	41,805.56	47,777.78	53,750.00	59,722.22	119,444.44
8.0	6,000.00	12,000.00	18,000.00	24,000.00	30,000.00	36,000.00	42,000.00	48,000.00	54,000.00	60,000.00	120,000.00
8.5	6,027.78	12,055.56	18,083.33	24,111.11	30,138.89	36,166.67	42,194.44	48,222.22	54,250.00	60,277.78	120,555.56
9.0	6,055.56	12,111.11	18,166.67	24,222.22	30,277.78	36,333.33	42,388.89	48,444.44	54,500.00	60,555.56	121,111.11
9.5	6,083.33	12,166.67	18,250.00	24,333.33	30,416.67	36,500.00	42,583.33	48,666.67	54,750.00	60,833.33	121,666.67
10.0	6,111.11	12,222.22	18,333.33	24,444.44	30,555.56	36,666.67	42,777.78	48,888.89	55,000.00	61,111.11	122,222.22
10.5	6,138.89	12,277.78	18,416.67	24,555.56	30,694.44	36,833.33	42,972.22	49,111.11	55,250.00	61,388.89	122,777.78
11.0	6,166.67	12,333.33	18,500.00	24,666.67	30,833.33	37,000.00	43,166.67	49,333.33	55,500.00	61,666.67	123,333.33
11.5	6,194.44	12,388.89	18,583.33	24,777.78	30,972.22	37,166.67	43,361.11	49,555.56	55,750.00	61,944.44	123,888.89
12.0	6,222.22	12,444.44	18,666.67	24,888.89	31,111.11	37,333.33	43,555.56	49,777.78	56,000.00	62,222.22	124,444.44
12.5	6,250.00	12,500.00	18,750.00	25,000.00	31,250.00	37,500.00	43,750.00	50,000.00	56,250.00	62,500.00	125,000.00
13.0	6,277.78	12,555.56	18,833.33	25,111.11	31,388.89	37,666.67	43,944.44	50,222.22	56,500.00	62,777.78	125,555.56
13.5	6,305.56	12,611.11	18,916.67	25,222.22	31,527.78	37,833.33	44,138.89	50,444.44	56,750.00	63,055.56	126,111.11
14.0	6,333.33	12,666.67	19,000.00	25,333.33	31,666.67	38,000.00	44,333.33	50,666.67	57,000.00	63,333.33	126,666.67
14.5	6,361.11	12,722.22	19,083.33	25,444.44	31,805.56	38,166.67	44,527.78	50,888.89	57,250.00	63,611.11	127,222.22
15.0	6,388.89	12,777.78	19,166.67	25,555.56	31,944.44	38,333.33	44,722.22	51,111.11	57,500.00	63,888.89	127,777.78
15.5	6,416.67	12,833.33	19,250.00	25,666.67	32,083.33	38,500.00	44,916.67	51,333.33	57,750.00	64,166.67	128,333.33
16.0	6,444.44	12,888.89	19,333.33	25,777.78	32,222.22	38,666.67	45,111.11	51,555.56	58,000.00	64,444.44	128,888.89
16.5	6,472.22	12,944.44	19,416.67	25,888.89	32,361.11	38,833.33	45,305.56	51,777.78	58,250.00	64,722.22	129,444.44
17.0	6,500.00	13,000.00	19,500.00	26,000.00	32,500.00	39,000.00	45,500.00	52,000.00	58,500.00	65,000.00	130,000.00
17.5	6,527.78	13,055.56	19,583.33	26,111.11	32,638.89	39,166.67	45,694.44	52,222.22	58,750.00	65,277.78	130,555.56
18.0	6,555.56	13,111.11	19,666.67	26,222.22	32,777.78	39,333.33	45,888.89	52,444.44	59,000.00	65,555.56	131,111.11
18.5	6,583.33	13,166.67	19,750.00	26,333.33	32,916.67	39,500.00	46,083.33	52,666.67	59,250.00	65,833.33	131,666.67
19.0	6,611.11	13,222.22	19,833.33	26,444.44	33,055.56	39,666.67	46,277.78	52,888.89	59,500.00	66,111.11	132,222.22
19.5	6,638.89	13,277.78	19,916.67	26,555.56	33,194.44	39,833.33	46,472.22	53,111.11	59,750.00	66,388.89	132,777.78
20.0	6,666.67	13,333.33	20,000.00	26,666.67	33,333.33	40,000.00	46,666.67	53,333.33	60,000.00	66,666.67	133,333.33
20.5	6,694.44	13,388.89	20,083.33	26,777.78	33,472.22	40,166.67	46,861.11	53,555.56	60,250.00	66,944.44	133,888.89
21.0	6,722.22	13,444.44	20,166.67	26,888.89	33,611.11	40,333.33	47,055.56	53,777.78	60,500.00	67,222.22	134,444.44
21.5	6,750.00	13,500.00	20,250.00	27,000.00	33,750.00	40,500.00	47,250.00	54,000.00	60,750.00	67,500.00	135,000.00
22.0	6,777.78	13,555.56	20,333.33	27,111.11	33,888.89	40,666.67	47,444.44	54,222.22	61,000.00	67,777.78	135,555.56
22.5	6,805.56	13,611.11	20,416.67	27,222.22	34,027.78	40,833.33	47,638.89	54,444.44	61,250.00	68,055.56	136,111.11
23.0	6,833.33	13,666.67	20,500.00	27,333.33	34,166.67	41,000.00	47,833.33	54,666.67	61,500.00	68,333.33	136,666.67
23.5	6,861.11	13,722.22	20,583.33	27,444.44	34,305.56	41,166.67	48,027.78	54,888.89	61,750.00	68,611.11	137,222.22
24.0	6,888.89	13,777.78	20,666.67	27,555.56	34,444.44	41,333.33	48,222.22	55,111.11	62,000.00	68,888.89	137,777.78
24.5	6,916.67	13,833.33	20,750.00	27,666.67	34,583.33	41,500.00	48,416.67	55,333.33	62,250.00	69,166.67	138,333.33
25.0	6,944.44	13,888.89	20,833.33	27,777.78	34,722.22	41,666.67	48,611.11	55,555.56	62,500.00	69,444.44	138,888.89
25.5	6,972.22	13,944.44	20,916.67	27,888.89	34,861.11	41,833.33	48,805.56	55,777.78	62,750.00	69,722.22	139,444.44
26.0	7,000.00	14,000.00	21,000.00	28,000.00	35,000.00	42,000.00	49,000.00	56,000.00	63,000.00	70,000.00	140,000.00
26.5	7,027.78	14,055.56	21,083.33	28,111.11	35,138.89	42,166.67	49,194.44	56,222.22	63,250.00	70,277.78	140,555.56
27.0	7,055.56	14,111.11	21,166.67	28,222.22	35,277.78	42,333.33	49,388.89	56,444.44	63,500.00	70,555.56	141,111.11
27.5	7,083.33	14,166.67	21,250.00	28,333.33	35,416.67	42,500.00	49,583.33	56,666.67	63,750.00	70,833.33	141,666.67
28.0	7,111.11	14,222.22	21,333.33	28,444.44	35,555.56	42,666.67	49,777.78	56,888.89	64,000.00	71,111.11	142,222.22

