

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
Washington

Letter
Circular
LC-693
(Supersedes
LC-651)

(June 4, 1942)

VARIETY REDUCTION EFFECTED BY THE APPLICATION
OF SIMPLIFIED PRACTICE

The demands of war upon our resources, and upon our capacity to produce, tower staggeringly above any requirements we have heretofore thought possible of attainment, and dwarf any goals we have heretofore set for ourselves. To meet those demands every resource must be husbanded with the utmost care; every productive process keyed to the highest pitch. Raw materials must be fabricated into finished products, and products must be put into use with the minimum of delay. Every hesitation in the movement of material through the channels of production and distribution, whether it be in inventories of raw stocks or finished products, in factories, in jobbers' warehouses, or on dealers' shelves, reduces the effectiveness of the material. Every unnecessary operation reduces the productivity of our manpower. And both inevitably result when things are produced in unnecessarily large variety.

We have been accustomed to producing most of our common, everyday commodities in a large variety of lengths, widths, heights, thicknesses, weights, capacities, shapes, grades, etc. But each added item exacts its toll of material immobilized, of machinery rendered idle, and of manhours made unproductive, to mention but a part. It is the purpose of simplification to prevent this.

Just as in the last war, simplification is being applied as rapidly as possible. Products requiring critical materials for their manufacture are being simplified on the initiative of the war agencies themselves. In other fields industries and their customers are cooperating with the National Bureau of Standards to make their curtailed supplies go farther and to increase the efficiency of their operation through the application of Simplified Practice.

Simplified Practice means reduction of excessive variety of manufactured products, or of methods. Simplified Practice Recommendations are records of stock items retained after superfluous varieties have been eliminated. These recommendations are developed by voluntary cooperation among manufacturers, distributors, consumers, and other interests, through a regular procedure of the National Bureau of Standards established for that purpose; a procedure designed to insure not only the initial success of a program, but also its regular review, thereafter, and revision whenever, and as often as necessary, to meet changing technological and economic conditions.¹

¹For further information regarding the complete list of effective Simplified Practice Recommendations, and a description of the procedure used in their development, write to the Division of Simplified Practice, National Bureau of Standards, Washington, D. C. In your request, please mention this Letter Circular.

To illustrate achievements in the reduction of unnecessary variety, and, by example, to show the broad applicability of the procedure which has made them possible, there is presented herein for a selected list of commodities a comparison of the number of varieties produced under simplified practice with the number produced before simplified practice was applied.

The following brief notes suggest some of the more obvious advantages to be gained from a simplified practice program by the various participants.

TO THE MANUFACTURER: Longer factory-runs with fewer changes; less idle equipment; fewer idle manhours; less capital tied up in slow-moving stocks; simplified inspection requirements; less stock to handle; larger production-units; less special machinery; more prompt delivery; less chance of error in shipment; and less obsolescence in material and equipment.

TO THE JOBBER, WHOLESALER, AND RETAILER: Increased turnover; elimination of slow-moving stock; staple lines—easy to buy, and quick to sell; greater concentration of sales efforts on fewer items; decreased capital invested in new stocks and repair parts; less storage space required; and decreased overhead and handling charges.

TO THE CONSUMER: Better values than otherwise possible; better service in delivery and repairs; and better quality of products.

Simplification may be applied quickly, as an emergency measure, to meet the wartime need for economy and efficiency, for conservation of materials, control of inventories, etc. Furthermore, when the war is over, the established Simplified Practice Recommendations will tend to prevent a recurrence of the unnecessary multiplication of variety which occurred in many fields following the last war.

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VARIETY REDUCTION EFFECTED BY THE APPLICATION
OF SIMPLIFIED PRACTICE

