

Serum Total Cholesterol Concentrations, mg. per 100 ml.

Subject No.	Initial Conc. ¹	Weeks of Change	Weekly Mean After Drop	Total Drop %	Variability ²
Natural Oil Period					
1	257	3	202	21	3
2	230	4	204	11	5
3	160	4	149	7	1
Hydrogenated Oil Period					
1	268	4	218	19	3
2	233 ³	—	—	—	—
3	193	7	181	6	2

¹Mean of 3 tests, first week.

²Weekly, + or - of mean after drop.

³No change.

(Continued from Previous Page)

Biological Application

Elaidic acid, "man-made" in the hydrogenation process, served as a source of energy, apparently equivalent in calories, weight for weight, to the polyunsaturated fatty acids originally present in the natural oil.

A biological change in pattern of utilization of lipids was demonstrated. Criteria were diminished levels of serum cholesterol and increased levels of beta lipoprotein. It was apparent that elaidic acid is capable of diminishing serum cholesterol, although affecting a different pathway of lipid utilization as evidenced by increased beta lipoprotein.

Asks Irrigation Research Be Increased

Of particular interest to us in Arizona is the recommendation that more research is needed to cut down losses of irrigation water through seepage, evaporation, and wasteful runoff. The suggestion comes from the USDA's Soils, Water, and Fertilizer Research Advisory Committee.

New principles, practices, and equipment should be developed to reduce water losses, develop new water sources, and recharge ground water, the committee reported. Expanded research is needed on low-cost soil stabilizers and sealers to decrease losses of irrigation water during conveyance, and to develop satisfactory methods for spreading chemicals that prevent evaporation from water surfaces.

The committee recommended that USDA consider priorities for soil and water research, to assure that work is done in prime agricultural areas of the country that now, and in the future, will produce most of our food and fiber.

More research on watershed area problems, including management of storm runoff, reduction of flood runoff, and control of erosion and sedimentation, was recommended. Increased cooperation between the Forest Service, Agricultural Research Service, and other public and private groups on problems of crop, forest, and range lands should complement these studies, according to the committee.

The committee also urged expanded economic research to guide planning of programs by soil conservation districts, the Bureau of Land Management, and other groups. This research would compare the success of conservation practices by regions, different physical conditions, and types of farming.

Improved technology, including higher yielding crops and increased application of commercial fertilizers, serves to emphasize the need for more research to define precisely the seedbed requirements for various crops in different areas of the country. These studies should deal with depth of cover, size of soil particles, degree of soil compaction, soil surface profile, and row spacing, the committee said.

Dewhirst Heads UA Agric. Men's Club

New officers of the Agricultural College Men's Club, made up of staff members in this college, are Dr. Leonard W. Dewhirst, animal pathology, president; Dr. George Gries, plant pathology, president-elect; Dr. Jimmie Hillman, agricultural economics, program chairman; and Dr. K. C. Hamilton, agronomy, secretary-treasurer. The new officers will man the club through the 1963-64 school year, starting next September.

1962 Cotton Crop Sets Yield Record

Arizona's cotton production last season set a new state record, while the state's average short staple yield may have set a national mark.

These figures and others were reviewed at a mid-May meeting of the High Yield Club at Phoenix. Honored by the group were farmers who grew the most cotton per acre in Arizona during the 1962-63 season.

Top honors went to John Buxton and Jack C. Hart of Royal Packing Co., who grew an amazing 4.98 bales per acre on 141 acres in the Harquahala Valley. Power Brothers, in the Queen Creek area, was second with 3.547 bales per acre.

Others in the top production group are Franklin B. Cox, Stanfield; E. A. Robert, Bernard J. Erskine, Red Mountain Ranches, of the Scottsdale area; Raymond Cook of Glendale; Jaybe Tschudy, Kyrene; Glenn Kempton and Robert Snediger of Tempe; G. D. Isabell of Deer Valley; and Don Wiechens of Cashion.

Arizona, which consistently leads the nation in yield per acre, produced 942,000 bales of cotton in the 1962-63 season, the 300 persons at the award banquet were told.

The average yield of 1,162 pounds of short staple cotton last season set a new state record. The Crop & Livestock Reporting Service, with only preliminary figures available from other states, believes this 1,162 pounds may set a national record.

Arizona's all-cotton yield (short staple plus long staple) was 1,112 pounds per acre, falling behind California's 1,132.

But California grows only about 600 acres of comparatively low-yielding long staple, while Arizona's all-cotton average was diluted by 41,000 acres of long staple, half the nation's production.

Long-staple yield in Arizona rose from an average 518 pounds per acre the previous year to 665 pounds in 1962-63.

Seton Ross, Memphis, editor and publisher of the Cotton Trade Journal, said in a banquet address that research is the answer to cotton's biggest problem, the cost of production.

He called for "greatly accelerated progress in basic and applied cotton research if our industry is not to sink to the level of a specialty crop."

Orange production in Arizona for the 1962-63 crop year is forecast at 1,050,000 boxes compared with the 1961-62 crop of 1,440,000 boxes. Grapefruit production was 1,900,000 boxes compared with the 1961-62 crop of 2,270,000 boxes. The 1962-63 lemon production is estimated at 500,000 boxes, less than one-third of the 1,540,000 boxes produced in 1961-62.