Vol. 2, No. 2
Berkeley Journal of Entomology and Agronomy Studies

28.5	7,138.89	14,277.78	21,416.67	28,555.56	35,694.44	42,833.33	49,972.22	57,111.11	64,250.00	71,388.89	142,777.78
29.0	7,166.67	14,333.33	21,500.00	28,666.67	35,833.33	43,000.00	50,166.67	57,333.33	64,500.00	71,666.67	143,333.33
29.5	7,194.44	14,388.89	21,583.33	28,777.78	35,972.22	43,166.67	50,361.11	57,555.56	64,750.00	71,944.44	143,888.89
30.0	7,222.22	14,444.44	21,666.67	28,888.89	36,111.11	43,333.33	50,555.56	57,777.78	65,000.00	72,222.22	144,444.44

Vertical = Interest rate
Horizontal = Principal Loan

VALIDATION OF RESULTS

The generated results were validated using the operating principle of loan terms and conditions of SENSTAFF Cooperative Society, a typical cooperative society within Federal Polytechnic, Bida, Niger State, Nigeria. Table 3 shows the responses of the inputted data based on the cooperative loan terms and principles. The responses from the developed tool were compared to the various loan repayment amounts and found to be precise and accurate. The responses were summarily generalized as the cooperative "loan payment return handbook" an inflected in the sample case study of SenStaff Cooperative Society Limited, Federal Polytechnic, Bida, Nigeria and her generated Payment-return Handbook shown in Table 3.

Two Figure Table
SENSTAFF PAYMENT-RETURN HANDBOOK

SenStaff Co-operative Multipurpose Society Limited
The Federal Polytechnic, Bida, Nigeria.
Table 3: SenStaff Payment Return Handbook, Federal Polytechnic, Bida, Nigeria.

