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# PACKAGING AND PREPACKAGING OF FRESH FRUITS AND VEGETABLES JULY 1946 - DECEMBER 1947

## A List of References

Compiled by Donald W. Gooch



This list supplements the references on the packaging of fruits and vegetables which appear in Library List 37, "Marketing Fruits and Vegetables. 1942 - 1946; a List of References," by A. M. Hannay and E. Hareide.

Call numbers are those of the U. S. Department of Agriculture Library.

1. ACETATE film for produce packaging. Good Packaging 8(6): 11-12, 42. June 1947. 280.33 G59
   Use of cellulose acetate (Lumarith) in prepackaging of fresh fruits and vegetables. Outlines factors on transmission rates of water vapor and common gases.
2. AIKEN, W. H. Factors affecting measurement of water vapor permeability at low temperatures. Paper Trade J. 125(14): 31-35. Oct. 2, 1947. 302.8 P196
3. ALBAN, E. K., and TUSSING, E. B. Weight loss of potatoes stored in various containers. Amer. Potato J. 23(8): 302-304. Aug. 1946. 75.8 P842
   The two-walled kraft paper bag was found superior to the net bag commonly used for packing potatoes, onions, and oranges, in reducing weight loss in potatoes in Katahdin potatoes in experiments conducted during 1945-46.
4. ALLEN, N. Fresh produce--a new field for the packaging industry Fibre Containers 32(3): 80-83. Mar. 1947. 286.8 F44
   Packaging materials and methods.

5. ALLEN, N. Prepackaging of produce. Food Indus. 19(1): 105. Jan. 1947. 389.8 F737
   Also in Ill. State Hort. Soc. News Letter No. 1: 3-4, Feb. 1947. 81 IL6N
   Discusses water vapor permeability; fogging; requirements of packaging materials; and prepackaging of asparagus, tomatoes, spinach, salad mixes and peaches.
6. ANDERSON, E.A. Paper strapping for baskets. Barrel & Box & Packages 52(2): 11. Feb. 1947. 99.82 B27
   Tests with samples of three types of paper strapping made into hoops for half-bushel baskets.
7. ANSPACH, G. Fruit containers and grades. Canad. Grower 70(4):10-11, 28. Apr. 1947. 80 C16
   Experience with peach baskets and cartons, and with Pliofilm and red leno.
8. ANTI-BRUISE containers developed of film-fibre for carry-home, gift and bulk packs. Good Packaging 8(1): 21-22, 36-37. Jan. 1947. 280.38 G59
   The "Hammock-Pak" principle of suspending Pliofilm-sealed fruit within either a compartmented fiber container or a paperboard frame. Developed in research at Wayne University, Detroit.
9. APPLES; they're jumble-packed for self-service selling in a folding carton with tough Pliofilm windows. Mod. Packaging 20(7): 129. Mar. 1947. 309.8 M72
10. ARMITAGE, F. D., and VERDCOURT, B. The identification of certain transparent wrapping materials. Printing and Allied Trades Res. Assoc., Packaging Tech. Paper No. 1, 28 p., London, 1946 309.9 P93
    Section 2, "Transparent packaging materials," p. 4-8, reprinted in Food Mater. & Equip. 7(6): 12-13. June 1947. 389.8 F7393
11. AUTHORIZE new cherry container in Oregon. Barrel & Box & Packages 52(7): 21. July 1947. 99.82 B27
    A lug for cherries and apricots.
12. "AUTOMATIC set-up" shipping box. Packaging Parade 15(172): 68. May 1947. 309.8 P123
    A 2-in-1 corrugated box with a set-up speed of about 3 seconds. Of basically new design, it was originally developed for shipment of apples.
13. BAGGED cranberries; Ocean Spray turns out 165 a minute to meet demand for self-service package; tests show sales increased and waste cut. Mod. Packaging 21(1): 107, 194. Sept. 1947. 309.8 M72
    Cellophane packaging of fresh cranberries.
14. BAGGED oranges. Mod. Packaging 21(2): 108-111. Oct. 1947 309.8 M72
15. BAILEY, J. C. Aluminium for plant and pack. Food [London] 16(188): 145-147. May 1947. 389.8 F738
    Use of aluminum foil for wrapping skin fruits such as grapefruit and oranges.

16. BARAIL, L. C. Bacteriology of food package materials. Mod. Packaging 21(3): 145-149, 196. Nov. 1947. 309.8 M72
17. BASS, K. New ideas in marketing fresh fruits and vegetables. Purdue Agr. 38(9): 4, 18. June 1947. 6 P97
    Work of the Horticulture Department with the cooperation of the Agricultural Chemistry and Home Economics Departments of Purdue in the prepackaging of fresh vegetables in sanitary cardboard boxes overwrapped with a breathing type of cellophane.
18. BASS, S. Plastics and you. 190 p. New York, N. Y., Eastwood-Steli Co. [1947] 309 B29
    Suitability of melamine resins in wrappers for moist vegetables p. 165; use of melamine resin treated paper shipping bags for potatoes, p. 167-168.
19. BAUM, R. A. Chemical impregnation of paper as aid to packing citrus fruits. Pulp & Paper Indus. 21(2): 30-32. Feb. 1947. 302.8 P11
20. BELMONT, F. Merchandising--it's in the bag. Calif. Fruit & Veg. Rev. 7(5): 26, 46, 48. Aug. 1946. 80 C1224
    Fruit and vegetable packaging.
21. BERRY box or the like. U. S. Pat. 2,406,254. U. S. Pat. Off. Off. Gaz. 589(3): 461. Aug. 20, 1946. 156.65 Of2
    William A. Ringler, Wayne, Pa., assignor to the Gardner-Richardson Company, Middletown, Ohio, a corporation of Chio.
22. BINKLEY, A. M., and KUNKEL, R. Loss of 20 to 30 percent of perishable foods emphasizes need of pre-packaging work. Colo. Agr. Col. Colo. A. & M. News 1(6): 7. Dec. 1946. 6 C713
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23. BONNELL'S packing and shipping directory. Packing and shipping, v. 74, No. 4, 46 p. Plainfield, N. J., 1947. 289.8P12
24. BRADLEY, S. K. Consumer opinion on pre-packaging of fruits and vegetables. Good Packaging 8(1): 25-26. Jan. 1947. 280.38 G59
    Similar title (Public opinion on prepackaging of fresh fruits and vegetables) in Fibre Containers 32(3): 84-86. Mar. 1947. 286.8 F44
    Abridgment under title "Opinions on packaged produce" in Food Indus. 19(1): 104. Jan. 1947. 389.8 F737
    An address before the Eighth Annual Meeting of the Packaging Institute at Chicago, Nov. 26, 1946.
25. BRATLEY, C. O. Refrigeration of prepackaged fruits and vegetables. Refrig. Engin. 52(6): 516-520, 570, 572-573. Dec. 1946. 295.9 Am32J
26. BURBANK, P. E. Packaging for air cargo shipment. Amer. Mangt. Assoc. Packaging Ser. No. 17, p. 3-12. N. Y., 1946. 280.38 Am3
    Perishable fruits, p. 9
27. BURGUM, K. K., MCCORMICK, Z., and LARSEN, S. A. Consumer acceptance of kitchen-serviced vegetables. Wayne Univ., Studies in Air Transport 4, 12 p. Detroit, 1946. 289.59 W36
    Experiments in the prepackaging of corn, asparagus, peas, lima beans, carrot sticks, watercress, chopped green peppers, coleslaw, sliced and chopped onions, and lettuce. Pliofilm, Lumarith, parchment paper, cellophane, open cartons, and Vitafilm were used, depending upon the product.