Item	Varieties		Per- cent reduc- tion	S.P.R. number
	Before simplifi- cation	After simplifi- cation		
Abrasive products, coated.....	8,000	1,755	78	89-40
Asphalt.....	102	11	89	4-36
Axes, forged.....	845	199	77	158-41
Bags, glassine.....sizes..	124	26	79	107-31
Bags, paper, grocers'.....	61	47	23	42
Bags, paper, notion and millinery.....sizes..	188	22	88	129-41
Barrels, steel; and drums.....capacities..	66	26	61	20-28
Bars, steel, reinforcing.....	32	11	66	26-30
Bars, steel, spiral, reinforcing.....sizes..	7	4	43	53-32
Beds, hospital.....	{ lengths.. 33 widths.. 34 heights.. 44	{ 1 1 1	{ 97 97 98	{ 24-37
Bell bottom screw jacks.....	78	27	78	97-42
Blackboard, composition.....	{ colors.. 3 widths.. 18 lengths.. 90	{ 2 3 5	{ 33 83 94	{ 75-29
Blankets.....	78	11	86	11-36
Board, binders'.....	718	10	99	81-28
Board, box.....thicknesses..	244	96	61	44-36
Boilers, range; and expansion tanks.....	130	13	90	8-29
Boilers, range, non-ferrous.....	200	36	82	181-41
Boilers, steel, horizontal firebox heating.....	2,328	38	98	157-37
Bolts, machine, carriage and lag, steel.....stock production sizes..	896	584	31	169-37
Bolts, plow.....	1,500	840	44	23
Books, composition.....varieties..	76	41	46	84-28
Bottles, carbonated beverage..	{ Soda and imported ginger ale..... { shapes.. 15 capacities.. 15 heights.. 78 wt. of glass.. 16 Water and water-shape ginger ale.. { capacities.. 11 heights.. 13 wt. of glass.. 18 Beers, export, select or C.S..... { capacities.. 8 heights.. 18 wt. of glass.. 18	{ 12 12 6 8 3 3 4 3 2 2	{ 20 20 92 50 73 77 89 89	{ 123-30
Bottles, milk and cream, and bottle caps.....	49	4	92	10
Boxes, corrugated and solid fiber for canned fruits and vegetables.....	150	97	55	146-41
Boxes, corrugated, for department and specialty store use.....sizes..	322	61	81	128-41
Boxes, folding, for department and specialty store use.....sizes..	262	23	88	127-41
Boxes, folding, one-pound for coffee.....	100	2	98	64-30
Boxes, set-up.....sizes..	1,084	75	93	126-41
Brass or bronze valves.....pressure ratings..	11	5	50	183-42
Brick, common; and rough and smooth face brick.....	75	2	97	7
Brick, paving, vitrified.....	66	5	92	1-40
Brick, sand-lime.....	45	1	98	38-37
Brushes, calcimine, block sizes for.....	{ widths.. 47 thicknesses.. 34	{ 10 8	{ 79 76	{ 121-31
Brushes, paint and varnish.....	480	143	70	43-28
Cans, fruit and vegetable (names, dimensions, capacities, and designated use).....	200	39	80	155-40
Cans, tinned, steel, ice cream, types and sizes.....	14	5	64	164-36
Canton flannels, cotton, unbleached, for work gloves.....weights..	18	9	50	186-42
Caps, bottle, milk and cream; and milk and cream bottles.....	49	4	92	10
Cartons, ice cream; and ice cream brick molds.....mold sizes..	30	1	97	120-40
Cartridges, metallic.....	348	150	57	62-39
Cases, flashlight, metal and nonconducting.....	50	17	66	68-41
Chain, welded.....	1,831	1,214	34	100-29
Checks, guest, restaurant.....	{ Cardboard checks.. { grades.. 4 widths.. 12 lengths.. 16 Paper checks.. { grades.. 7 widths.. 10	{ 3 5 14 4 8	{ 25 58 12 43 20	{ 113-30