Loan	3 months	4 months	5 months	6 months	7 months	8 months	9 months	10 months	11 months
100,000	34,333.33	25,750.00	20,600.00	17,250.00	14,857.14	13,062.50	11,666.67	10,550.00	9,636.36
150,000	51,500.00	38,625.00	30,900.00	25,875.00	22,285.71	19,593.75	17,500.00	15,825.00	14,454.55
200,000	68,666.67	51,500.00	41,200.00	34,500.00	29,714.29	26,125.00	23,333.33	21,100.00	19,272.73
250,000	85,833.33	64,375.00	51,500.00	43,125.00	37,142.86	32,656.25	29,166.67	26,375.00	24,090.91
300,000	103,000.00	77,250.00	61,800.00	51,750.00	44,571.43	39,187.50	35,000.00	31,650.00	28,909.09
350,000	120,166.67	90,125.00	72,100.00	60,375.00	52,000.00	45,718.75	40,833.33	36,925.00	33,727.27
400,000	137,333.33	103,000.00	82,400.00	69,000.00	59,428.57	52,250.00	46,666.67	42,200.00	38,545.45
450,000	154,500.00	115,875.00	92,700.00	77,625.00	66,857.14	58,781.25	52,500.00	47,475.00	43,363.64
500,000	171,666.67	128,750.00	103,000.00	86,250.00	74,285.71	65,312.50	58,333.33	52,750.00	48,181.82
550,000	188,833.33	141,625.00	113,300.00	94,875.00	81,714.29	71,843.75	64,166.67	58,025.00	53,000.00
600,000	206,000.00	154,500.00	123,600.00	103,500.00	89,142.86	78,375.00	70,000.00	63,300.00	57,818.18
650,000	223,166.67	167,375.00	133,900.00	112,125.00	96,571.43	84,906.25	75,833.33	68,575.00	62,636.36
700,000	240,333.33	180,250.00	144,200.00	120,750.00	104,000.00	91,437.50	81,666.67	73,850.00	67,454.55
750,000	257,500.00	193,125.00	154,500.00	129,375.00	111,428.57	97,968.75	87,500.00	79,125.00	72,272.73
800,000	274,666.67	206,000.00	164,800.00	138,000.00	118,857.14	104,500.00	93,333.33	84,400.00	77,090.91
850,000	291,833.33	218,875.00	175,100.00	146,625.00	126,285.71	111,031.25	99,166.67	89,675.00	81,909.09
900,000	309,000.00	231,750.00	185,400.00	155,250.00	133,714.29	117,562.50	105,000.00	94,950.00	86,727.27
950,000	326,166.67	244,625.00	195,700.00	163,875.00	141,142.86	124,093.75	110,833.33	100,225.00	91,545.45
1,000,000	343,333.33	257,500.00	206,000.00	172,500.00	148,571.43	130,625.00	116,666.67	105,500.00	96,363.64
1,050,000	360,500.00	270,375.00	216,300.00	181,125.00	156,000.00	137,156.25	122,500.00	110,775.00	101,181.82
1,100,000	377,666.67	283,250.00	226,600.00	189,750.00	163,428.57	143,687.50	128,333.33	116,050.00	106,000.00
1,150,000	394,833.33	296,125.00	236,900.00	198,375.00	170,857.14	150,218.75	134,166.67	121,325.00	110,818.18
1,200,000	412,000.00	309,000.00	247,200.00	207,000.00	178,285.71	156,750.00	140,000.00	126,600.00	115,636.36
1,250,000	429,166.67	321,875.00	257,500.00	215,625.00	185,714.29	163,281.25	145,833.33	131,875.00	120,454.55
1,300,000	446,333.33	334,750.00	267,800.00	224,250.00	193,142.86	169,812.50	151,666.67	137,150.00	125,272.73
1,350,000	463,500.00	347,625.00	278,100.00	232,875.00	200,571.43	176,343.75	157,500.00	142,425.00	130,090.91
1,400,000	480,666.67	360,500.00	288,400.00	241,500.00	208,000.00	182,875.00	163,333.33	147,700.00	134,909.09
1,450,000	497,833.33	373,375.00	298,700.00	250,125.00	215,428.57	189,406.25	169,166.67	152,975.00	139,727.27
1,500,000	515,000.00	386,250.00	309,000.00	258,750.00	222,857.14	195,937.50	175,000.00	158,250.00	144,545.45
1,550,000	532,166.67	399,125.00	319,300.00	267,375.00	230,285.71	202,468.75	180,833.33	163,525.00	149,363.64
1,600,000	549,333.33	412,000.00	329,600.00	276,000.00	237,714.29	209,000.00	186,666.67	168,800.00	154,181.82
1,650,000	566,500.00	424,875.00	339,900.00	284,625.00	245,142.86	215,531.25	192,500.00	174,075.00	159,000.00
1,700,000	583,666.67	437,750.00	350,200.00	293,250.00	252,571.43	222,062.50	198,333.33	179,350.00	163,818.18
1,750,000	600,833.33	450,625.00	360,500.00	301,875.00	260,000.00	228,593.75	204,166.67	184,625.00	168,636.36
1,800,000	618,000.00	463,500.00	370,800.00	310,500.00	267,428.57	235,125.00	210,000.00	189,900.00	173,454.55
1,850,000	635,166.67	476,375.00	381,100.00	319,125.00	274,857.14	241,656.25	215,833.33	195,175.00	178,272.73
1,900,000	652,333.33	489,250.00	391,400.00	327,750.00	282,285.71	248,187.50	221,666.67	200,450.00	183,090.91
1,950,000	669,500.00	502,125.00	401,700.00	336,375.00	289,714.29	254,718.75	227,500.00	205,725.00	187,909.09
2,000,000	686,666.67	515,000.00	412,000.00	345,000.00	297,142.86	261,250.00	233,333.33	211,000.00	192,727.27
2,050,000	703,833.33	527,875.00	422,300.00	353,625.00	304,571.43	267,781.25	239,166.67	216,275.00	197,545.45