"The study was originally published in two parts in Good Packaging, Volume VII, September and October, 1946."

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Tests at the University of Florida reveal that over a four-week period unwrapped Valencia oranges at room temperature suffer a weight loss of more than six times that of Pliofilm-wrapped fruit. Over a 20-week testing period unwrapped oranges in cold storage showed a weight loss 10 times greater than those in film.

29. BUYER'S directory for packaging equipment & supplies. Food Packer 28(3): 25-48. Feb. 15, 1947. 286.83 C165

30. CAL-CO-PAC inaugurates commercial operation. Good Packaging 8(4): 19-21, 39-40. Apr. 1947. 280.38 G59
Prepackage trays for lettuce, mixed salad, spinach, and celery.

31. CAROLUS, R. L. Prepackaging activity and research. Fruit & Veg. Rev. 8(7): 12-13, 35-40. Oct. 1947. 80 C1224

32. CARTWRIGHT, L. C. Measurement of the gas permeability of sheet materials. Indus. & Engin. Chem. Analyt. Ed. 19(6): 393-396. June 1947. 381 J825A

33. 'CELLPAK' fruit shipping box developed by Hinde, Dauch; intended for tree-ripened products. Food Field Rptr. 14(20): 12. Sept. 30, 1946. 286.83 F73
A corrugated shipping box giving individual packaging to each separate fruit.

34. COLLINS, J. H. Packaging and the small grocer; this San Francisco food retailer eagerly awaits grower-shipper packaging. West. Grower & Shipper 18(3): 9, 33-34. Feb. 1947. 280.38 W52
Retailer packaging of fresh vegetables in cellophane moisture-proof bags.

35. COMBINATION fibre-wood container soon to be introduced to produce trade. Good Packaging 8(2): 24-25. Feb. 1947. 280.38 G59
The Tray-crate for commercial shipment of berries, lettuce and other perishables. Its wirebound wrap-around has no wooden ends.

36. COMBINATION wood-fiber lug fails to impress packers. Wooden Box & Crate 8(4): 13-15. 1946. 99.82 W857
Criticisms of this type of container as used in the shipping of cherries and apricots from the Wenatchee-Okanogan area of Washington State, 1946.

37. COMIN, D., and JUNNILA, W. Water loss from vegetables in storage. Ohio Agr. Expt. Sta. Bimo. Bul. 31(243): 159-166. Nov./Dec. 1946. 100 Oh3S
Tests on the effect of containers on loss of moisture from several vegetables in common storage with high and low relative humidity showed that the water loss (weight) in percent of original weight was lowest in bags, followed by boxes, baskets and crates.

38. CORSI, L. E. Attractive packages and speed are keys to new markets. Amer. Fruit Grower 67(1): 15-16. July 1946. 80 G85
Containers, wax emulsions and film coverings.

39. COVINGTON, E. G. Douglas fir boxes safe for apple packing. Tests on 49 varieties fail to show harmful effects on any of them. Food Packer 28(9): 50, 52. Aug. 1947. 286.83 C165

40. CROWS, P. A. Minor matters that mean much. Citrus Grower, No. 156, p. 12. Jan. 31, 1947. 80 C495
Shipping citrus fruit in ventilated space and wiring instead of strapping boxes.

41. CULLOM, W. F. Why prepackaging. Mkt. Growers J. 76(5): 7, 44-46. May 1947. 6 M34
A discussion of the merits of prepackaging fresh fruits and vegetables, and of the role of transparent films in prepackaging.

42. DAVIS, D. W. Isostatic method for determining the gas permeability of sheet materials. Paper Trade J. 123(9): 33-40. Aug. 29, 1946. Ref. 302.8 P196
Food packaging in flexible sheet materials.

43. DENNY, J. L. Modern packing methods. Fruitation (n. s.) 1(10): 24-26. Aug. 1947. 286.83 F949
The hammock pack for oranges.

44. DEZAUCHE, J. F. Future of the yam is in the bag. Sweet Potato J. 1(4): 3, 13. Nov./Dec. 1946. 80 Sw32

45. DICKMAN, P. B. Adding quality and eye appeal. News Farmer Coops. 13(8): 9-10, 20. Nov. 1946. 166.2 N47
Also in Sowega Standard 22(6): 2. Dec. 19, 1946. 280.28 So9
Prepackaging of vegetables by a Florida cooperative.

46. DIPHENYL-TREATED citrus bags. Mod. Packaging 20(9): 206. May 1947. 309.8 M72
In a sample test for shrinkage, two groups of five 8-lb. open-mesh bags of oranges were used - one with a diphenyl-treated protective paper baler and the other without, and both identical in weight. At the end of a week, the unprotected group weighed 2 1/4 lbs. less than the protected group.

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Discusses the characteristics of packaging materials, and, using spinach as an example, points out that it is possible to have two best films for one product--one to be used with, and the other without, refrigeration.

48. DUMAS, L. Here's a first-hand report on how your fruit looks on market; grower shocked by what he saw. Better Fruit 41(10): 9, 26. Apr. 1947. 80 B46
Author believes that the solution to difficulties of apple packing "may be found in the adaptation of the molded papier-mâché trays to a slightly larger NW standard wooden box."

49. EDITORIAL citation to the Visking Corp. for achievement in polythene plastics for packaging. Mater. & Methods 24(5): 1188-1189. Nov. 1946.

50. EIRE. Dept. of Agriculture. The grading and packing of apples for market. Eire. Dept. Agr. Leaflet 57, 9 p. Dublin, 1946. 10.5 Ir42
Box types, wrapping and packing are discussed.

51. ELDER, L. W., JR. Odor transmission through package walls. Food Mater. and Equip. 7(8): 12-13. Aug. 1947. 389.8 F7393
Similar title in Paper Trade J. 125(19): 128, 130. Nov. 6, 1947. 302.8 P196

52. ELEY, G. F. In pre-packaging, the plan's the thing. Food Canada 7(1): 11-14. Jan. 1947. 389.8 F7323
Materials and refrigeration.

53. EXPERIMENTS on pre-packaging of vegetables under way in Florida. Packaging Parade 15(169): 52-54. Feb. 1947. 309.8 P123
Florida Agricultural Experiment Station.

54. FACING realities with respect to prepackaged produce. Packaging Parade 15(172): 48-53. May 1947. 309.8 P123
Mainly excerpts from addresses of A. L. Martin before the 1947 Annual Convention of the Super Market Institute, Chicago, and the April 1947 conference of the American Management Association, Philadelphia.
Discusses shipping point and point of sale prepackaging, and refrigeration. Deals primarily with broccoli, carrots, cauliflower, celery, lettuce and tomatoes.

55. FARM Pak. Packaging Parade 15(173): 24. June 1947. 309.8 P123
A tough corrugated board container with telescoping handle, built to withstand 500 pounds pressure when stacked. For use in 4-, 8-, and 12-quart sizes for packaging apples, peaches, plums, pears, grapes, tomatoes, cucumbers and other farm produce.

56. FAWCETT, K. I., and BURKHOLDER, C. L. Improving the bushel basket as a peach container. Natl. Peach Council. Peach Ann. 1947: 7, 9. 281.3939 N21
Also in Hoosier Hort. 29(5): 75-79. May 1947. 81 In2H

57. FILM wrapped corn stays fresh. Two weeks more market life for garden delicacy. Fla. Grower 55 (i.e.54) (11): 14. Nov. 1946. 80 F6622
Tests show that Golden Bantam corn wrapped in Pliofilm and kept at 37 degrees over a 14-day period suffered a weight loss of 0.72 per cent.

