Peer reviewed Journal Impact Factor: 7.265 ISSN-2230-9578

Journal of Research and Development

A Multidisciplinary International Level Referred Journal

July 2021 Volume-11 Issue-25

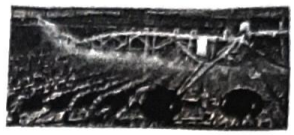
Impact of Environment on Agriculture, Health, Water Resources, Social Life & Industrial Development

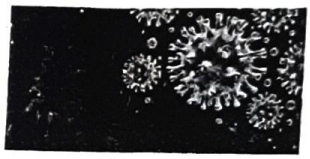
Chief Editor
Dr. R. V. Bhole
'Ravichandram' Survey No-101/1, Plot No-23, Mundada Nagar, Jalgaon

Executive Editors	Executive Editors	Executive Editors
Dr. M. N. Kolpuke	**Dr. S. S. Patil**	**Dr. E. U. Masumdar**
Principal,	Principal,	Principal,
Maharashtra Mahavidyalaya, Nilanga	Maharashtra College of Pharmacy, Nilanga	Azad Mahavidyalaya, Ausa

Co- Editors

Dr. B. N. Paul, Dr. C.J. Kadam, Prof. T. A. Jahagirdar, Dr. Naresh Pinamkar
Dr. C. V Panchal, Dr. Nisar Syed, Mr. Santosh P Mane





Address
'Ravichandram' Survey No-101/1, Plot, No-23,
Mundada Nagar, Jalgaon (M.S.) 425102

30	Recycling Industries - Environment Protection by Waste Management to Wealth Maximisation **Dr. Ruchy Sharma**	101-103
31	Hindu Epics and Environmental Concern **Mrs. Ipsita Chakraborty, Dr. P. Ganesan, Dr. Debaprashad Chatterjee**	104-106
32	Technology-based marketing with a focus on social media **P.Preeti,**	107-109
33	Environment and Society **Pratap Kumar Ghorai , Priyanka Sarkar**	110-112
34	Impact of Climatic Changes on Socio Economic Factors in South Odisha W.R.T Cyclone Phailin **Rasmiraj Palo, Dr Kailash Chandra Diwan Behera**	113-116
35	A Study of Important Role of Supply Chain Management During Covid-19 **Sunil Tukaram More**	117-118
36	Environmental Health Awareness through Education **Dr. Anita Madhusudan Shelke**	119-120
37	Time Bound Analysis of Rainfall Trend in Satara District of Maharashtra : A Geographical Study **Dr. Adinath D. Gade, Avadhut D. Kulakrni**	121-123
38	Teaching English Language through Popular Culture **Mr. Anil Gaman Ahire**	124-126
39	A Paradigm Shift In Conventional Marketing Into Green Marketing: An Overview and Perspectives in Today's Era of Global Warming. **Dr. V.A. Pawale , Mudiraj Narendra Balbhim**	127-129
40	Climate Change and Health - A Historical Study **Dr. Radhamma D.K**	130-132
41	Influencing Geographical Aspects for Floriculture Development in Solapur District **Ranjana Rathod, Dr. B. L. Rathod**	133-135
42	Socio-Economic Status of Fishermen of Devarjan Reservoir of Latur District Maharashtra **Niture S D , Shirshi U.K**	136-139
43	Study of Fishing Gears and Crafts Used In Deverjan Reservoir, Latur District, Maharashtra, India **Niture S.D, Shirshi U.K**	140-144
44	E-Commerce: Impact on Environment **Dr. Rupali Karbhari Sanap**	145-147
45	Covid-19 and Its Impact on Agriculture **R. V. Suryawanshia , R. M. Mahindrakarb, G. D. Tingarea, B. D. Ingalea**	148-149
46	Impact of Covid-19 pandemic on sports & exercise **Mr. C. B. Satpute**	150-151
47	Soil Texture: A Geographical study of Marathwada Region in the year 2020 **Narwade Madan Vitthal**	152-154
48	Impact of COVID-19 on Indian economy **Rupeshkumar Raut, Dr. Sharyu Manish Potnurwar**	155-158
49	Industrial Growth and Environmental Degradation **Mrs Swati Venkatrao Adde**	159-161
50	Impact of COVID -19 on Agriculture and Food Security in India **Ramshankar Varma**	162-163
51	Comparison of Interval Training Effect on Speed and Explosive Strength on Players of Kabaddi and Kho-Kho **Dr. Rameshkumar Varsat, Dr. Miteshkumar Govindbhai Vagh**	164-165
52	Analysis Of Rainfall Variability In North Western Agro Climatic Zone Of Tamil Nadu, India **Latha S and Malleeswari V**	166-175
53	A study of parent's opinion on online teaching in Mumbai's schools. **Mrs Shubhangi Rajendra Londhe**	176-178
54	New Records of Beetles (Coleoptera : Insecta : Histeridae : Histerid) Infesting Stored Products : A case study **S.S. Bhalerao, P.R. Surve**	179-180
55	A Study of ABC Analysis for Inventory Control in Cooperative Sugar Factory **Mr. Gaikwad Vijay Ganpat**	181-183
56	Assessment of Terminalia catappa varieties using RAPD and SSR Markers **Farzana Tasneem M.I**	184-188
57	Analysis on Nature in J.M. Hopkins's Poetry **Dr. Vijaykumar Ganpatrao Pawar**	189-190