2,100,000	721,000.00	540,750.00	432,600.00	362,250.00	312,000.00	274,312.50	245,000.00	221,550.00	202,363.64
2,150,000	738,166.67	553,625.00	442,900.00	370,875.00	319,428.57	280,843.75	250,833.33	226,825.00	207,181.82
2,200,000	755,333.33	566,500.00	453,200.00	379,500.00	326,857.14	287,375.00	256,666.67	232,100.00	212,000.00
2,250,000	772,500.00	579,375.00	463,500.00	388,125.00	334,285.71	293,906.25	262,500.00	237,375.00	216,818.18
2,300,000	789,666.67	592,250.00	473,800.00	396,750.00	341,714.29	300,437.50	268,333.33	242,650.00	221,636.36
2,350,000	806,833.33	605,125.00	484,100.00	405,375.00	349,142.86	306,968.75	274,166.67	247,925.00	226,454.55
2,400,000	824,000.00	618,000.00	494,400.00	414,000.00	356,571.43	313,500.00	280,000.00	253,200.00	231,272.73
2,450,000	841,166.67	630,875.00	504,700.00	422,625.00	364,000.00	320,031.25	285,833.33	258,475.00	236,090.91
2,500,000	858,333.33	643,750.00	515,000.00	431,250.00	371,428.57	326,562.50	291,666.67	263,750.00	240,909.09
2,550,000	875,500.00	656,625.00	525,300.00	439,875.00	378,857.14	333,093.75	297,500.00	269,025.00	245,727.27
2,600,000	892,666.67	669,500.00	535,600.00	448,500.00	386,285.71	339,625.00	303,333.33	274,300.00	250,545.45
2,650,000	909,833.33	682,375.00	545,900.00	457,125.00	393,714.29	346,156.25	309,166.67	279,575.00	255,363.64
2,700,000	927,000.00	695,250.00	556,200.00	465,750.00	401,142.86	352,687.50	315,000.00	284,850.00	260,181.82
2,750,000	944,166.67	708,125.00	566,500.00	474,375.00	408,571.43	359,218.75	320,833.33	290,125.00	265,000.00
2,800,000	961,333.33	721,000.00	576,800.00	483,000.00	416,000.00	365,750.00	326,666.67	295,400.00	269,818.18
2,850,000	978,500.00	733,875.00	587,100.00	491,625.00	423,428.57	372,281.25	332,500.00	300,675.00	274,636.36
2,900,000	995,666.67	746,750.00	597,400.00	500,250.00	430,857.14	378,812.50	338,333.33	305,950.00	279,454.55
2,950,000	1,012,833.33	759,625.00	607,700.00	508,875.00	438,285.71	385,343.75	344,166.67	311,225.00	284,272.73
3,000,000	1,030,000.00	772,500.00	618,000.00	517,500.00	445,714.29	391,875.00	350,000.00	316,500.00	289,090.91