58. FITCH, C. L. Fancy Iowa yellow Jerseys. Sweet Potato J. 1(4): 9. Nov./Dec. 1946. 80 Sw32
Packing of sweet potatoes in veneer tub baskets or hampers in the bushel size.

59. FOREIGN markets; a golden opportunity to sell more packaged goods. Mod. Packaging 20(6): 87-92, 166, 168. Feb. 1947. 309.8 M72
Problems in export packaging and prepackaging of fresh fruits and vegetables.

60. FREW, S. Harvesting, packing, and marketing stone fruit. New Zeal. J. Agr. 73(6): 571-572. Dec. 16, 1946. 23 N48J
Container type and packing recommendations, p. 572

61. FROZEN foods field still seeking ideal pack, Institute told. Packaging Parade 14(167): 4, 7-8, 49-62. Dec. 1946. 309.8 P123
Packaging Institute, annual meeting, Chicago Section entitled "Prepackaged produce and self-service" (p. 7-8, 49-53) contains discussion of packaging materials for fresh fruits and vegetables.

62. FRUIT and vegetable basket. Mod. Packaging 20(10): 196. June 1947. 309.8 M72
The "Farm Pak" basket with telescoping handle.

63. FULTON, S. M. A grower's experience with pre-packaging of fruits. Md. Agr. Soc. - Md. Farm Bur. Rpt. (1946) 31:111. 1947. 4 M366
Packaging of apples in 5-pound mesh bags which in turn are packed 10 bags per crate in Bruce orange crates to avoid bruising. Packer is seeking a cardboard container that will hold 8 bags of apples.

64. FULTZ, J. M. Aluminum foil solves packaging problems for many food industries. Food Mater. & Equip. 6(6): 16-17. June 1946. 389.8 F7393

65. GAYLORD, F. C., and FAWCETT, K. I. Packaged produce without refrigeration. Mod. Packaging 20(4): 124-128, 170. Dec. 1946. 309.8 M72
Studies extending over a period of two years at Agricultural Experiment Station, Purdue University, on this method of distribution.

66. GINDICK, F. Consumer packaging of fruit. Natl. Peach Council. Peach Ann. 1947: 15, 17. 281.3939 N21
Package requirements.

67. GINDICK, F. Prepackaged fruit brings high price in western tests. Advertising Age 18(29): 2. July 21, 1947. 238.28 Ad94
Mentions experiments by California plum growers with an open-faced tray holding from 8 to 13 uniformly-sized plums having a total net weight of 1½ pounds. The carton acquires the appearance of a basket through use of a handle three-fourths of an inch wide.

68. GLANZER, P. Packaging machinery. Packing & Shipping 74(5): 8-9. Aug. 1947. 289.8 P12
Machines for the packaging of fresh vegetables.

69. GLENMAR FARMS - grower and packager; a complete pre-packaging plant backed by a maker of airplanes [Glenn L. Martin] becomes the proving ground for new theories of merchandising. Mod. Packaging 20(4): 93-98. Dec. 1946. 309.8 M72

70. GOODYEAR announces non-fogging film to overcome objections to fogging characteristics. Good Packaging 8(5): 25. May 1947. 280.38 G59
A new series of special purpose Pliofilms which, it is claimed, accurately control the transmission of water vapor, oxygen and carbon dioxide.

71. GREEN, A. L. Rail-cannery studies disclose 40% fiber box fatigue loss. Wooden Box & Crate 8(3): 21-23. 1946. 99.82 W857

72. GROWER packaging of produce; California leads the way. Mod. Packaging 19(9): 103-109, 170, 172. May 1946. 309.8 M72
Projects of the California Cooperative Packaging Association and the Western Growers Experimental Institute.

73. A HAMMOCK for fruit. Mod. Packaging 20(5): 176. Jan. 1947. 309.8 M72
Sealing and suspension of individual fruit in Pliofilm, with use of two sheets of cardboard as basis for the package.

74. "HAMMOCK PACK" :Packaging Parade 15(168): 76. Jan. 1947.
309.8 P123
A development of Air Cargo Research, Wayne University, Detroit. Pliofilm-wrapped fruit is suspended in the openings in paperboard sheets to prevent any swaying or contact which might cause bruising. Fruit-containing paperboard sheets are packed in "hammock pack" boxes using egg crate principle. Specific reference is made to apples, peaches, pears, oranges and tomatoes.

75. HAMMOCK-PACKED apples. Good Packaging 8(6): 24. June 1947.
280.38 G59
An exhibit at the Wenatchee (Wash.) Apple Blossom Festival, May 1947, of Winesap apples packaged in consumer carry-home units, six to a container, in the Hammock-Pak style package. For earlier article on the Hammock-Pak in same periodical see entry under "Anti-bruise containers..."

76. HANMER, F. I., JR. What are the potentialities of new films and foils? Food Indus. 18(9): 97-99, 236, 238, 240, 242. Sept. 1946. 389.8 F737
Comparison of Pliofilm and cellophane, p. 240.
Excerpts under title "New films and foils for packaging" in Ill. Hort. 35(4): 3-5. Nov. 1946. 80 IL66

77. HAUCK, C. W. 1946 experiments in packaging and transportation of peaches. Natl. Peach Council. Peach Ann. 1947: 11, 13, 15.
281.3939 N21

78. HAUCK, C. W. Pre-packaging and marketing fruit. Va. Fruit 35(1): 138-143. Jan. 1947. 81 V81B
Deals in part with required equipment, and with relative merits of shipping point and point of sale prepackaging.

79. HAUCK, C. W. Prepackaging fruits and vegetables: New method of merchandising fresh produce cuts handling cost, prolongs shelf life, and saves work for the housewife. Better Food 52(2): 26-27, 62-63. Oct. 1946. 389.8 B65
Bags, and trays with transparent overwraps.

80. HAUCK, C. W. Pre-packaging produce. Contact 12(1): 1, 4, 6. Mar. 1946. 80 C76
Fruit and vegetables.
Phases of the Columbus Prepackaging Experiment. Deals in part with spoilage, refrigeration, and shipping point prepackaging.

81. HAUCK, C. W., and CRAWFORD, J. J. Salable life of seven vegetables. Ohio Agr. Expt. Farm and Home Res. Bimo. Bul. 32 (246): 96-101. May/June 1947. 100 Oh3S
Also in Good Packaging 8(9): 29-31. Sept. 1947. 280.38 G59
One phase of a research project including prepackaging, at Columbus, Ohio. Vegetables prepackaged and kept under mechanical refrigeration, in tests made, retained within 95 percent of their original weight from two to seven times longer than those receiving other treatment.

82. HAUCK, C. W. Shelf life of fresh fruits and vegetables can be lengthened. Ohio Agr. Expt. Sta. Bimo. Bul. 31(241): 100-103. July/Aug. 1946. 100 Oh3S
Results of cellophane prepackaging tests with 14 root crops, green and leafy vegetables, and citrus and deciduous fruits.

83. HAUCK, C. W. Strawberry packaging tests. Ohio Agr. Expt. Farm & Home Res. Bimo. Bul. 32(248): 182-186. Sept./Oct. 1947. 100 Oh3S

84. HAUCK, C. W. Wanted--better berry baskets! Ohio Farmer 200(3): 29. Aug. 2, 1947. 6 Oh3
Use of 12-quart corrugated paper cartons, with two layers of six baskets each. Developments in paper containers are listed.

85. HELIN, P. O. How avocados are packed and shipped. Distrib. Age 46(6): 52-53, 94. June 1947. 288.8 T68
Use of flats holding from 12 to 42 fruits, with excelsior above, below, and between the individual avocados.

