

AVERAGE ANNUAL COST TABLE
(Per Dollar of Installation Costs)

LIFE SPAN IN YEARS	INTEREST RATE – PERCENT													
	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	.515	.523	.530	.538	.545	.553	.561	.568	.576	.584	.592	.599	.607	.615
3	.347	.354	.360	.367	.374	.381	.388	.395	.402	.409	.416	.424	.431	.438
4	.263	.269	.275	.282	.289	.295	.302	.309	.315	.322	.329	.336	.343	.350
5	.212	.218	.225	.231	.237	.244	.250	.257	.264	.271	.277	.284	.284	.298
6	.179	.185	.191	.197	.203	.210	.216	.223	.230	.236	.243	.250	.250	.264
7	.155	.161	.167	.173	.179	.186	.192	.199	.205	.212	.219	.226	.226	.240
8	.137	.142	.149	.155	.161	.167	.174	.181	.187	.194	.201	.208	.208	.223
9	.123	.128	.134	.141	.147	.153	.160	.167	.174	.181	.188	.195	.195	.210
10	.111	.117	.123	.130	.136	.142	.149	.156	.163	.170	.177	.184	.184	.199
11	.102	.108	.114	.120	.127	.133	.140	.147	.154	.161	.168	.176	.176	.191
12	.095	.100	.107	.113	.119	.126	.133	.140	.147	.154	.161	.169	.169	.184
13	.088	.094	.100	.106	.113	.120	.127	.134	.141	.148	.156	.163	.163	.179
14	.083	.089	.095	.101	.108	.114	.121	.128	.136	.143	.151	.159	.159	.175
15	.078	.084	.090	.096	.103	.110	.117	.124	.131	.139	.147	.155	.155	.171
20	.061	.067	.074	.080	.087	.094	.102	.110	.117	.126	.134	.142	.142	.160
25	.051	.057	.064	.071	.078	.086	.094	.102	.110	.119	.128	.136	.136	.155
50	.032	.039	.047	.055	.063	.072	.082	.091	.101	.111	.120	.130	.130	.150
100	.023	.032	.041	.050	.060	.070	.080	.090	.100	.110	.120	.130	.130	.150

Amortization: Take the installation cost times the factor on the table for the selected years and interest rate to get the average annual installation costs. Include annual operation & maintenance (O&M) by adding it to average annual installation costs to get total average annual cost.

EXAMPLE – COMPUTING AVERAGE ANNUAL COST

Average Annual Cost = Installation Cost X appropriate factor + O & M (include O & M by one of the two methods.)

1. Grazing System will cost \$300 per acre to install, interest rate is 7 percent and life span is 10 years. O & M is estimated to be 2 percent of the installation cost.

SOLUTION: $.142 + .02 = .162 \times \$300 = \$48.60$ average annual cost per acre.

2. Same as above except farmer qualifies for financial assistance of \$225 per acre for the installation cost. Farmer wants to know their annual cost.

SOLUTION: $\$300 - \225 (financial assistance) = $(\$75 \times .142) + (\$300 \times .02) = \$10.65 + \$6 = \$16.65$ average annual cost per acre.

EXAMPLE – COMPUTING WHAT INSTALLATION COST IS ECONOMICALLY JUSTIFIED

Installation cost **economically** justified = average annual benefits – annual O & M ÷ appropriate factor.

1. Annual benefits from a nutrient management system are estimated to be \$30 per acre and annual O & M will be \$2 per acre. At a 6 percent interest rate and a capital recovery period of 20 years, what amount can be **economically** justified to spend on installing the system?

SOLUTION: $\$30 - \$2 = \$28 \div .087 = \321.84 per acre.

(Installation cost **economically** justified to spend on installing the system)

(total annual costs equal to or less than total annual benefits; also be sure to consider non-monetary benefits.)