A Study of ABC Analysis for Inventory Control in Cooperative Sugar Factory

Mr. Gaikwad Vijay Ganpat

Assistant Professor in Commerce, K.R.T. Arts and Commerce College, Vani, Tal- Dindori, Dist-Nashik
vijaygcommerce@gmail.com

Abstract:

ABC analysis is a method in which inventory is divided into three categoriesi.e. A.B. and C in descending values. The items in the A category have the highest value, B category items are of lower value than category A and C category items have the lowest value. **ABC analysis of inventory** helps to sugar factory to keep working capital costs at under control because it clearly identifies which items you should reorder more frequently and which items don't need to be stocked often reducing obsolete inventory and optimizing the rate of inventory turnover of sugar factory

Introduction:

ABC analysis divides an overall inventory into three categories "A items" with very tight control and accurate records, "B items" with less tightly controlled and good records, and "C items" with the simplest controls possible and minimal records. The ABC analysis provides a mechanism for identifying items that will have a significant impact on overall inventory cost, while also providing a mechanism for identifying different categories of stock that will require different management and controls. The ABC analysis suggests that inventories of an organization are not of equal value. Thus, the inventory is grouped into three categories (**A**, **B**, and **C**) in order of their estimated importance. 'A' items are very important for an organization. Because of the high value of these 'A' items, frequent value analysis is required. In addition to that, an organization needs to choose an appropriate order pattern (e.g. 'just-in-time') to avoid excess capacity. 'B' items are important, but of course less important than 'A' items and more important than 'C' items. Therefore, 'B' items are intergroup items. 'C' items are marginally important. Sugar industry is the process industry where ABC analysis for inventory control is very much essential for the purpose of effective material management, control of available various materials. Minimization of inventory cost and maximization of productivity is required in cooperative sugar factories, where ABC is useful for sugar industry. The proper choice of costing and calculation of accurate inventory cost in processing industries have been widely discussed by academics and practitioners. At present the cooperative sugar factories have been facing the problems of qualitative raw material, sufficient raw material, harvesters, transporters, cost of material transport, skilled manpower, pricing of material, cost, performance etc. To solve the problems of inventory control sugar industry problems, routine checking of material, various stock levels, is not suitable is competitive era, where as ABC analysis is useful. In this research paper the researcher has tried to explain the concept of ABC analysis and steps to be taken for implementation of ABC in cooperative sugar factories in study area. The concept of ABC analysis has been considered a classy method of inventory cost calculation since the first 1980s. The ABC method was designed as a solution to overcome the problems in the traditional inventory valuation methods. This research paper has no ambitions to judge the concept of ABC but to apply in cooperative sugar factories. In fact, the aim of this paper is to explain the necessary steps to apply ABC, as well as to explain the procedures for identifying different categories of stock that will require different management and controls. Sugarcane is the main raw material for the producing of sugar in the sugar manufacturing process. Sugarcane is refined with various chemicals such as sulphur dioxide, phosphoric acid, calcium hydroxide etc. subordinate raw materials used in sugar production. All this material processes certain value and it should be kept in well structured store department under the supervision of store manager. Store department covers all aspect of materials, handling, storage, stock control and issue to concern department as per requisition.

Objective of the study:

1. To Study the existing material planning to secure economy in cooperative sugarfactories
2. To check the feasibility of implementation of ABC Analysis for inventory control incooperative sugar factories.

Hypothesis of the study:

1. ABC Analysis is useful for inventory management in cooperative sugar factory
2. ABC Analysis is not useful for inventory management in cooperative sugar factory

Research Methodology:

This is conceptual based paper and the researcher has collected secondary data with necessary primary data for this paper. The researcher has selected Pushphadanta Cooperative Sugar Factories from Nashik district where sugar factory have been working in loss. The researcher has discussed with a few sugar factory experts, industrial people, financial experts and cost accounting practitioners for practicability of implementation of ABC Analysis for inventory control in cooperative sugar factories.

