

## MAN POWER MANAGEMENT TECHNIQUE

Deepak Dattatrya Pawar<sup>1</sup>, Ankit Vishnu Gojamgunde<sup>2</sup>, Sachin Bhagwanrao Gore<sup>3</sup>, Rushikesh Dipak Mete<sup>4</sup>, Mr. Ashish Rajkumar Devshette<sup>5</sup>

<sup>1,2,3,4</sup>Students, Diploma in Mechanical Engineering, Vishweshwarayya Abhyantriki Padvika Mahavidyalay, Almala, Maharashtra, India.

<sup>5</sup>Project Guide, Lecturer, Department of Mechanical Engineering, Vishweshwarayya Abhyantriki Padvika Mahavidyalay, Almala, Maharashtra, India.

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**Abstract** - 'Man power' may be thought of as "the total knowledge, skills, creative abilities, talents and aptitudes of an organization's work force". Of all the 'M's (men, materials, machines, methods and money) in management, the most important is "M" for men i.e. human resources or manpower. An organization's performance and resulting productivity are directly proportional to the quantity and quality of its manpower. Efficiency of industrial production lines is crucial as it results in an improved production and utilization of available resources. In ancient, Agriculture business firms, typically uses simple techniques and devices for material, cereals handling with more man-power. It created some critics like less productivity, more work time, more expenditure on salary of worker etc. Worker spent maximum time on grains handling & transporting sacks. This problem of grains filling in sacks is overcome by developing another material handling device which reduces man-power efforts and their quantity to improve efficiency of agriculture firm.

**Key Words:** Man-Power, 5 M's, Productivity, Efficiency, Performance, Mechanism, Seesaw

### Literature Review:

- Ozay Mehmet, (1972), examined the Manpower planning/HRP and labour markets in developing countries. He argued that disaggregated manpower research, focused on current problems and conditions in employment markets, and would be far more useful to economic development policies than the sort of abstract macro-planning aimed at forecasts of long-term manpower requirements which has been highly fashionable during the last decade. He found that institutional and economic factors peculiar to that country have resulted in three 'insulated' labor markets, one each for Malays, Chinese and Indians, with practically no mobility of labour across insulated markets, even in widely divergent supply-demand conditions
- Harvey Kahalas, Wayne.E.Leininger, 1976 observed the manpower planning /HRP model for organizational effectiveness. He argued that micro-manpower planning is finally beginning to emerge as a process for helping individuals and firms to play an active role in developing integrated approaches and facilitating interrelationships within an organization.
- Margaret Slater, 1980 examined the Manpower planning/HRP and research. He pointed out that the best entry point or initial approach to manpower planning is via term definition. He had further pointed out that we should also keep this term-defining concept in mind whenever we think, talk, or write about the subject, because the very label manpower planning in itself is ambiguous and capable of multiple interpretations.
- Trevor Wegner, 1985 designed a discrete simulation modelling for corporate manpower planning, Africa. He pointed out the impact on organizational staffing levels over time as result of specific present or proposed manpower policies in the areas of procurement and promotion. He found that manpower planners in south African companies have very few, if any decision support tools at their disposal to assist them in the formulation of their manpower strategies such as quantitative tools as do exist are mathematically too sophisticated to be easily understood and implemented by manpower managers who are, on the whole, non-numerate. He suggested that through manipulating the inputs, the manpower planner can, with relative ease, examine the consequences of a range of alternative policies within a very short period of time.
- Hyun Park, Sang M. Lee, Seong No Yoon, Seung-Jun Yeon, 2008 analyzed the dynamic manpower forecasting/HRP model for the information security industry. They developed an integrated model for manpower forecasting for the information security (IS) industry, one of the fastest growing IT-related industries. They incorporated three critical factors (feedback structure, time lags, and a flexible saturation point) in a system dynamics (SD) simulation frame. They found that the simulation results showed an overall IS manpower shortage in the IS industry. Policy alternatives were proposed based on the simulation results. They suggested that the simulation model can rerun to reflect the various alternatives to achieve a stable manpower balance between demand and supply.
- Manpower planning enables a department to project its short to long term needs on the basis of its departmental plans so that it can adjust its manpower requirements to meet changing priorities.
- Performance management is a very important Human Resource Management function. Its objective is to

improve overall productivity and effectiveness by maximizing individual performance and potential.

- Its objective is the maintenance of better human relations in the organization by the development, application and evaluation of policies, procedures and programs relating to human resources to optimize their contribution towards the realization of organizational objectives.

**1. INTRODUCTION**

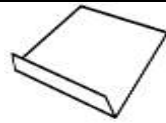


In general typical Indian Agriculture Business firms, organizations, godown use full utilization of worker (Man-Power) for doing various daily activities like filling of coarse sacks with grains like wheat, rice, maize, millet etc. Sack is defined as traditional storage and transportation material. Grains are the bulk materials so there will be continuous material flow and bulk handling equipments are required but most of the firms do manually or use simple devices like pallet, skids, slipsheets, tote pans, bins, baskets, racks etc. It will require more man-power, work time, effort which reduce efficiency of firm. Man power management based agriculture device is one which is operated manually. This type of machine/device is used for the sacks of the cereals like wheat and rice. It is the simple construction mechanism which operates without any electricity. It works like a seesaw in which the weight is balanced between the two sides.