Loan	12 months	13 months	14 months	15 months	16 months	17 months	18 months	19 months	20 months
100,000	8,875.00	8,230.77	7,678.57	7,200.00	6,781.25	6,411.76	6,083.33	5,789.47	5,525.00
150,000	13,312.50	12,346.15	11,517.86	10,800.00	10,171.88	9,617.65	9,125.00	8,684.21	8,287.50
200,000	17,750.00	16,461.54	15,357.14	14,400.00	13,562.50	12,823.53	12,166.67	11,578.95	11,050.00
250,000	22,187.50	20,576.92	19,196.43	18,000.00	16,953.13	16,029.41	15,208.33	14,473.68	13,812.50
300,000	26,625.00	24,692.31	23,035.71	21,600.00	20,343.75	19,235.29	18,250.00	17,368.42	16,575.00
350,000	31,062.50	28,807.69	26,875.00	25,200.00	23,734.38	22,441.18	21,291.67	20,263.16	19,337.50
400,000	35,500.00	32,923.08	30,714.29	28,800.00	27,125.00	25,647.06	24,333.33	23,157.89	22,100.00
450,000	39,937.50	37,038.46	34,553.57	32,400.00	30,515.63	28,852.94	27,375.00	26,052.63	24,862.50
500,000	44,375.00	41,153.85	38,392.86	36,000.00	33,906.25	32,058.82	30,416.67	28,947.37	27,625.00
550,000	48,812.50	45,269.23	42,232.14	39,600.00	37,296.88	35,264.71	33,458.33	31,842.11	30,387.50
600,000	53,250.00	49,384.62	46,071.43	43,200.00	40,687.50	38,470.59	36,500.00	34,736.84	33,150.00
650,000	57,687.50	53,500.00	49,910.71	46,800.00	44,078.13	41,676.47	39,541.67	37,631.58	35,912.50
700,000	62,125.00	57,615.38	53,750.00	50,400.00	47,468.75	44,882.35	42,583.33	40,526.32	38,675.00
750,000	66,562.50	61,730.77	57,589.29	54,000.00	50,859.38	48,088.24	45,625.00	43,421.05	41,437.50
800,000	71,000.00	65,846.15	61,428.57	57,600.00	54,250.00	51,294.12	48,666.67	46,315.79	44,200.00
850,000	75,437.50	69,961.54	65,267.86	61,200.00	57,640.63	54,500.00	51,708.33	49,210.53	46,962.50
900,000	79,875.00	74,076.92	69,107.14	64,800.00	61,031.25	57,705.88	54,750.00	52,105.26	49,725.00
950,000	84,312.50	78,192.31	72,946.43	68,400.00	64,421.88	60,911.76	57,791.67	55,000.00	52,487.50
1,000,000	88,750.00	82,307.69	76,785.71	72,000.00	67,812.50	64,117.65	60,833.33	57,894.74	55,250.00
1,050,000	93,187.50	86,423.08	80,625.00	75,600.00	71,203.13	67,323.53	63,875.00	60,789.47	58,012.50
1,100,000	97,625.00	90,538.46	84,464.29	79,200.00	74,593.75	70,529.41	66,916.67	63,684.21	60,775.00
1,150,000	102,062.50	94,653.85	88,303.57	82,800.00	77,984.38	73,735.29	69,958.33	66,578.95	63,537.50
1,200,000	106,500.00	98,769.23	92,142.86	86,400.00	81,375.00	76,941.18	73,000.00	69,473.68	66,300.00
1,250,000	110,937.50	102,884.62	95,982.14	90,000.00	84,765.63	80,147.06	76,041.67	72,368.42	69,062.50
1,300,000	115,375.00	107,000.00	99,821.43	93,600.00	88,156.25	83,352.94	79,083.33	75,263.16	71,825.00

