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CHAPTER V

PRICE CHANGES AND THE FORTUNES OF PRIMARY PRODUCERS IN RECOVERY

THE sharp pick-up that lifted prices above the depression lows of February 1933 was one of the most striking of which we have record. Within five months the general level of wholesale prices advanced 17 per cent. Thereafter the advance tapered off, but over forty months the rise amounted to approximately 32 per cent. In June 1936 the general index of wholesale prices was 18 per cent below the July 1929 level, having risen from a trough 38 per cent below.

The fact of the general price rise is important, but its incidence is of even greater significance. How did it affect the badly twisted price structure left by forty-three months of practically unbroken recession? Did it serve to correct some of the disparities that reflected radical shifts in the distribution of current income, or to intensify them? If the net effect was in the direction of correction, how have the later phases of the movement compared with the earlier? Here was a rise that was in some degree, at least, the result of conscious stimulation. Its effects on the shaken price structure of the depression, and possible variations in these effects with the passage of time, are of peculiar and compelling interest.

In this chapter we are concerned with those price movements and concurrent production changes that affected the purchasing power and general economic status of primary producers. Diverse as their products and problems are, producers of raw materials have something in common in their

relation to economic processes at large. Yet the diversities that prevail among them call for specialized treatment of important groups. In particular, we shall deal with the distinctive problems of farmers during the recovery from the depression lows of the winter of 1932-33. In this economic area were focused a variety of attempts at selective inflation and production control. For this reason the course of events is of special interest.

For primary producers as a class the recession was marked by severe price declines, by relatively small reductions in the volume of production, and by substantial losses in aggregate purchasing power. Particularly on the price front was weakness apparent when the forces of recession were loosed. Special circumstances in 1929 intensified the difficulties usually encountered by primary producers during a cyclical recession, difficulties growing out of their distinctive relations to the stream of trade, the character of competition faced, the relatively limited control over supply and the influence of non-business considerations in the activities of agricultural producers. The problems of recovery and readjustment faced by these producers were similarly affected by special conditions—important shifts in the volume and character of our export trade, and legislative and administrative measures designed to stimulate price improvement and to restore the purchasing power of this group.

RAW MATERIALS IN PRICE RECOVERY

The changes brought by recovery in the general market relations between raw materials and manufactured goods are indicated in Table 20. As in past revivals, the first push of price recovery was felt by primary products. During the five months, February-July 1933, raw materials gained 30 per cent in price, manufactured goods 12 per cent. To the cus-

tomary stimulus that business revival gives to the prices of primary products was added, at this time, the effect of departure from the gold standard. Materials sold in world markets are most immediately influenced by monetary devaluation. In terms of per unit purchasing power these changes meant a gain of 10 per cent for raw materials, a loss of 5 per cent for products of manufacture. Reviewed against a pre-recession base, these movements cut in half the average per unit loss of purchasing power suffered by raw materials

TABLE 20
PRICES AND PURCHASING POWER OF RAW MATERIALS AND
MANUFACTURED GOODS, JULY 1929-JUNE 1936¹

A. MOVEMENTS OF WHOLESALE PRICES

	July 1929	Feb. 1933	July 1933	Oct. 1933	May 1934	Sept. 1934	May 1935	Dec. 1935	Apr. 1936	June 1936
<i>RECESSION AND RECOVERY</i>										
All commodities	100	62	72	74	77	81	83	84	82	82
Raw materials	100	51	66	65	68	75	78	78	77	78
Manufactured goods	100	69	77	80	83	84	86	87	85	84
<i>RECOVERY</i>										
All commodities		100	117	121	125	131	134	135	133	132
Raw materials		100	130	129	134	149	154	153	152	153
Manufactured goods		100	112	117	120	123	125	127	124	122

B. CHANGES IN PER UNIT PURCHASING POWER

	July 1929	Feb. 1933	July 1933	Oct. 1933	May 1934	Sept. 1934	May 1935	Dec. 1935	Apr. 1936	June 1936
<i>RECESSION AND RECOVERY</i>										
All commodities	100	100	100	100	100	100	100	100	100	100
Raw materials	100	82	91	87	88	93	94	93	94	95
Manufactured goods	100	111	106	108	107	104	104	104	104	103
<i>RECOVERY</i>										
All commodities		100	100	100	100	100	100	100	100	100
Raw materials		100	110	107	108	114	114	113	115	116
Manufactured goods		100	95	97	96	94	93	94	93	92

¹ The index numbers from which these measurements for selected dates are taken appear in Appendix IV.

and the average per unit gain enjoyed by manufactured goods after forty-three months of recession.

