Farm crops

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expand generating capacity at the Chalk Point power plant. To eliminate further thermal pollution of the river, PEPCO installed natural-draft cooling towers, which dissipate generated heat as steam.

The two Chalk Point cooling towers each have a capacity for circulating 250,000 gallons of water per minute. This study concerns only cooling tower No. 3. Unit 4 is not scheduled to begin operation until 1982.

Saline aerosol droplets are created when the towers are in operation. Inside each tower, salt concentration of the brackish water increases two-fold. This is a result of stream evaporation from the circulating water.

Because of the possible environmental impact from salt deposition on area vegetation, the Maryland Power Plant Siting Program contracted with the Water resources Research Center to define standards for safe power plant operation. The aim was to prevent salt damage to nearby farm crops and native vegetation.

The Power Plant Siting Program is administered by the Energy and Coastal Zone Administration of the state Department of Natural Resources. It also coordinates with the state departments of Health and Mental Hygiene, Economic and Community Development, State Planning, and Transportation. Also, the Comptroller of the Treasury and the Public Service Commission.

When PEPCO installed the first natural-draft cooling tower, there was little information available concerning the effects of salt drift from brackish-water cooling towers on agricultural and native plant species.

The Maryland research workers developed 12 permanent observation points, encompassing north, east, south and west sites — located one, three and six miles away from the Chalk Point power plant.

Each site measured 0.4 acre and contained three plot replications of tobacco, soybeans and corn. In addition, Dr. Mulchi and two fellow agronomy department faculty members studied areas of undistrubed soil. University of Maryland botanists looked at the natural vegetation.

Three dust collectors measured airborne salts and other particle accumulation at each research site. Water accumulated in the rain gauge at each location was analyzed for salinity content and pH (a measure of acidity).

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Lancaster Co. DHIA

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Robert H. Rohrer & Sons						
GrH	27	224.1	89.4	46.9	3.8	1.80
Howard S. Erb						
RH	33	44.8	86.3	49.5	3.6	1.80
Joseph W. Best						
GrH	30	104.5	91.6	44.6	4.0	1.79
Samuel K. Stoltzfus						
R&GrH	33	37.4	80.9	50.7	3.5	1.79
John F. Petersheim						
R&GrH	34	38.0	86.3	48.3	3.7	1.79
William W. Absher						
RH	30	9.7	82.1	48.8	3.7	1.79
Sunny Craft Farm						
RH	33	31.7	92.2	44.2	4.0	1.78
Denlinger & Stoltzfus						
Mix	31	70.6	87.3	41.2	4.3	1.78
James G. Kreider						
R&GrH	28	157.3	92.1	47.3	3.8	1.78
Paul N. Brubaker						
R&GrH	34	70.5	85.4	47.5	3.7	1.78
Harry L. Troop						
RH	33	51.3	89.0	48.1	3.7	1.78
Shadytop Farm						
R&GrH	32	37.8	92.0	54.1	3.3	1.78
Harold G. Shelly						
R&GrH	28	31.1	87.7	50.6	3.5	1.78
Springarden Farm						
RH	34	77.1	86.2	48.9	3.6	1.78
Donald M. Eckman						
R&GrH	33	45.0	85.2	45.1	3.9	1.78
Bruce H. Hershey						
Mix	31	56.4	87.4	46.5	3.8	1.77
Paul B. Zimmerman						
R&GrH	63	41.5	81.7	44.3	4.0	1.77
Harry Zimmerman Jr.						
R&GrH	29	41.6	95.0	45.9	3.9	1.77
Joseph DeLong						
GrH	31	71.9	88.5	43.1	4.1	1.77
Reuben L. Stoltzfus						
R&GrH	31	38.1	85.4	44.9	3.9	1.77
James & Kenn Miller						
R&GrH	29	40.6	90.5	45.6	3.9	1.77
Isaac S. Beiler						
Mix	32	47.4	89.1	49.2	3.6	1.77
Paul Sauder						
R&GrH	29	63.4	88.8	48.5	3.6	1.76
Raymond & Louis Witmer						
R&GrG	21	68.3	87.0	35.3	5.0	1.76
J. Wilmer Conrad						
R&GrH	33	39.0	86.6	45.1	3.9	1.76
Kenneth B. Garber						
R&GrG	30	60.3	91.2	35.2	5.0	1.76
Shellenberger Bros.						
R&GrH	29	73.1	87.4	48.2	3.7	1.76
Paul H. Rohrer						
GrH	32	78.9	88.6	47.7	3.7	1.76
John David Martin						
Mix	43	35.0	92.0	49.4	3.6	1.76
John E. Fisher						
R&GrH	29	31.7	80.6	45.9	3.8	1.76
Jacob Speicher Jr.						
R&GrH	28	35.0	81.8	48.2	3.7	1.76
Kenneth D. Myer						
Mix	39	66.2	85.1	44.8	3.9	1.76