1,350,000	119,812.50	111,115.38	103,660.71	97,200.00	91,546.88	86,558.82	82,125.00	78,157.89	74,587.50
1,400,000	124,250.00	115,230.77	107,500.00	100,800.00	94,937.50	89,764.71	85,166.67	81,052.63	77,350.00
1,450,000	128,687.50	119,346.15	111,339.29	104,400.00	98,328.13	92,970.59	88,208.33	83,947.37	80,112.50
1,500,000	133,125.00	123,461.54	115,178.57	108,000.00	101,718.75	96,176.47	91,250.00	86,842.11	82,875.00
1,550,000	137,562.50	127,576.92	119,017.86	111,600.00	105,109.38	99,382.35	94,291.67	89,736.84	85,637.50
1,600,000	142,000.00	131,692.31	122,857.14	115,200.00	108,500.00	102,588.24	97,333.33	92,631.58	88,400.00
1,650,000	146,437.50	135,807.69	126,696.43	118,800.00	111,890.63	105,794.12	100,375.00	95,526.32	91,162.50
1,700,000	150,875.00	139,923.08	130,535.71	122,400.00	115,281.25	109,000.00	103,416.67	98,421.05	93,925.00
1,750,000	155,312.50	144,038.46	134,375.00	126,000.00	118,671.88	112,205.88	106,458.33	101,315.79	96,687.50
1,800,000	159,750.00	148,153.85	138,214.29	129,600.00	122,062.50	115,411.76	109,500.00	104,210.53	99,450.00
1,850,000	164,187.50	152,269.23	142,053.57	133,200.00	125,453.13	118,617.65	112,541.67	107,105.26	102,212.50
1,900,000	168,625.00	156,384.62	145,892.86	136,800.00	128,843.75	121,823.53	115,583.33	110,000.00	104,975.00
1,950,000	173,062.50	160,500.00	149,732.14	140,400.00	132,234.38	125,029.41	118,625.00	112,894.74	107,737.50
2,000,000	177,500.00	164,615.38	153,571.43	144,000.00	135,625.00	128,235.29	121,666.67	115,789.47	110,500.00
2,050,000	181,937.50	168,730.77	157,410.71	147,600.00	139,015.63	131,441.18	124,708.33	118,684.21	113,262.50
2,100,000	186,375.00	172,846.15	161,250.00	151,200.00	142,406.25	134,647.06	127,750.00	121,578.95	116,025.00
2,150,000	190,812.50	176,961.54	165,089.29	154,800.00	145,796.88	137,852.94	130,791.67	124,473.68	118,787.50
2,200,000	195,250.00	181,076.92	168,928.57	158,400.00	149,187.50	141,058.82	133,833.33	127,368.42	121,550.00
2,250,000	199,687.50	185,192.31	172,767.86	162,000.00	152,578.13	144,264.71	136,875.00	130,263.16	124,312.50
2,300,000	204,125.00	189,307.69	176,607.14	165,600.00	155,968.75	147,470.59	139,916.67	133,157.89	127,075.00
2,350,000	208,562.50	193,423.08	180,446.43	169,200.00	159,359.38	150,676.47	142,958.33	136,052.63	129,837.50
2,400,000	213,000.00	197,538.46	184,285.71	172,800.00	162,750.00	153,882.35	146,000.00	138,947.37	132,600.00
2,450,000	217,437.50	201,653.85	188,125.00	176,400.00	166,140.63	157,088.24	149,041.67	141,842.11	135,362.50
2,500,000	221,875.00	205,769.23	191,964.29	180,000.00	169,531.25	160,294.12	152,083.33	144,736.84	138,125.00
2,550,000	226,312.50	209,884.62	195,803.57	183,600.00	172,921.88	163,500.00	155,125.00	147,631.58	140,887.50
2,600,000	230,750.00	214,000.00	199,642.86	187,200.00	176,312.50	166,705.88	158,166.67	150,526.32	143,650.00
2,650,000	235,187.50	218,115.38	203,482.14	190,800.00	179,703.13	169,911.76	161,208.33	153,421.05	146,412.50
2,700,000	239,625.00	222,230.77	207,321.43	194,400.00	183,093.75	173,117.65	164,250.00	156,315.79	149,175.00
2,750,000	244,062.50	226,346.15	211,160.71	198,000.00	186,484.38	176,323.53	167,291.67	159,210.53	151,937.50
2,800,000	248,500.00	230,461.54	215,000.00	201,600.00	189,875.00	179,529.41	170,333.33	162,105.26	154,700.00
2,850,000	252,937.50	234,576.92	218,839.29	205,200.00	193,265.63	182,735.29	173,375.00	165,000.00	157,462.50
2,900,000	257,375.00	238,692.31	222,678.57	208,800.00	196,656.25	185,941.18	176,416.67	167,894.74	160,225.00
2,950,000	261,812.50	242,807.69	226,517.86	212,400.00	200,046.88	189,147.06	179,458.33	170,789.47	162,987.50
3,000,000	266,250.00	246,923.08	230,357.14	216,000.00	203,437.50	192,352.94	182,500.00	173,684.21	165,750.00

Loan	21 months	22 months	23 months	24 months	25 months	26 months
100,000	5,285.71	5,068.18	4,869.57	4,687.50	4,520.00	4,365.38
150,000	7,928.57	7,602.27	7,304.35	7,031.25	6,780.00	6,548.08
200,000	10,571.43	10,136.36	9,739.13	9,375.00	9,040.00	8,730.77
250,000	13,214.29	12,670.45	12,173.91	11,718.75	11,300.00	10,913.46
300,000	15,857.14	15,204.55	14,608.70	14,062.50	13,560.00	13,096.15
350,000	18,500.00	17,738.64	17,043.48	16,406.25	15,820.00	15,278.85
400,000	21,142.86	20,272.73	19,478.26	18,750.00	18,080.00	17,461.54
450,000	23,785.71	22,806.82	21,913.04	21,093.75	20,340.00	19,644.23