It is fair to assume that this movement toward the restoration of earlier relations through the relatively rapid advance of the more seriously depressed prices was salutary. It is true that pre-recession relations among elements of the economic system may by no means be accepted as 'normal'. The recession itself furnishes *prima facie* evidence that 1929 relations did not represent a state of equilibrium. Some correctional movements within the price system and in other elements of the economy at large were undoubtedly called for. But the gap between the prices of raw and of processed goods that was violently opened during recession was a serious impediment to economic activity. The reduction of this gap during the spring of 1933 improved the status of raw material producers and stimulated intergroup trade.

The rapid rise in the prices of raw materials in the early months of recovery was definitely checked in the late summer and early autumn of 1933. The general price advance was retarded, after July, and the pressure of price change upon the elements of the system at large was shifted. Commodity groups that had most successfully resisted the price decline of the preceding four years, and had moved upwards but slowly in price during the first months of recovery, began to feel the push of changing values, while among the groups previously most active the rise of prices was retarded. This reversal of tendencies is reflected in Table 20. The ten months following July 1933 brought an advance of 3 per cent in the average prices, at wholesale, of raw materials, and a rise of 8 per cent in average prices of manufactured products. In terms of relative purchasing power, the situation in May 1934 was further removed from the pre-recession situation than was that of July 1933.

The shift in the incidence of price advance in the summer

of 1933 was in part a direct result of the earlier movement. Higher prices of materials may be expected, after an interval, to affect the selling prices of finished goods. Moreover, in the earlier period manufacturers were stocking up materials prior to the introduction of the new codes that went into effect under the National Industrial Recovery Act in the summer and fall of 1933. Raw material prices reflected this heavy buying in the spring of 1933. Later retardation was natural. As a final factor, undoubtedly important but difficult to appraise in quantitative terms, the enforcement of the wage, hour and price provisions of the new industrial codes played a part in raising the prices of fabricated goods between July 1933 and May 1934.

After May 1934 new forces were injected into the situation. Drought and consequent crop destruction, superimposed upon a program of output limitation, operated powerfully to raise market prices among agricultural raw materials. By September 1934 average raw material prices had advanced 11 per cent from the May level; the average price of manufactured goods had risen less than 3 per cent. Adaptation to the conditions created by the codes and a lessening of the pressure towards higher costs and prices under the codes were factors in checking the more rapid advance that had prevailed in earlier months. The net results are most clearly reflected in the index numbers of purchasing power in Part B of Table 20. The figures for September 1934 define a situation closer to pre-recession parity than at any time after the low point of February 1933. Substantial corrections had been effected in the maladjustments created during recession. The recession gain in the average per unit purchasing power of manufactured goods had been reduced from 11 to 4 per cent, and the loss of raw material purchasing power had been reduced from 18 to 7 per cent.

Minor price fluctuations during the succeeding twenty-one

months brought a net advance of less than 2 per cent in the general level of wholesale prices. Raw and manufactured goods were left in the same relative positions as in the autumn of 1934. The stability of the price level and the constancy of price relations between raw and processed goods over a period marked by steadily expanding business activity and rising profits, and by the termination of the industrial codes, have been notable features of recent economic developments.

The fortunes of four major groups of raw material producers during this period of recovery may be followed in the record of Table 21. The outstanding feature of the early price recovery was the amazing advance in the prices of raw farm crops. No other group approached the gain of 65 per cent, in five months, that was made by these commodities. Raw mineral products advanced only 6 per cent. Animal and forest products rose markedly, by amounts well in excess of the 17 per cent gain recorded for the general index. The sharp alteration in the incidence of price change during the three following months, July 1933–October 1933, is apparent in these several index numbers of raw material prices, as well as in the contrasting movements of the prices of raw and processed goods. Farm crops lost a third of their earlier gain, in terms of actual prices; animal products barely maintained their mid-summer position; forest products continued to advance, but at a lower rate; the prices of raw mineral products spurted ahead, gaining in three months twice the amount of the previous five months' advance.