86. HERR, F. I. The grower considers packaged produce. Ice & Refrig. 111(2): 25-27, 66. Aug. 1946. 295.8 Ic2
Prepackaging and refrigeration. Developments as outlined to the author by A. L. Martin.

87. HOADLEY, T. C. The strictly tailored wooden package. West. Grower & Shipper 18(8): 10-11, 45-50. July 1947. 280.38 W52
Boxes and/or crates for apples, beets, brussels sprouts, carrots, cauliflower, celery, corn, garlic, grapefruit, lemons, lettuce, lima beans, melons, onions, oranges, peas, peppers, and potatoes.

88. HOPKINS, E. F., and LOUCKS, K. W. The use of diphenyl in the control of stem-end rot and mold in citrus fruits. Citrus Indus. 28(10): 5-9. Oct. 1947. 80 C49
Impregnated wraps and box liners.

89. HOWARD, S. H. Prepackaging pro's and con's. Canad. Grocer 61(8): 24, 26, 28, 90-91. Apr. 15, 1947. 286.83 C162
Use of transparent wraps, strong kraft paper bags, and cardboard cylinders with visible windows.

90. INTRODUCE California tray crate to trade. Barrel & Box & Packages 52(5): 15-16. May 1947. 99.82 B27
A lightweight container for the commercial shipment of berries, lettuce, prepackaged tomatoes and other perishables, believed to be equally suited to all types of transportation equipment--particularly to air cargo application because of its low ratio of weight compared to over-all weight.

91. JONES, T. H. New developments in handling strawberries. Tenn. State Hort. Soc. Proc. (1945-1946) 39-40: 117-120. 81 T25
Results of the Columbus Experiment in this field of prepackaging.

92. JUDKINS, W. P. The use of Pliofilm as a packaging material for peaches. Ohio Agr. Expt. Sta. Bimo. Bul. 31(242): 119-122. Sept./Oct. 1946. 100 Oh3S

93. THE JUMBLE Pack apple carton. Good Packaging 8(7): 32 July 1947. 280.38 G59

A new two-Pliofilm-window carton which holds four apples, can be packed by semi-automatic or hand method, and closed without gluing or stapling. Believed adaptable to other produce such as peaches, pears, onions, and potatoes.

94. JUMBLE packs ... Folding carton merchandises apples. Amer. Boxmaker 36(7): 16. July 1947. 99.82 Am3

A carton believed by fruit packers and store managers to be adaptable to other produce such as peaches, pears, onions, and potatoes.

95. KROGER pre-packaging. Mod. Packaging 21(3): 100-104. Nov. 1947. 309.8 M72

Use of cellophane and glassine bags, and kraft bags with cellophane or acetate windows for packaging perishable produce in the store. "Hard-are" items such as citrus and potatoes are pre-packaged at the shipping point.

96. KURTENACKER, R. S. White fir crates; a test of the practicability of this wood for fruit and vegetable shipping containers, with conclusions and recommendations made by Forest Products Laboratory. Mod. Packaging 20(9): 152-155. May 1947. 309.8 M72

Also in Wooden Box and Crate 9(2): 24-27, 1947; 9(3): 22-25, 1947, under title "White fir found suitable for shipping containers." 99.82 W857

With minor differences, also in Barrel & Box & Packages 52(4): 9-12, April 1947, under title "White fir for fruit and vegetable containers". 99.82 B27

97. LAMINATED, reinforced tray. Mod. Packaging 20(8): 170. Apr. 1947. 309.8 M72

A tray with laminated bottom and triple-reinforced ends; said to be particularly adapted to handling in cellophane-over-wrapping machines.

98. LAVERS, C. G. Mold control; study of the susceptibility of packaging materials to mold and a review of means of inhibiting or preventing development. Mod. Packaging 20(7): 185-187, 218. Mar. 1947. Ref. 309.8 M72

99. LAVERS, C. G. Packaging. III. Effect of mould growth and ageing on the water-vapour transmission of packaging materials (by C. G. Lavers and W. I. Illman); IV. Methods of applying water-vapour barriers, and the water-vapour resistance of some packaging materials (by C. G. Lavers and J. A. Pearce); V. The grease resistance of some common packaging materials; VI. The relative merits of various types of bag construction in producing water-vapour resistant packages; VII. Waterproofing of fiberboard containers. Canad. J. Res. Sect. F, Technol. 24(2): 117-122. Mar. 1946; 24(6): 409-419. Nov. 1946; 25(1): 1-7. Jan. 1947; 25(1): 8-12. Jan. 1947; 25(2): 128-132. Mar. 1947. 470 C16F

For parts I and II, see entry "Packaging" under Woodcock, A. H.

100. LEMON life preserver suggestion by cellophane maker. Good Packaging 8(7): 36. July 1947. 280.38 G59
Package made of semi-moistureproof, heat-sealing cellophane for reducing spoilage and extending store life of lemons.

101. LEVIN, M. M. Waste control in citrus. Palestine Tribune 2(14): 14-15. Apr. 4, 1946. 280.8 P172
In an experimental shipment, fruit wrapped in paper not containing diphenyl suffered nearly ten times more waste than fruit in wrappers impregnated with diphenyl.

102. LIGHT-WEIGHT apple boxes pass shipping tests. Wooden Box & Crate 8(3): 14-15. 1946. 99.82 W857

103. LUCAS, J. D. Mesh bags step up sales of 5 big produce sellers. Prog. Grocer 25(12): 76-77, 140, 143. Dec. 1946. 286.83 P942
Cites advantages of use of open-mesh consumer-size bags for apples, grapefruit, oranges, onions, and potatoes.

104. LUHRS, A. W. Trends in shipping containers. Canad. Food Packer 17(8): 29, 31, 33, 35. Aug. 1946. 286.83 C166
Use of V-type boxes in air transport of fruits and vegetables packaged in cartons or in transparent bags, or wrapped in Lumarith, cellophane, glassine, or parchment.

105. LUMARITH bag for spinach. Good Packaging 8(3): 41. Mar. 1947. 280.38 G59
Fogging on inside of bag is said to be minimized or completely eliminated.

106. MACHINE automatically weighs, bags 2,000 consumer-size units per hour. Packaging Parade 15(172): 77. May 1947. 309.8 P123
Packaging of onions, oranges, lemons, potatoes, apples, and similar produce in bags of 10 pounds or less.

107. MACHINE closes mesh bags. Mod. Packaging 20(10): 158. June 1947. 309.8 M72
A stapling machine which automatically fastens the draw strings of mesh bags, thus eliminating the hand-tying operation.

108. Machine wraps 800 oranges a minute. Packaging Parade 15(172): 74-75. May 1947. 309.8 P123
Results are given of tests in the Pliofilm-wrapping of oranges at the University of Florida conducted over a 6-year period.

109. MCKENNON, F. Consumer packaging and quality control. Oreg. Dept. Agr. Agr. Bul., No. 154, p. 22-23. June 1947. 2 Or3
Mentions suitability of semi-perishable commodities such as apples, pears, and oranges, and some vegetables, to packaging at shipping point, in contrast to the softer and more perishable commodities.

110. MCMUNN, R. L., and others. Package comparisons for shipping more mature peaches in 1945. Ill. State Hort. Soc. Trans. (1945) 79: 351-364. 1946. 81 IL6
V. W. Kelley, R. A. Kelly, and L. L. Clovis, joint authors.

111. MANY foods packed in film. West. Canner & Packer 38(13): 71. Dec. 1946. 286.83 W522
Ears of corn experimentally wrapped in Pliofilm were still marketable at the end of three weeks.