500,000	26,428.57	25,340.91	24,347.83	23,437.50	22,600.00	21,826.92
550,000	29,071.43	27,875.00	26,782.61	25,781.25	24,860.00	24,009.62
600,000	31,714.29	30,409.09	29,217.39	28,125.00	27,120.00	26,192.31
650,000	34,357.14	32,943.18	31,652.17	30,468.75	29,380.00	28,375.00
700,000	37,000.00	35,477.27	34,086.96	32,812.50	31,640.00	30,557.69
750,000	39,642.86	38,011.36	36,521.74	35,156.25	33,900.00	32,740.38
800,000	42,285.71	40,545.45	38,956.52	37,500.00	36,160.00	34,923.08
850,000	44,928.57	43,079.55	41,391.30	39,843.75	38,420.00	37,105.77
900,000	47,571.43	45,613.64	43,826.09	42,187.50	40,680.00	39,288.46
950,000	50,214.29	48,147.73	46,260.87	44,531.25	42,940.00	41,471.15
1,000,000	52,857.14	50,681.82	48,695.65	46,875.00	45,200.00	43,653.85
1,050,000	55,500.00	53,215.91	51,130.43	49,218.75	47,460.00	45,836.54
1,100,000	58,142.86	55,750.00	53,565.22	51,562.50	49,720.00	48,019.23
1,150,000	60,785.71	58,284.09	56,000.00	53,906.25	51,980.00	50,201.92
1,200,000	63,428.57	60,818.18	58,434.78	56,250.00	54,240.00	52,384.62
1,250,000	66,071.43	63,352.27	60,869.57	58,593.75	56,500.00	54,567.31
1,300,000	68,714.29	65,886.36	63,304.35	60,937.50	58,760.00	56,750.00
1,350,000	71,357.14	68,420.45	65,739.13	63,281.25	61,020.00	58,932.69
1,400,000	74,000.00	70,954.55	68,173.91	65,625.00	63,280.00	61,115.38
1,450,000	76,642.86	73,488.64	70,608.70	67,968.75	65,540.00	63,298.08
1,500,000	79,285.71	76,022.73	73,043.48	70,312.50	67,800.00	65,480.77
1,550,000	81,928.57	78,556.82	75,478.26	72,656.25	70,060.00	67,663.46
1,600,000	84,571.43	81,090.91	77,913.04	75,000.00	72,320.00	69,846.15
1,650,000	87,214.29	83,625.00	80,347.83	77,343.75	74,580.00	72,028.85
1,700,000	89,857.14	86,159.09	82,782.61	79,687.50	76,840.00	74,211.54
1,750,000	92,500.00	88,693.18	85,217.39	82,031.25	79,100.00	76,394.23
1,800,000	95,142.86	91,227.27	87,652.17	84,375.00	81,360.00	78,576.92
1,850,000	97,785.71	93,761.36	90,086.96	86,718.75	83,620.00	80,759.62
1,900,000	100,428.57	96,295.45	92,521.74	89,062.50	85,880.00	82,942.31
1,950,000	103,071.43	98,829.55	94,956.52	91,406.25	88,140.00	85,125.00
2,000,000	105,714.29	101,363.64	97,391.30	93,750.00	90,400.00	87,307.69
2,050,000	108,357.14	103,897.73	99,826.09	96,093.75	92,660.00	89,490.38
2,100,000	111,000.00	106,431.82	102,260.87	98,437.50	94,920.00	91,673.08
2,150,000	113,642.86	108,965.91	104,695.65	100,781.25	97,180.00	93,855.77
2,200,000	116,285.71	111,500.00	107,130.43	103,125.00	99,440.00	96,038.46
2,250,000	118,928.57	114,034.09	109,565.22	105,468.75	101,700.00	98,221.15
2,300,000	121,571.43	116,568.18	112,000.00	107,812.50	103,960.00	100,403.85
2,350,000	124,214.29	119,102.27	114,434.78	110,156.25	106,220.00	102,586.54
2,400,000	126,857.14	121,636.36	116,869.57	112,500.00	108,480.00	104,769.23