Crop reduction and drought brought a further notable advance in the prices of farm crops in 1934, with a subsequent decline in 1935. Animal products rose steadily, to the end of 1935. Raw forest and mineral products dropped behind in the rise and lost in purchasing power. During the

TABLE 21

PRICES AND PURCHASING POWER OF FOUR GROUPS OF PRIMARY PRODUCTS, JULY 1929-JUNE 1936 :

A. MOVEMENTS OF WHOLESALE PRICES OF RAW MATERIALS

	July 1929	Feb. 1933	July 1933	Oct. 1933	May 1934	Sept. 1934	May 1935	Dec. 1935	Apr. 1936	June 1936
<i>RECESSION AND RECOVERY</i>										
Farm crops	100	40	67	57	64	75	73	67	69	73
Animal products	100	39	52	51	51	62	74	76	73	71
Forest products	100	63	78	83	87	83	80	82	81	81
Mineral products	100	73	78	87	87	89	88	91	91	90
<i>RECOVERY</i>										
Farm crops	100	165	142	159	187	180	167	171	182	182
Animal products	100	132	131	131	158	189	194	186	181	181
Forest products	100	124	132	138	132	127	129	128	128	128
Mineral products	100	106	119	120	122	120	124	124	124	124

B. CHANGES IN PER UNIT PURCHASING POWER OF RAW MATERIALS

	July 1929	Feb. 1933	July 1933	Oct. 1933	May 1934	Sept. 1934	May 1935	Dec. 1935	Apr. 1936	June 1936
<i>RECESSION AND RECOVERY</i>										
Farm crops	100	65	92	77	83	93	88	81	84	90
Animal products	100	63	71	69	67	77	89	91	89	86
Forest products	100	102	108	111	113	103	97	98	99	99
Mineral products	100	118	107	116	113	110	105	109	111	110
<i>RECOVERY</i>										
Farm crops	100	141	117	128	143	134	123	129	137	137
Animal products	100	112	109	105	121	141	143	140	136	136
Forest products	100	106	109	110	101	94	96	97	97	97
Mineral products	100	91	99	96	93	89	92	94	93	93

first six months of 1936 farm crops advanced appreciably and animal products lost in purchasing power. In June 1936 raw minerals had an average per unit worth 10 per cent greater than in July 1929; raw forest and animal products and farm crops were respectively, 1, 14 and 10 per cent below the pre-recession level. The range of difference is considerable, but

far less than that of February 1933. The worst of the price inequalities existing in the winter of 1932-33 had been ironed out.

Behind these diverse price movements lay a host of factors. Changing monetary values, and hopes and fears concerning further changes; important modifications of working conditions and production costs as the Administration's program of recovery unfolded, and hopes and fears connected with these changes; shifts in current and potential supplies, as a result of administrative action and the play of natural forces—all these combined with fluctuations on the demand side to create an extraordinary complex of factors affecting the level of commodity prices and the relations among the prices of different commodity groups. Some of these factors are discussed in subsequent sections. We should note here, however, the major changes in supply accompanying the shifts that recovery brought in the prices of raw materials.

Variations in the annual output of the four chief classes of raw materials are indicated by the accompanying index numbers of physical production.¹ We do not find a perfect

	1929	1932	1933	1934	1935
Farm crops	100	93	85	72	89
Animal products (slaughterings)	100	103	105	108	94
Forest products	100	38	48	49	55
Mineral products	100	62	67	72	77

inverse relation between production and price movements between 1929 and 1935, for changes in market demand and in stocks on hand constitute additional factors, not here represented. However, the groups for which prices were maintained during the recession—forest and mineral products—were those in which production was most severely curtailed. Mineral products suffered less in price than forest

¹ The sources of these measurements and the movements of their component elements are indicated in Appendix VII.

products, though production of the latter declined by a larger percentage. This is accounted for by the virtual cessation of building and the consequent great decline in demand for lumber. Maintenance of the output of crops and animal products was a factor, of course, in their sharp price declines during recession.

With recovery, the greatest immediate price advances occurred among farm crops, the output of which was reduced, particularly in 1934, by crop reduction and drought. The relative price rise through 1934 was much lower for animal products. Output (which here means slaughterings) was maintained for this group, and even increased in 1934 as a result of feed shortage. The lower price gains of mineral and forest products were accompanied by increases in output.