112. MARTIN, A. L. Developments in prepackaged perishable foods. Amer. Mangt. Assoc. Packaging Ser. No. 24, p. 29-38 New York, 1947. 280.38 Am3

Identical or similar titles, with textual variations as follows: "Developments in pre-packaged perishable foods", Mod. Packaging 20(8): 150-152, Apr. 1947, 309.8 M72; "Progress in produce pre-packaging told at packaging conference by Western Growers' research head", Good Packaging 8(5): 20-21, 30, May 1947. 280.38 G59; "Developments in produce packaging presage wide consumer acceptance", Food Canada 7(5): 37, May 1947, 389.8 F7323

Paper presented at the Packaging Conference and Exposition of the American Management Association held at Philadelphia, Apr. 8-11, 1947.

A discussion of machinery, refrigeration, spoilage, shipping point prepackaging, and point of sale prepackaging.

113. MARTIN, A. L. Shipping point prepackaging of produce. South. Calif. Grocers J. 33(49): 4, 12-13, 16-17, 20-22. Dec. 27, 1946. 286.28 So82

114. MARVIN, L. W. The advantages and disadvantages of consumer packages [for fruit]. New York State Hort. Soc. Proc. (1947) 92: 234-240. 81 N484

Includes statement by D. Taylor.

Discusses shipping point and point of sale prepackaging, and size of unit of sale.

115. MAUCK, A. Prepackaging fresh vegetables and fruits. Mich. State Col. Agr. Ext. Mich. Farm Econ., No. 42, p. 3. June 1946. 275.29 M58A

Discusses spoilage, and advantages of shipping point prepackaging.

116. MAXIM, E. Modern packaging for the fruiterer. Fruit, Flower, & Veg. Trades' J. 89(18): 261. May 4, 1946. 80 F946

A non-returnable container of 12-lb. capacity, designed for stacking, with reinforced sides and ends, and 34 apertures for ventilation.

117. MEHREN. G. L., MORRIS, L. L., and CALHOUN, W. Consumer packaging in California. Giannini Found. Mimeog. Rpt. 89, 20 p., processed. Berkeley, 1947. Ref. 281.9 G34M

For spinach, head lettuce, tomatoes, celery, salad mix, topped carrots, asparagus, cauliflower, and broccoli, gives storage life, causes of deterioration, storage requirements, effect of low oxygen, effect of high carbon dioxide, magnitude of respiration, preperation for packaging, elimination of weight and effect of packaging.

118. MELON crate nailing and car-loading improved. Wooden Box & Crate 8(3): 24. 1946. 99.82 W857

119. MERCHANT, C. H. Consumer packages for Maine apples. New England Homestead 119(17): 16-17. Sept. 14, 1946. 6 N442

120. MERRILL, G. Tree ripe--why and how we do it. Nat'l. Peach Council. Peach Ann. 1947: 24-25. 281.3939 N21

Use of Los Angeles lugs, in which are packed two layers of peaches, the second layer being placed on shredded paper.

121. METHOD of packing leafy vegetables for shipment. U. S. Pat. 2,413,129. U. S. Pat. Off. Off. Gaz. 593(4): 531. Dec. 24, 1946. 156.65 Of2
William H. Wilson, Los Angeles, Calif., assignor to Fruit & Vegetable Processing Co., Los Angeles, Calif., a corporation of California.
Crate packing of lettuce.

122. MICHELBACHER, A. E. Insects--and how to control them; more data from the Berkeley study of package pests and the storage conditions which favor growth. Mod. Packaging 20(5): 143-145, 170,172. Jan. 1947. 309.8 M72

123. MODERN packaging encyclopedia; packaging catalog 1946/47. New York, Mod. Packaging Mag., 1946. 1035 p. 225 P122
Specialty flexible containers, p. 243-246; veneer packages, p. 856-857; packaging fruits and vegetables for air shipment, p. 882-883.

124. MOORE, C. B. Consumer packaging and research. West. Grower & Shipper 18(9): 22-23, 39-41, 44, 46. Aug. 1947. 280.38 W52
Paper presented before the annual convention of the Nat'l. Assoc. Retail Grocers, San Francisco, June 23, 1947.
Appeared, with minor variations, under title "Vegetable packaging" in Kans. City Grocer 34(8): 11, 13, 27, 29. Aug. 1947. 286.28 K13
Arguments in favor of shipping point packaging. Refers to experiments in machine prepackaging of lettuce.

125. MOORE, C. B. Shipping point prepackaging. Fruit & Veg. Rev. 8(5): 27, 33-34. Aug. 1947. 80 C1224
Arguments in favor of, and problems presented by, prepackaging of fresh vegetables at the source.

126. NEW CONTAINER for fruits and vegetables. Fibre Containers 32(6): 94-95. June 1947. 286.8 F44
The "Farm Pak" container of tough corrugated board, and with a telescoping wire handle which may be pushed flush with the top of the container for cross stacking and shipping, and pulled up for carrying.

127. NEW CONTAINERS prove successful in experimental shipment. Mod. Mater. Handling 2(4): 35. April 1947. 289.8 P17
Use of combination steel wire pallet and bin for shipment and retailing of oranges in mesh bags.

128. NEW COVERING for fruit baskets. Barrel & Box Packages 51(9): 21. Sept. 1946. 99.82 B27

129. NEW "Hammock pack " for fruit. Consumer package seals in tree-fresh quality. Fla. Grower 56 i. e. 55(1): 19, 21. Jan. 1947. 80 F6622
A new method of packaging fresh fruit which firmly suspends each individual fruit in Pliofilm, thus preventing sway or contact which might cause bruising.

130. NEW MACHINE wraps lettuce heads in cellophane. Packaging Parade 14(164): 86. Sept. 1946. 309.8 P123

131. NEW "NON-FOGGING" Pliofilm. Mod. Packaging 20(9): 202. May 1947. 309.8 M72
The new Pliofilm with which, it is claimed, both moisture retention and visibility can be obtained in the prepackaging of fresh produce.

132. NEW PACKAGING film from plastic latex. Packaging Parade 15(177): 62. Oct. 1947. 309.8 P123
Similar titles in Chem. & Engin. News. 25(43): 3168, Oct. 27, 1947, 381 J825N; Mech. Engin, 69(12): 1033, Dec. 1947, 291.9 Am3J; and Rubber Age 62(1): 69, Oct. 1947, 305.8 R82.
Reynolon, a clear, tough, flexible packaging film made from Geon latex for food packaging and protective coverings.

133. NEW PACKAGING for corn on the cob; machine wrapped right on field. Packaging Parade 14(165): 82. Oct. 1946. 309.8 P123
Gives results of tests made with Pliofilm-wrapped Golden Bantam corn at Akron and at the agricultural experiment station of the University of Florida.

134. NEW PROCESS keeps vegetables fresher. Business Week No. 907:61 Jan. 18, 1947. 280.8 Sy8
Research at the California Institute of Technology resulted in a new development which includes the washing of vegetables in harmless solutions that kill fungi picked up in ordinary water. Of 180 transparent wrappings, two that keep the products sterile were selected.

135. NEW SHIPPING container for produce. Mod. Packaging 20(10): 158, 160. June 1947. 309.8 M72
The "Tray-Crate", a container consisting of lightweight corrugated trays and a wirebound outer sleeve.

136. NEW STYLES for produce ... Fruits and vegetables "prepackaged" in Cellophane for self-service—a new way to help lower distribution costs and reduce waste. DuPont Mag. 40(6): 18-20. Dec. 1946. 309.8 D92
Tests with moistureproof cellophane bags and cardboard trays with cellophane overwrap. In one test, packaged tomatoes, lettuce, peas, peppers, parsley, celery, beets, cauliflower, carrots, and green beans were given a 100 percent salable rating after being displayed in a refrigerator case for five days.

