

Do You Know?

Some farmers in early days disinfected *grain seed* by soaking in sea water.

When spinning time comes the *silk-worm*, working continuously for three days, produces a cocoon with the reelable thread from 800 to 1200 yards long.

A machine called a *penetrometer* is used to measure the toughness of meat; it is a cutting tool and records the pressure required to shear through a sample of the meat.

A policy of the U. S. National Park Service is not to disturb the *wild animal life* in any park until a scientific appraisal has been made of the probable effects of such action.

Solid *carbon dioxide* (dry ice) is so much denser than gaseous carbon dioxide that it can be used to extinguish fires outdoors in high winds, even gasolined fires in wrecked airplanes.

Common tent *caterpillars*, particularly active on orchard trees in spring and early summer, hatch from egg-masses on twigs; the worms from a single egg-cluster hold together in building a tent in a crotch in the tree.

Fluorescent lamps, coming more widely into use in home lighting every day, do not require special wiring but are installed on the regular house-lighting current.

Extremely small amounts of deadly *carbon monoxide gas* in air are detected by a new solution containing palladium chloride, phospho-molybdic acid, and acetone; a measured quantity of the air is passed through the solution.

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NUTRITION

Vitamins Aid Manpower

A gain of 4.1% was achieved in one year at an aircraft corporation. Absenteeism and turnover were reduced and work performance improved.

► A GAIN in manpower of 4.1% by conservative estimate was achieved in one year at the Lockheed Aircraft Corporation through a vitamin supplement given a group of its workers, Dr. Henry Borsook, of California Institute of Technology, reported.

The gain was made up of 6.6 working days per man per year through improved work performance; 2.3 days from a reduction in absenteeism; and 1.6 days from reduced turnover.

Improvement in industrial morale is considered the major factor responsible for the effect of the vitamin supplement, according to Dr. Borsook's report in the *Milbank Memorial Fund Quarterly*. The Milbank Fund is one of 12 organizations, including government agencies and industrial concerns, which supported the extensive study.

The vitamin supplement consisted in vitamins A and D from fish liver oil, three synthetic B vitamins (B₁, B₂, and niacinamid) and synthetic vitamin C. Besides this the supplement contained calcium. These were given twice a day, five days a week, for one year. A group of dispensers saw to it that every worker in the study got and swallowed his vitamin pills.

The workers in the project were a highly selected group of young men, exceptionally interested in their work. Examination before the vitamin supplement was started showed no signs of acute or severe diet deficiency disease. No dramatic results were therefore to be expected from the extra vitamins and calcium. Diet histories showed that they were eating about the same foods at the

end of the study as at the beginning.

The men all volunteered for the study, and therefore were probably interested in improving their health, had initiative when there was a chance to do something about it, and were in a cooperative frame of mind.

These traits in a worker make for better industrial morale, Dr. Borsook points out. This is another reason why dramatic results from the vitamin supplement would not be expected. Improvement in work performance and reduction in absenteeism in such a group would therefore be more impressive, it is suggested, than in one made up of workers with lower morale and poorer health at the beginning of the study.

The vitamin-mineral supplement was given to one group while a similar group received pills and capsules identical in appearance but containing no vitamins. Records of work performance, absenteeism and turnover in a third group that did not take part in the study were also used for comparison.

The effects of the vitamin supplement did not show up until the second six months of the study. Then absenteeism from all causes was 19% less for the vitamin group than for the non-vitamin group. The greatest differences were in unauthorized absences, the least in illness absences.

Non-military terminations were 27% fewer in the vitamin group for the whole year. At the end of the year personnel ratings were significantly higher on the average for the vitamin workers than for the non-vitamin group.

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