The later strength of the prices of raw animal products, manifest in the 1935 price quotations, reflects substantial reductions in the existing supplies of meat animals—an aftermath of the earlier feed shortage and forced marketings of 1934. The following comparison of the number of meat animals on farms² at the beginning of 1934 and of 1935

	<i>Jan. 1, 1934</i>	<i>Jan. 1, 1935</i>	<i>Percentage decrease</i>
Cattle and calves ¹	47,203,000	42,293,000	10.4
Hogs, including pigs	58,621,000	39,004,000	33.5
Sheep and lambs	53,713,000	52,251,000	2.7

¹ Excludes cows and heifers, two years old and over, kept for milk.

indicates the nature of the forces responsible for the sharp spurt in the prices of farm animals and meat products in 1935. Reduced supply contributed to the strength of the prices of farm crops and animal products during recovery, as it had to the relative strength of prices of raw forest and mineral products during recession. But other forces, operat-

² *Crops and Markets*, February 1936, p. 34.

ing from the monetary and demand side, played important parts in the price advance of 1933-36.

FARM PRODUCTS IN WHOLESALE MARKETS

We pass to a more detailed consideration of recovery, as it affected the class of primary producers that suffered most severely during the decline (Table 22). During the first five months of recovery the average price, at wholesale, of raw products of American farms advanced just 50 per cent; the prices of non-farm products rose but 12 per cent. Here was a movement of amazing proportions, which contributed materially to correct one of the major price disparities of the

TABLE 22

PRICES AND PURCHASING POWER OF FARM AND OTHER PRODUCTS, JULY 1929-JUNE 1936

A. MOVEMENTS OF WHOLESALE PRICES

	July 1929	Feb. 1933	July 1933	Oct. 1933	May 1934	Sept. 1934	May 1935	Dec. 1935	Apr. 1936	June 1936
<i>RECESSION AND RECOVERY</i>										
All commodities	100	62	72	74	77	81	83	84	82	82
Products of American farms, raw ¹	100	40	59	55	58	70	76	74	73	74
All other commodities	100	68	76	80	83	84	85	87	85	84
Products of American farms, raw										
Producers' goods	100	37	57	51	56	70	78	74	74	72
Consumers' goods	100	47	66	63	63	70	71	72	69	78
<i>RECOVERY</i>										
All commodities	100	117	121	125	131	134	135	133	132	
Products of American farms, raw ¹	100	150	138	146	177	192	186	184	186	
All other commodities	100	112	118	121	123	125	127	124	123	
Products of American farms, raw										
Producers' goods	100	155	140	152	190	213	202	202	197	
Consumers' goods	100	141	135	135	150	150	153	148	166	

TABLE 22 (cont.)

PRICES AND PURCHASING POWER OF FARM AND OTHER PRODUCTS, JULY 1929-JUNE 1936

B. CHANGES IN PER UNIT PURCHASING POWER

	July 1929	Feb. 1933	July 1933	Oct. 1933	May 1934	Sept. 1934	May 1935	Dec. 1935	Apr. 1936	June 1936
<i>RECESSION AND RECOVERY</i>										
All commodities	100	100	100	100	100	100	100	100	100	100
Products of American farms, raw ¹	100	64	82	73	75	86	91	88	88	90
All other commodities	100	110	105	108	107	104	102	104	103	103
Products of American farms, raw										
Producers' goods	100	59	78	68	72	86	94	89	90	88
Consumers' goods	100	76	92	85	82	87	85	86	84	95
<i>RECOVERY</i>										
All commodities		100	100	100	100	100	100	100	100	100
Products of American farms, raw ¹		100	128	114	117	135	143	138	138	141
All other commodities		100	95	98	97	94	93	94	94	93
Products of American farms, raw										
Producers' goods		100	132	116	122	146	158	150	152	148
Consumers' goods		100	120	112	108	115	112	113	111	125

¹ The index numbers of prices of raw crops and raw animal products given in Table 21 are not confined to products of American farms, as are the measurements in Table 22.

depression. Subsequent changes follow the pattern outlined in the opening section of this chapter—an appreciable loss of relative position by raw farm products between July and October 1933, minor fluctuations between October 1933 and May 1934, followed by a substantial price rise under the influence of the adverse crop conditions in the summer of 1934. By September 1934 raw farm products were in a better relative position than in the summer of 1933. This advantage was maintained and, indeed, slightly improved, over the succeeding twenty-one months. In June 1936 the average per

unit purchasing power of raw farm products was 41 per cent higher than in February 1933, and 10 per cent lower than in July 1929. The latter figure may be compared with the corresponding index for February 1933, which was 36 per cent below the pre-recession level.