137. NICHOLSON, J. L. Flying perishables to market. Food Indus. 19(6): 102-105. June 1947. 389.8 F737
Air shipment from Tampa to Cincinnati, Dayton and Cleveland of fresh grapefruit segments packed in tubular parafined paper containers, chilled, and placed in corrugated boxes.

138. NON-FOGGING Pliofilm. Amer. Boxmaker 36(7): 33-34. July 1947. 99.82 Am3
A new, non-fogging Pliofilm for packaging fruits, vegetables and other foodstuffs.

139. O'BRIEN, G. F. Pre-packaging of fresh fruits and vegetables. Natl. League Wholesale Fresh Fruit and Veg. Distributors Off. Proc. (1946) 54: 139-142. 287 N214
Relative merits of shipping point and point of sale prepackaging.

140. OIL COATING of apples. Food Manufacture 21(9): 386. Sept. 1, 1946. 389.8 F736

141. OLSON, R. L. Packing house operations for Deglet Noor dates. Fruit Prod. J. & Amer. Food Mfr. 26(8): 233, 250. Apr. 1947. 389.8 F94

A small cardboard tray with an overwrap of cellophane "or a similar transparent material" is mentioned as the typical commercial pack. To prevent molding and souring, some packing plants fumigate individual packages with propylene oxide.

142. ORANGES by pallet. Business Week No. 914: 52. Mar. 8, 1947. 280.8 Sv8

Use of wire pallet bins for shipment of oranges, each bin containing 75 sacks weighing 8 lb. 7 oz. each. Among advantages claimed is prevention of damage to fruit in transit.

143. ORANGES wrapped in Pliofilm by aid of vacuum. Compressed Air Mag. 52(8): 203. Aug. 1947.

144. OVERHOLSER, E. L., TESKE, A. H. and WATSON, J. F. Suggestions for handling and packing Virginia apples. Va. Fruit 35(10): 17-22. Oct. 1947 and (12): 20-27 Dec. 1947. 81 V81B

Dec. 1947 issue includes material on wraps and containers, p. 24-27.

145. PACKAGE prophecy: a look into tomorrow's market basket. Northwest. Miller 227(3): 20, 30, 34. July 16, 1946. 298.8 N81

Includes an account of the Columbus Prepackaging Experiment, with list of 25 fruits and vegetables machine-packaged with heat-sealed overwraps.

146. PACKAGING potentialities of air freight shipments. Packaging Parade 15(168): 78-79. Jan. 1947. 309.8 P123

Potentialities in use of lightweight fiber containers as result of substitution of speed in air shipment for moisture-producing refrigeration.

147. THE PACKER. The Packer looks at pre-packaging; a nation-wide Packer staff survey. "So you're going to pre-package?" 28 p. [n. p., 1946] 280.3 P12

"The series of articles which appeared in the Packer during June and July of 1946 ... is reproduced in this booklet..."

Previously published separately under title "So you're going to pre-package?" in the New York Packer, 45(28): 1, 15; (29): 1, 21; (30): 1, 21; (31): 1, 22; (32): 1, 22; (33): 1, 8; (34): 1, 8. June 15, 22, 29, July 6, 13, 20, 27, 1946. 286.8 N483

Materials, container types, machinery, costs, research.

148. PALLET bins tested for citrus shipment. Food Indus. 19(3): 132, 134. Mar. 1947. 389.8 F737

Oranges in bags experimentally shipped in two steel wire pallet bins from Winter Haven, Fla., to Detroit showed no bruising or juice leakage. Collapsible feature of bins reduces freight charges on return shipment.

149. PALLETIZATION spells savings in costs, time, and labor. Wooden Box & Crate 8(3): 25-27. 1946. 99.82 W857
Emphasis is placed on the need for sturdier containers than ordinarily employed in palletization.

150. PEACHES in fibre drum. Packaging Parade 14(163): 25. Aug. 1946. 309.8 P123
A fiber drum basically similar to the kind used for bulk shipments of dry foods, chemicals, drugs, etc.

151. PITMAN, A. L. How processors can test and improve their own packages. Food Indus. 18(7): 104-106, 228. July 1946. 389.8 F737

152. PLATENIUS, H. Films for produce; their physical characteristics and requirements. Mod. Packaging 20(2): 139-143, 170. Oct. 1946. 309.8 M72

153. PLATENIUS, H. Prepackaging of vegetables raises problems. Farm Res. [New York State Sta.] 13(3): 2. July 1, 1947. 100 N48A
Inadequacies of packaging films; discoloration of lettuce, coleslaw, and salad mixes; and shipping point and point of sale prepackaging.

154. PLATENIUS, H. Problems in prepackaging vegetables. Food Packer 28(11): 60, 62. Oct. 1947. 286.83 C165
Determination of permeability of wrapper films to water vapor through use of shallow aluminum cup partly filled with distilled water, and with the film mounted on the rim of the cup and held in place by a ring sealed airtight.

155. POLYETHYLENE packages in use. Mod. Packaging 20(5): 118-122. Jan. 1947. 309.8 M72
Refers to study of the adaptability of this film to the pre-packaging of fruits and vegetables.

156. POST-WAR packaging. Food Manufacture 21(7): 293-296. July 1, 1946. 389.8 F736
Method of stretch wrapping fruit with Pliofilm. Laboratory tests showed that after six months' storage, fruit packed in this manner looked and tasted as if it had been recently picked.

157. PRE-PACKAGED lettuce is now distributed by Cal-Co-Pac. Food Field Rptr. 15(6): 14, 18. Mar. 17, 1947. 286.83 F73
Use of open-topped cardboard cartons with a heat-sealed over-wrap of cellophane, Lumarith, or Pliofilm.

158. PRE-PACKAGED plums. Good Packaging 8(8): 34, 46. Aug. 1947. 280.38 G59
Use of an open-faced tray without cellophane for overwrapping. In addition to plums, cherries, apricots, pears, and grapes are mentioned.

159. PRE-PACKAGING in Pliofilm. Quality produce goes to market, properly refrigerated, in a quality package. Good Packaging 7(8): 34-36. Aug. 1946. 280.38 G59
Use of Pliofilm bags for celery heads, and broccoli, and sheet overwraps for cauliflower heads.

160. PREPACKAGING potatoes at shipping point. Packaging Parade 15(169): 30. Feb. 1947. 309.8 P123
Use of 10-, 15-, and 50-pound wet strength bags made of two or three plies of paper. Shipments are made in larger paper bags called "balers" in which 4 of the 15-pound bags or 6 of the 10-pound bags can be placed.

161. PRE-PACKAGING without refrigeration. Food Canada 7(1): 12. Jan. 1947. 389.8 F7323
Experiments at the Agricultural Experiment Station, Purdue University.
Based on an article by F. C. Gaylord and K. I. Fawcett, "Packaged produce without refrigeration." Mod. Packaging 20(4): 124-128, 170. Dec. 1946. 309.8 M72

162. PROCESS of coating fruit. U. S. Pat. 2,412,686. U. S. Pat. Off. Off. Gaz. 593(3): 359. Dec. 17, 1946. 156.65 Of2
Arthur F. Kalmar, Riverside, Calif., assignor to Food Machinery Corporation, San Jose, Calif., a corporation of Delaware.
A solution of waxy material is formed in a volatile petroleum distillate solvent, mixed with water to form a temporary emulsion. This emulsion is applied to the fresh fruit.