**1.1 Basic Material Handling Equipment**

Unit load formation equipment is used to restrict materials so that they maintain their integrity when handled a single load during transport and for storage. If materials are self-restraining (e.g. single part or interlocking parts), then they can be formed into a unit load with no equipment.

**Table 1.1.** Unit Load Formation Equipment

1	Self-restraining (no equipment)
2	Pallets
3	Skids
4	Slipsheets
5	Totepans
6	Pallet boxes
7	Bins/baskets/racks
8	Cartons
9	Bags

	Slip-sheets
	tote pans
	Skid Boxes


**Fig 1.1.** Unit Load Formation Equipment

**1.2 Actual Agriculture Work**



**Fig 1.2** Actual work by worker to fill sacks

The method used in agriculture business firms for filling sacks of cereals is very time consuming and hectic to worker as very simple devices are used for material handling purpose as mentioned above. By this method 2 to 3 worker used for sack filling and 2 to 3 worker for transportation of these sacks to other location. So at each work area more man-power is required which will increase production cost of unit.

	skids
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This problem of material handling of cereals and its transportation is overcome by constructing the Agriculture Trolley.

### 2. Construction and working of Agriculture Trolley

In this machine or technique a tapered shape is made from the metal sheets by banding it and welded to each other. In this the side of the worker is narrow and the opposite side is wide in range. So the cereals picked up from the ground are directly filled in the sack. It consists of a base stand which is connected to the wheels to move it from one place to another place. A handle is provided. At the location of the cereals machine is placed and it is lifted by the handle provided to lift the trunk. As the trunk is lifted due to the gravity and the tapered shape the cereals are filled in the sack easily. On the base a plate is attached to put sacks on it and on the handles sharp U shaped rod is welded to hang one side of sack on it. By this trolley it will reduce the time and effort of the worker.

Usually this method is very fast as cereals are easily wrapped into sacks due to tapered shape of front panel. About 75 to 85 Kg of cereals is filled in sacks by applying of very small effort at the end of handle.

The mechanical advantage of this trolley is more as less effort is applied to lift heavy materials.



Fig 2.1 Use of Agriculture Trolley

### 3. Components and Description

1. Wheels
2. MS sheet metal for making tapered front panel
3. Trunk
- 4 Base Stands
5. Handle
6. Base Plate



Fig 3.1: MS Base Stand



Fig 3.2: Tapered trunk

- By selecting proper grade of Mild steel in required dimension first the base stand is made by keeping a flat metal sheet on MS rod and wheels are attached at two ends of it.
- At four corners four rods are joined by welding operation.
- A shaft is placed at the top of this stand and connection is given between movement of wheels and shaft by using ball bearings at two ends.
- Tapered front panel is welded on the shaft at exact location
- This front panel is movable in up and down side as shaft rotates.
- The volume of cereals which is collected in this panel depends on the dimensions of the constructed sheet metal.

### 3. Working:

- The long handle is moved up so that tapered front panel moves down. It is just similar to see-saw mechanism.

- Tapered front panel is directly dipped into cereals stock
- A sack is kept on base stand
- When sufficient amount of cereals are filled into panel area then the long handle is moved down so that panel moves up and cereals get filled into sack kept on stand.
- The device can be moved to any location as wheels are attached to base
- This is simple mechanism suitable for agriculture work which reduce human effort and man-power requirement
- Manpower planning and labour markets in developing countries, Ozay Mehmet, ( 1972), Manpower planning and labour markets in developing countries, Journal of development studies, volume 8, issue 2, pages 277 – 289
- Websites :  
[www.hrtoigo.com](http://www.hrtoigo.com)  
[www.sciencedirect.com/science article](http://www.sciencedirect.com/science/article)

#### 4. CONCLUSIONS

- The Agriculture trolley is a device based on the principle of Man-Power Management technique
- It will improve productivity, efficiency, time management, reduction in man-power requirement,
- less efforts are required to fill thousand of sacks
- simple mechanism for material handling and transportation
- Best suitable for agriculture work
- Low manufacturing cost
- Any low skill worker can handle/operate the device
- Manpower planning in any organization is very important. It is through this process that organizations can ensure optimum use of its human resources currently at their disposal as well as proving for the future of the organization. It is therefore concluded that the growth, success and development of any country can be measured by how its manpower is planned, how its human resources is being utilized.
- Therefore, manpower planning remains the single and the most important factor towards technological and economic advancement. In this present dispensation of technological development and advancement in all fields of human endeavour, manpower planning is carried out with the sole aim of increasing efficiency and effectiveness of individuals in an organization.
- The primary function of manpower planning is to analyse resources viable in an organization, and to determine how to obtain the kinds of personnel needed to staff position ranging from assembly line workers to chief executive. Thus, the most important resources, the people who supply the organization are its human resource, the people who supply the organization with work, talent, creativity and drive

#### 5. REFERENCES

- R. Fayana. Human Resource Management 7th Edition. New Delhi: Prentice Hall. 2002.
- Subba rao, P,( 2010), Personnel and Human Resource Management, New Delhi, Himalaya Publishing House (4th Ed)
- Prasath L. M., (2005) Thirty Fourth Edition 'Human Resource Management', Sulthan Chand & Sons Publishers, New Delhi.