VARIETY REDUCTION EFFECTED BY THE APPLICATION
OF SIMPLIFIED PRACTICE—Continued

Item	Varieties		Per- cent reduc- tion	S.P.R. number
	Before simplifi- cation	After simplifi- cation		
Chinaware, cafeteria and restaurant.....	700	309	56	33
Chinaware, dining car.....	700	345	51	39
Chinaware, hospital.....	700	345	51	40
Chinaware, hotel.....	700	258	63	5
Cloth, screen, wire insect.....	360	154	57	122-31
Conductors, copper, for building purposes.....	29	17	41	180-41
Containers (cans), fruit and vegetable, (names, dimensions, capacities, and designated use).....	200	39	80	155-40
Containers (cans), tinned, steel, ice cream, types and sizes.....	14	5	64	164-36
Containers, extracted honey.....sizes..	65	11	82	156-41
Containers, glass; for cottage cheese and sour cream.....sizes..	20	3	85	148-33
Containers, glass for mayonnaise and kindred products.....capacities..	25	5	80	131-35
Containers, glass for preserves, etc.....	{			
preserve jars..	40	9	77	} 91-32
jelly glasses..	25	7	72	
apple butter jars..	6	4	33	
Copper conductors for building purposes.....	29	17	41	180-41
Corrugated and solid fiber boxes for canned fruits and vegetables.....	150	97	55	146-41
Cups, ice cream; and cup caps.....	{			
cups..	16	5	69	} 132-36
caps..	15	6	60	
Ducts, pipes and fittings for warm air heating and air conditioning.....	5,580	759	86	191-42
Drums, steel; and barrels.....capacities..	66	26	61	20-28
Duck, cotton.....	460	94	80	27-36
Eaves trough, conductor pipe, and fittings, and ridge rolls.....	110	79	28	29-42
Extracted honey packages.....	65	11	82	156-41
Fencing, woven-wire; and woven-wire fence packages.....	{			
styles..	552	71	87	} 9-28
pkg. sizes..	2,072	300	90	
Files and rasps.....	661	377	43	6-40
Fittings, eaves trough, conductor pipe, and ridge rolls.....varieties..	110	79	28	29-42
Fittings, pipe, (grey cast iron, malleable iron and brass or bronze).....	8,566	2,969	65	185-42
Fittings, pipes, and ducts, for warm air heating and air conditioning.....	5,580	759	86	191-42
Flannels, cotton, canton, unbleached, for work gloves.....weights..	18	9	50	186-42
Flashlight cases, metal and nonconducting.....	50	17	66	68-41
Forges axes.....	845	199	77	158-41
Forged hatchets.....	242	89	63	160-41
Fungicides and insecticides.....package sizes..	38	25	34	41-40
Galvanized-ware, tinware and Japanned ware.....	1,154	873	24	55
Gauze, surgical.....	70	26	32	86-41
Goring, shoe, elastic.....	{			
qualities..	16	5	69	} 112-29
widths..	13	9	31	
Hammers, forged.....	386	180	53	159-37
Hatchets, forged.....	242	89	63	160-41
Honey, extracted, packages for.....	65	11	82	156-41
Insecticides and fungicides.....package sizes..	38	25	34	41-40
Investment, dental; plaster and artificial stone, packaging of.....	{			
plaster..	22	3	86	} 117-30
investment..	26	13	50	
Insulators, porcelain, one-piece.....	272	210	23	73
Iron-body valves, (pressure ratings).....	12	3	75	184-42
Jacks, screw, bell bottom.....	78	27	78	97-42
Japanned ware, tinware, and galvanized ware.....	1,154	873	24	55
Lath, metal (expanded and sheet).....	201	57	71	3-11
Lights; sidewalk, floor and roof.....	{			
sizes..	120	6	95	} 49
styles..	80	5	94	
shapes..	10	2	80	
Lining, brake, automobile.....	100	37	63	66