163. RASMUSSEN, M. P., and others. Pre-packaging forum ... a discussion pro and con. Mod. Packaging 20(2): 132-135. Oct. 1946. 309.8 M72
A digest of the more significant portions of an informal panel discussion at the 52nd annual convention of the International Apple Association, Chicago, Aug. 12-15, 1946, in which M. P. Rasmussen, C. W. Hauck, K. I. Fawcett and representatives of the produce industry participated.

164. RHODES, R. K. White mineral oil and petrolatum in the manufacture of specialty papers. Paper Trade J. 123(13): 59-62. Sept. 26, 1946. (TAPPI Section, p. 141-144.) 302.8 P196
Deals in part with apple wrappers.

165. RIDDELL, G. L. Science and packaging. Chem. & Indus., No. 3, p. 35-39. Jan. 18, 1947. Ref. 382 M31C
A Jubilee Memorial Lecture delivered before the London Section, Plastics Group and Food Group, February 13, 1946, and before the Birmingham Section March 8, 1946.
Deals in part with packaging materials, water vapor permeability, gas permeability, molds and insects.

166. ROSS, L. T. Paper bags and agriculture. Natl. Farm Chemurg. Papers, No. 547, 13 p., processed. Columbus, Ohio, 1947. 381 N213P
Fresh fruits and vegetables, p. 9-12.

167. RYALL, A. L. Packaging, transporting and storing Texas citrus. Tex. Farming & Citric. 23(7): 10, 12-13. Jan. 1947. 80 T31

168. SAFFER, R. American housewife changes produce counters: vegetable growers seek better quality, less waste, market appeal, and "wife saving" by pre-packaging. Fla. Grower 55(7): 5, 21. July 1947. 80 F6622

Prepackaging research and experimentation by Florida organizations. One illustration shows special, ripe tomato lugs, only one tomato in 80 lugs having been damaged.

169. SAMOILOFF, Z. Vegetables graduate from the cracker barrel age. South. Calif. Grocers J. 34(5): 22-23. Feb. 21, 1947. 286.28 So82

Packaging of fresh fruit and vegetables; an interview with G. F. Phillips.

170. SANDERFER, M. R. Grading and packing tomatoes for profit. Prog. Farmer, Ga.-Ala.-Fla. Ed. 61(6): 23. June 1946. 6 P945G

171. SARDO, WM. H., Jr. Nailed wooden boxes spell safe delivery. Wooden Box & Crate 9(3): 26-30. 1947. 99.82 W857

172. SARGE, T. W. Determination of gas permeability of Saran films. Indus. & Engin. Chem. Analyt. Ed. 19(6): 396-400. June 1947. 381 J825A

173. SCHAEFER, H. L., and DULMAGE, F. C., Jr. Saran film 517; first report on the physical properties of the new Saran, said to be tasteless, odorless, and suitable for food packaging. Mod. Packaging 20(11): 149-153. July 1947. 309.8 M72

174. SCOTT, L. E., and MAHONEY, C. H. Quality changes during the storage of consumer packages of sweet corn and lima beans: progress report. Amer. Soc. Hort. Sci. Proc. (1946) 47: 383-386. 81 So12

For Golden Cross Bantam sweet corn, cellophane-window, wax-impregnated, cardboard cartons holding six ears were used. For Clark's Bush lima beans, two types of packages were used: one similar to that for the corn tests, but smaller, holding about a pound; the other, a vapor-tight, sealed freezer package.

The corn remained in good marketable condition for 13 days when held in storage at 32° and 35°. More than half of its original sucrose content was retained after storage at 32° for 13 days. The lima beans remained in acceptable edible condition for 11 days when held in storage at 28° or 32°, and retained about two-thirds of their original ascorbic acid content. Ascorbic acid loss was greatest during the first part of the storage period.

The storage quality of the products was improved in all instances by precooling in iced water.

175. SECOND skin; Florida tests ingenious machine that will stretch-wrap and seal oranges in thin Pliofilm. Mod. Packaging 20(8): 96-98. April 1947. 309.8 M72

176. SHACKLETON, J. W. Polethylene, a new plastic and a new material for packaging. Mod. Packaging 20(1): 130-134, 166, 168. Sept. 1946. 309.8 M72

Mentions experiments on the prepackaging of fresh fruits and vegetables in polythene films, p. 134.

177. SHOTALTER, R. K. Vegetable prepacking activities in Florida. New York Packer 46(44): 20. Oct. 4, 1947. 286.8 N483

178. SKINLESS spuds to be marketed by new firm. Food Field Rptr. 14(17): 37. Aug. 19, 1946. 286.83 F73
Proposed shipping in 5- and 10- pound moisture-proof bags of peeled potatoes with eyes removed.

179. SPOONER, H. L. Crates play important part in preparation of celery. Barrel & Box & Packages 51(8): 10. Aug. 1946. 99.82 B27

180. STOKES, D. R. Produce wastage. Mod. Packaging 21(2): 120-124, 200, 202, 204. Oct. 1947. 309.8 M72

181. SUMNER, C. A. Foil package extends merchantable life of peas. Food Indus. 18(10): 94-95, 222, 224, Oct. 1946. 389.8 F737
Aluminum foil.

182. SUNNY Sally ... and how her garden grows. Earliest California prepacker now sells to assured big-volume market. Good Packaging 8(9): 34-35, 38. Sept. 1947. 280.38 G59
Use of cellulose acetate (Lumarith) bags for prepackaging spinach, celery, head lettuce, and vegetable salad.

183. STEINHART, W. C. Field notes on waxing and packaging processes - on fruits and vegetables. San Luis Val. Farmer and Stockman 1(6): 16. Mar. 1946. 6 Sa52.

184. TAYLOR, F. J. All dressed up for market. Country Gent. 117(3): 15, 63, 65-66. Mar. 1947. 6 C833
Work of the California Co-operative Packaging Association and the Western Growers Experimental Institute in the prepackaging of farm produce.

185. TESTS prove that cellophane wrapped sweet corn outsells corn in husk. Packaging Parade 15(168): 78. January 1947. 309.8 P123
Ohio State University experiment with sweet corn packed in hand-sealed cellophane bags and in paperboard trays overwrapped with sheet cellophane and machine-sealed. Units were stored at about 40° F., and sold from refrigerated cases at an average of 43° F.

186. TESTS show customers prefer mesh bags for oranges. Packing and Shipping 73(6): 16. Sept. 1946. 289.8 P12
An experiment in the use of mesh and cellophane bags.

187. THOMPSON, M. Put it in a better package; improved methods of packaging foods are displayed in gay atmosphere by leading manufacturers. South. Food Processing 1(2): 7-10. May 1946. 389.8 So33
Annual Packaging Conference, American Management Association, Atlantic City, April 2-5, 1946.
A new high speed Pliofilm wrapping machine exhibited by Goodyear which wraps fruit and vegetables of any shape or variety in Pliofilm.

188. TO USE burlap or paper over mesh citrus bags. Food Field Rptr. 14(17): 12. Aug. 19, 1946. 286.83 F73
Proposed use by Florida citrus growers as master containers for 6-pound cotton mesh bags to reduce the cost of handling.

189. TOUGH, transparent cover for fruit baskets. Mod. Packaging 20(4): 144. Dec. 1946. 309.8 M72
Vinylite, a clear vinyl plastic film, 1/1000-in. thick, perforated with 1/4-in. holes, one to a square inch, for ventilation.

190. 'TRAY crate of California' a new container. Barrel & Box & Packages 52(3): 15. March 1947. 99.32 B27
Originally devised as a lettuce crate; this container is believed to be especially adapted to shipping prepackaged tomatoes, spinach, and salad mix.