Implementation of ABC Analysis for Inventory Control in Factory:

In ABC Analysis, annual consumption of various items is worked out in terms of rupee value, and it is divided in to three board categories i.e. A, B, and C category at descending value. The items in the A category have the highest value, B category items are lower value then A category value and C category items have the lowest value. Based on ABC analysis, an average percentage of items and percentage of their respective values may work out as follows. ABC analysis for inventory control in the store department can be explained at allocation of total items in percentage and its value. A category items - 10% of the itemsaccounts for 70% of the annual consumption value of the items. B category items - 20%of the items accounts for 20% of the annual consumption value of the items. C category items - 70% of the items accounts for 10% of the annual consumption value of the items.

	Percentage of items	Percentage of rupee value
A	10% of the total inventory	70% of total inventory value
B	20% of the total inventory	20% of total inventory value
C	70% of the total inventory	10% of total inventory value

It is observed that A category items which are in large value but in small portion of total consumption in terms of value, these items are more important from the point of inventory control and focus for higher degree of control. C category items compare to A category items which are large in numbers but small value of the total consumption in terms of value. These are termed as C category items and there is no need for strict control. In between A and C the B items are of medium importance.

Policies for 'A' items

1. Items account for 70% of the value, they should be ordered frequently to reducethe capital locked up in inventories.
2. Such items should be estimated in advance and they should be procured on aplanned basis.
3. Purchase of A items should be looked up by the purchase manager to ensuredelivery.
4. Stock and issue records should be maintained carefully in the inventory control,so as to get the up to date position of stocks at any time.

Policies for 'B' items

1. The policies for B items in general are intermediate between those for A and Ccategory items
2. Order quantities, reorder points and safety stocks should be fixed for B categoryitems and revision once in a year is adequate for this items
3. Annual or six monthly contracts with scheduled deliveries can be used to anadvantage for B category items.
4. Stock and issue records must be maintained properlyPolicies for C category items
5. Annual or six monthly orders should be placed to reduce paper work in the purchase section and also to get the advantage of large purchase quantity discount.
6. Authority for the purchase of C category items could be delegated to the store keeper.
7. Stocks and issue records can be minimised to the extent that is possible.

Conclusion of the study:

Inventories constitute the significant part of current assets, and it involved major portion of working capital out of total capital invested in assets. Inventory management can effectively and efficiently avoid unnecessary investment. Inventory control is the

process of deciding what and how much of various items are to be kept in the store department. It is also determines quantity of finished goods, quantity of work in progress, quantity of closing stock of all raw materials specially in chemical material, spare parts and equipments. The basic aim of inventory control is to minimise cost in investment in inventories and ensure the continuous production process. For better inventory control there is need to undertake systematic analysis of all items in store rooms stored. On an average 1250 to 2500 TCD sugar factories carries items in inventory between 5000 to 6000 items. A high degree control on each item is possible only by applying the ABC Analysis Method for inventory control in selected sugar factories.

Recommendation/ Suggestions:

The **ABC analysis** is widely used in supply chain management and stock checking and inventory system and is implemented as a cycle counting system. It is most important to sugar factory seek to bring down their working capital and carrying costs. Hence Researcher strongly recommend to the sugar factory to introduce or implement **ABC analysis in his store department for better inventory control.**

References:

1. *Manufacturing planning and control systems for supply chain management By Thomas E.Vollmann*
2. *Lun, Lai, Cheng (2010) Shipping and Logistics Management, p. 158*
3. *Purchasing and Supply Chain Management By Kenneth Lysons, Brian Farrington*
4. *Best Practice in Inventory Management, by Tony Wild (2nd Ed., p. 40)*
5. *Ultsch, Alfred, Jörn Lötsch. "Computed ABC analysis for rational selection of mostinformative variables in multivariate data." PLOS One 10.6 (2015): e0129767.*
6. *Kringel, D., Ultsch, A., Zimmermann, M., Jansen, J. P., Ilias, W., Freynhagen, R., &Resch, E. (2016).*
7. *Iovanella, A.: Vital few e trivial many, Il Punto, pp 10-13, July, 2017.*
8. *Barbara Pawelek, Jozef Pociecha, Mateusz Baryla, ABC Analysis in CorporateBankruptcy Prediction, Abstracts of the IFCS Conference,p 17, Tokyo,Japan,2017*
9. *www.netsuite.com*
10. *www.eazystock.com*