VARIETY REDUCTION EFFECTED BY THE APPLICATION
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Item	Varieties		Per- cent reduc- tion	S.P.R. number
	Before simplifi- cation	After simplifi- cation		
Lockers, steel.....	65	23	64	35-28
Lumber, rotary cut, for wire-bound boxes.....	102	6	94	} 59
{ lengths..	65	6	91	
{ widths..	9	6	33	
{ thicknesses..	50	17	66	68-41
Metal flashlight cases, and nonconducting.....	201	57	71	3-41
Millboard, asbestos; and asbestos paper.....	72	20	72	} 19-37
{ paper..	21	5	76	
{ millboard..	7	4	43	137-32
Mirrors, dental cone-socket.....	30	1	97	120-40
Molds, brick, ice cream; and ice cream cartons.....	428	185	57	} 47-28
{ sizes..	423	127	70	
{ packages..	200	36	82	181-41
Non-ferrous range boilers.....	65	11	82	156-41
Packages, extracted honey.....	72	12	66	70-41
Packages, salt.....	22	3	86	} 117-30
Packaging of dental plaster, investment, and artificial stone.....	26	13	50	
{ plaster..	38	25	34	41-10
{ investment..	552	71	87	} 9-28
Packaging, woven-wire fence; and woven wire fencing.....	2,072	200	90	
{ styles..	72	20	72	} 19-37
{ pkg. sizes..	21	5	76	
Paper, asbestos; and asbestos millboard.....	73	62	15	98-36
Paper, photographic.....	110	79	28	29-42
Pipe, conductor, eaves trough, and fittings, and ridge rolls.....	62	48	24	57-32
Pipe, wrought-iron and wrought-steel; and valves and fittings.....	8,566	2,969	65	185-42
Pipe fittings, (grey cast iron, malleable iron and brass or bronze).....	209	67	70	190-42
Pipe, stove, and accessories.....	5,580	759	86	191-42
Pipes, ducts and fittings for warm air heating and air conditioning.....	26	15	42	85-37
Plaster, adhesive.....	22	3	86	} 117-30
Plaster, dental; investment, and artificial stone, packaging of.....	26	13	50	
{ plaster..	33	13	61	174-41
{ investment..	200	36	82	181-41
Radiators, large-tube, cast iron.....	661	377	43	6-40
Range boilers (non-ferrous).....	188	25	87	79-28
Rasps and files.....	110	79	28	29-42
Refractories, malleable foundry.....	292	178	39	78-28
Ridge rolls, eaves trough, conductor pipe, and fittings.....	42	11	74	138-32
Roofing, iron and steel.....	72	12	66	70-41
Rubber, dental (base and veneering) colors.....	72	12	66	70-41
Salt packages.....	5,136	1,161	77	48
Scoops, shovels and spades..... (1st revision)..	360	154	57	122-31
Screen cloth, insect, wire.....	78	27	78	97-42
Screw, jacks, bell bottom.....	4,067	262	94	31-39
Shells, loaded paper shot.....	5,136	1,161	77	48
Shovels, spades and scoops..... (1st revision)..	251	25	90	15-35
Slate, blackboard.....	1,260	309	75	14-28
Slate, roofing..... possible sizes..	827	118	81	13-28
Slate, structural.....	5,136	1,161	77	48
Spades, shovels, and scoops..... (1st revision)..	7	4	43	53-32
Spirals, steel, reinforcing..... sizes..	8	6	25	63
Spools, metal, for annealing, handling, and shipping wire.....	1,630	209	87	28-29
Steel, sheet.....	22	3	86	} 117-30
Stone, artificial, dental; plaster and investment, packaging of.....	26	13	50	
{ plaster..	209	67	70	190-42
{ investment..	70	26	32	86-41
Stove pipe and accessories.....	11	7	36	88-37
Surgical gauze.....	428	185	57	} 47-28
Sweeps, floor..... block lengths..	423	127	70	
{ sizes..	16	8	50	93-39
{ packages..				
Tacks, cut, and small cut nails.....				
Tags, shipping, paper..... sizes..				

VARIETY REDUCTION EFFECTED BY THE APPLICATION
OF SIMPLIFIED PRACTICE—Continued

Item	Varieties		Per- cent reduc- tion	S.P.R. number
	Before simplifi- cation	After simplifi- cation		
Tanks, expansion; and range boilers.....	130	13	90	8-29
Tanks, storage, hot water.....dimensions and capacities..	120	14	88	25
Tape, sealing, paper, No. 1 kraft.....weights of paper..	8	3	62	114-30
Textiles, cotton, hospital and institutional.....	454	26	94	74-30
Tile, building, hollow.....	36	22	39	12
Tinware, galvanized, and Japanned ware.....	1,154	873	24	55
Tools, forged.....	665	503	24	17-35
Towels, terry, fast selvage.....sizes..	74	6	92	119-31
Traps, lavatory and sink, brass.....	1,114	76	93	21
Trough, eaves, conductor pipe, and fittings, and ridge rolls.....	110	79	28	29-42
Turnbuckles.....sizes..	248	115	54	71-28
Twines, hard-fiber..... (ply and yarn goods)..	1,304	1,176	10	92-38
Units, building, concrete.....	45	22	51	32-38
Valves, brass or bronze..... (pressure ratings)..	11	5	50	183-42
Valves, iron-body..... (pressure ratings)..	12	3	75	184-42
Wheelbarrows.....	125	27	78	105-32
Wheels, brush, dental.....	50	10	80	116-30
Wheels, buffing, full disk, stock diameters.....	17	11	35	115-30
Wheels, grinding.....	715,200	254,400	64	45-39
Wheels, grinding, dental lathe.....	91	10	89	130-32