191. TWO PACKS of Wolverine rhubarb. Mod. Packaging 20(12): 93. Aug. 1947. 309.8 M72
A 2-pound consumer unit of paperboard with two acetate windows, and a 5-pound unit full telescoped carton.

192. UNION Bag discloses windowed fruit bag. Paper Trade J. 125(23): 112. Dec. 4, 1947. 302.8 P196
A bag of wet strength paper with a window of cotton mesh for use in prepackaging fruits or vegetables in 5-, 10-, or 15 pound units.

193. UNION Pacific Railroad Company, Dept. of Traffic. Agricultural Development. Handling onions. 15 p. [Omaha, 1947] 280.391 Un3
Use of crates and mesh bags.

194. UNIQUE chemical products benefit Salinas grower-shipper. Good Packaging 3(1): 14-16. Jan. 1947. 280.38 G59
Use of Tw-Ice, the Sharma process, and Durapack.

195. U. S. BUREAU of Agricultural Economics. Waste and spoilage losses in merchandising fresh fruits and vegetables in bulk in self-service food stores. 30 p. Washington, 1947. 1.941 M3F944
Prepackaging, p. 19, 30.
--Statistical supplement. 22 p. Washington, 1947. 1.941 M3F944A

196. U. S. FOREST Service. Forest Products Laboratory. List of publications on box and crate construction and packaging data. U. S. Forest Serv. Forest Prod. Lab. Mimeog. R791, 17 p. Madison, 1947. 1.9 F761R

197. U. S. OFFICE of Domestic Commerce. General Products Division. Packaging and shipping containers (Basic Information Sources). Compiled by C. C. Gartland. 19 p. processed. Washington, 1946.

198. U. S. PRODUCTION and Marketing Administration. List of manufacturers of fruit and vegetable hampers and baskets. Rev., 19 p., processed. 1947. 1.942 F2L69

199. U. S. QUARTERMASTER Corps. Quartermaster Food and Container Institute for the Armed Forces. [Manuals on food], v.1. Fruit and vegetables. Washington? 1946. 152.71 M314
Contains the following parts: 1. Fresh and dried fruits, by J. Novick and W. S. Richert, 120 p.; 2. Fresh and dehydrated vegetables, by J. Novick, 89 p.; 3. Irish potatoes, by J. Novick 36 p.; 4. Onions, by M. W. Miller, 25 p.; 5. Quick-frozen fruits and vegetables, by J. Novick, 23 p.

200. VAIL, B. B. Progress report Nargus-Bursley packaging test. Nat. Grocers B. 33(7): 68-69. July 1946. 286.83 N214
Machine wrapping of fruits and vegetables.

201. VERDCOURT, B. Insecticidal barriers; British data on the use of DDT and other insecticides as impregnants for packaging materials; a summary of general repellent materials. Mod. Packaging 21(3): 150-153. Nov. 1947. 309.8 M72

202. VERDCOURT, B. Packaging parasites; insecticides, combinations of materials, design of package, pre-packing treatment and careful storage, are means of combating insect attacks. PATRA J. 10(1): 6-11. Jan. 1947. 238.8 P27
Concerns food in general, but is applicable in part to fruits and vegetables.

203. A VINYL sheet for fruit packaging. Mod. Plastics 24(6): 126. Feb. 1947. 309.8 P69
Packaging of fruit with overwrap of 1/1000-in. thick Vinylite film having a 1/4-in. perforation in each square inch of its surface for ventilation.

204. WAKEMAN, R. L. The chemistry of commercial plastics. 836 p. New York, 1947. 309 W132
Food wrappers, p. 367, 750.

205. WALLER, A. Influence of prepackaging and freezing on the vegetable industry. Conn. Veg. Growers' Assoc. Proc. (1946) 42-50. 75.8 C76
Physical problems involved in prepackaging, p. 47.

206. WEATHERPROOF Solid Fibre Box Group. The story of the weatherproof solid fibre box: its wartime accomplishments and its application to peacetime commerce and industry. 50 p. Washington, 1946. 302 W372
Recommends V-type box for packing fresh fruits and vegetables for icing and cold storage conditions and for shipment to market.

207. WEIGHS and bags potatoes, oranges, onions in consumer units of 5, 8, 10 or 15 pounds. Packaging Parade 15(175): 65. Aug. 1947. 309.8 P123
Use of either paper or net bags in new bagging machine known as the Universal Bagger.

208. WHIPPLE, S. R. Consumer packages and air transportation in relation to fruit and vegetable standardization enforcement and legislation. West. Grower and Shipper 17(8): 8-9, 33. July 1946. 280.38 W52
Also in Blue Anchor 23(3): 13, 35, 37. Aug. 1946. 286.83 B62

209. WILLIAMS, C. G. Harvesting and packing lemons. Queensland Agr. J. 63: 270-279. Nov. 1, 1946. 23 Q33
Describes use of the Australian dump case.

210. WILLIAMS, C. G. Sizes and specifications of fruit and vegetable cases. Queensland Agr. J. 64: 212-216. Apr. 1947. 23 Q33

211. WINDOW bag for prepackaged produce. Mod. Packaging 19(11): 148. July 1946. 309.8 M72
A wet-strength kraft paper bag which absorbs moisture without disintegrating or breaking, and regains its full strength when dried. Window is of cellophane.

212. WOOD Box Institute develops new box. Barrel & Box & Packages 52(6): 6. June 1947. 99.82 B27
A new tomato box using glued cloth tape instead of nails.

213. WOOD Box Institute research program. Barrel & Box & Packages 52(4): 23. April 1947. 99.82 B27
An account of the taped and glued nailless box under tests at the Institute's laboratory at Portland, Oregon.

214. WOODCOCK, A. H. Packaging. I. Water-vapour resistance of cellulose-base containers (by A. H. Woodcock, M. G. Chapman, and J. A. Pearce); II. A cellulose-base container for modified vacuum packing. Canad. J. Res. Sect. F, Technol. 23(2): 109-116. Mar. 1945; 23(2): 117-122. Mar. 1945. 470 C16F
For parts III - VII, see entry "Packaging" under Lavers, C. G.

215. WOODEN box associations meet and report on all association activities. Good Packaging 8(2): 32-34. Feb. 1947. 280.38 G59
Specifications for a taped box to be used for 30 pounds of tight packed tomatoes. Details of tests made.

216. WOODEN Box Institute tests taped and glued nail-less wooden boxes. Barrel & Box & Packages 52(4): 17. April 1947. 99.82 B27

217. WOODEN boxes get face lifting through use of tape and glue. Wooden Box & Crate 9(1): 13-15. 1947. 99.82 W857
Tests of the taped and glued nailless box conducted at the Wooden Box Institute's laboratory at Portland, Oregon, show this box to be "at least as strong as the conventional nailed box..."

218. YAMS in packages, air delivered. Mod. Packaging 20(2): 106-107, 172. Oct. 1946. 309.8 M72
Packaging activities of Dezauche & Son, Opelousas, La. Consumer packages consist of 5-pound open-mesh bags, ten of which are packed into a 50-pound multiwall baler. The outer bag consists of three plies of 60-pound multiwall heavy shipping paper.

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Mentions non-fogging Pliofilm; Saran; Pliofilm machine-wrapping of oranges; and the "Air-Pek," a Union Bag and Paper Corp. two-ply wet strength kraft paper bag with an open mesh cloth window for packaging onions and potatoes.

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Names of persons and institutions appearing as first authors in this list are not included in the index.