2,450,000	129,500.00	124,170.45	119,304.35	114,843.75	110,740.00	106,951.92
2,500,000	132,142.86	126,704.55	121,739.13	117,187.50	113,000.00	109,134.62
2,550,000	134,785.71	129,238.64	124,173.91	119,531.25	115,260.00	111,317.31
2,600,000	137,428.57	131,772.73	126,608.70	121,875.00	117,520.00	113,500.00
2,650,000	140,071.43	134,306.82	129,043.48	124,218.75	119,780.00	115,682.69
2,700,000	142,714.29	136,840.91	131,478.26	126,562.50	122,040.00	117,865.38
2,750,000	145,357.14	139,375.00	133,913.04	128,906.25	124,300.00	120,048.08
2,800,000	148,000.00	141,909.09	136,347.83	131,250.00	126,560.00	122,230.77
2,850,000	150,642.86	144,443.18	138,782.61	133,593.75	128,820.00	124,413.46
2,900,000	153,285.71	146,977.27	141,217.39	135,937.50	131,080.00	126,596.15
2,950,000	155,928.57	149,511.36	143,652.17	138,281.25	133,340.00	128,778.85
3,000,000	158,571.43	152,045.45	146,086.96	140,625.00	135,600.00	130,961.54

Note: The figures in this Table had been tested and confirmed by taking sample of loans given out by the cooperative concerned. The results were found concise, precise and accurate.

Conclusion and Recommendation

The results generated in the Two-Figure Table were tested using equation 1, by substitution of different values for every rate of the standard annual interest used for the computation. This has been found to be accurate and precise and therefore, fit for every monthly payment-return based on annual flat interest-rate. The Payment Return Handbook generated in Table 3 has been adopted by the institution concern.

The generated figures are highly recommended not only for the Agricultural Cooperative Societies but also for every worker societies and their members provided that they are operating on annual flat interest rate basis.

References

Anagbogu, T. U., Onugu, C. U., Onyeugbo, B. N., & Okoli, M. I. (2014). Determinants of Loan Payment Return among Cooperative Farmers in Awka North L. G. A. of Anambra State, Nigeria. European Sceientific Journal. Vol. 10 (22): ISSN: 187-7881.

Andrew, M. (2006). Types of Cooperatives. Northwest Cooperative Development Centre. Retrieved on: 2011-07-31.

Brown, J. (2006). Designing Equity Finance for Social Enterprises. Social Enterprise Journal, 2(1): 73-81.

Gregory, M., Keri, L., & Albert, K. (2020). Trade Credit Use in Agricultural Cooperatives: Pricing and Performance. Journal of Cooperatives. Vol. 35: Pp. 74-101.

International Cooperative Alliance (2006). Statement on the Cooperative Identity. Retrieved on: 2011-07-31.

John, M. S. (1987). Farmers' Incentives to Take Collective Action via Cooperatives: A Transaction-Cost Approach, in: Cooperative Theory: New Approaches. ed. J.S. Royer, Washington, DC: USDA ACS Service Report. pp. 87-107.

Lalwani, M. (2008). Sugar Co-operatives in Maharashtra: A Political Economy Perspective. The Journal of Development Studies **44** (10): 1474–1505.

Longo Mai, C. R. (2011). Network of Agricultural Cooperatives. Sonador.info. December 2011.

Mejeha, R. O., Bassey, A. E., & Obasi, I. O. (2018). Influence of Loan Repayment of Farmers Beneficiaries Within the Bank of Agriculture (BOA) in Akwa Ibom State, Nigeria. Nigeria Agricultural Journal. Vol 49 (2): Pp. 252-257, ISSN: 0300-368X.

Monzon, J. L. & Chaves, R. (2008). The European Social Economy: Concept and Dimensions of the Third Sector. Annals of Public and Cooperative Economics, 79(3/4): 549-577.

New Generation Cooperatives (2011). 10 Things You Need to Know. Government of Alberta: Agriculture and Rural Development.

Olowofeso, O. E., Adeboye, A. A., Adejo, V. T., Bassey, K. J., & Abraham Ochoche (2017). Agricultural Sector Credit and Output Relationship in Nigeria: Evidence from Nonlinear ARDL. CBN Journal of Applied Statistics. Vol. 8 (1).

Reddy, K. S. S., & Ravishankar, K., (2020). A Study of Farmers Perception Towards Agricultural Loans in Rural Areas with Reference to Rayaleseema Region, Andhra Pradesh. International Journal of Management (IJM), Vol. 11 (3): Pp. 175-185.

Ridley-Duff, R. J. (2007). Communitarian Perspectives on Social Enterprise, Corporate Governance: An International Review, 15(2):382-392.

Ridley-Duff, R. J. (2008). Social Enterprise as a Socially Rational Business, International Journal of Entrepreneurial Behaviour and Research, 14(5): 291-312.

Ruerd, R. & Zvi, L. (2005). Why Nicaraguan Peasants Stay in Agricultural Production Cooperatives. American Agricultural Economic Association. 2005 Annual Genaral Meeting, July 24-27 Providence, RI.

Weinbren, D. & James, B. (2005). Getting a Grip: the Roles of Friendly Societies in Australia and Britain Reappraised, Labour History, Vol. 88.

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