The gains of this advance were not even, as among the various types of farm product. We have noted that raw crops, which are more directly affected by the monetary forces playing on international markets, fared much better in the 1933 rise than raw animal products. Animal products gained slightly more than crops in the advance of the summer of 1934, and further improved their position in the winter of 1934-35. If we distinguish raw farm products intended for productive use from those ready for direct consumption, we find that the greater decline of the former, during recession, was offset by a more rapid advance during the recovery in raw material prices. The present record ends, in June 1936, with raw producers' goods, among farm products, 12 per cent below their pre-recession unit purchasing power, at wholesale, and raw consumers' goods from the same source 5 per cent below. Cotton, wheat, cattle and hogs, the great staples that weigh heavily in the raw producers' group, scored more substantial price gains during the recovery than did raw materials ready for consumption.

In appraising the situation existing from 1933 to 1936 we may with advantage go back to a more distant base. Measurements in Table 23 are based on 1913. For the two main groups the shift of base makes little difference in average purchasing power, per unit. At the peak prior to the recession these two groups stood in approximately the same relative position as in 1913. The net result of the conflicting currents of recession and recovery, up to June 1936, was to leave the average purchasing power of raw farm products 8 per cent lower than in 1913, and that of non-farm products 2 per cent higher. Similarly, the change of base

TABLE 23
PURCHASING POWER OF RAW FARM PRODUCTS AND OTHER
COMMODITIES, 1913-1936

CHANGES IN PER UNIT PURCHASING POWER, AT WHOLESALE

	July 1913	Feb. 1929	July 1933	Oct. 1933	May 1934	Sept. 1934	May 1935	Dec. 1935	Apr. 1936	June 1936
All commodities	100	100	100	100	100	100	100	100	100	100
Products of Amer- ican farms, raw	100	102	66	84	75	77	89	94	90	91
All other com- modities	100	100	110	105	107	107	104	102	103	102
Crops, raw ¹	100	102	66	93	78	85	95	89	82	85
Animal products, raw ¹	100	98	62	70	68	65	75	88	89	87
Products of Amer- ican farms, raw										
Producers' goods	100	99	59	78	68	72	86	93	88	89
Consumers' goods	100	112	85	102	95	92	98	95	96	94

¹ These index numbers include raw crops and raw animal products of both American and foreign origin.

brings but slight modification in the relative movements of crops and animal products, since their 1929 relations were close to their pre-War relations. Wider differences are introduced into the comparison, among farm products, of raw producers' and raw consumers' goods. In July 1929 these two groups stood, respectively, 1 per cent below and 12 per cent above the 1913 level, in per unit purchasing power. The changes of recession and recovery left them, respectively, 13 per cent below and 7 per cent above 1913 parity with commodities in general, at wholesale.

PRICES RECEIVED BY FARMERS AND PRICES PAID BY FARMERS

The price and purchasing power changes we have been discussing relate to wholesale markets. These are of high im-

portance in trade but they do not measure changes in the values of immediate concern to farmers. For this purpose we must take account of prices at the farm, and of prices actually paid by farmers for the goods they buy (Table 24).³

³ A parallel treatment of the wholesale prices and farm prices of agricultural products is necessary because of the magnitude of the distributive margin between these two sets of prices, and because the movements of this margin in times of rapid price change are quite unlike the movements of prices actually received by farmers.

The size of the margin varies, of course, for different commodities. The relative importance of one element of the margin, transportation charges, is indicated by the following figures, compiled by Thor Hultgren, of the Bureau of Agricultural Economics. Freight charges are comparatively high, in relation to price, for the articles here listed.

TRANSPORTATION CHARGES FROM REPRESENTATIVE PRODUCING
POINTS TO NEW YORK CITY, 1928-1932, EXPRESSED AS
PERCENTAGES OF FARM PRICE OF SPECIFIED
FRUITS AND VEGETABLES

	1928	1929	1932
Potatoes, Maine	83	27	131
Apples, Washington	96	64	167
Oranges, California	69	36	101
Grapes, California, wine and table	152	110	305
Lettuce, California, second early	116	87	107
Watermelons, Georgia	114	106	322
Cabbage, New York (Danish, for market)	21	33	161
Onions, Texas, early bermuda and creole	78	64	56
Peaches, Georgia	94	63	77
Tomatoes, Florida, early, second	32	38	35

The variations in these percentages are due, in the main, to fluctuations in the prices received by producers, not to changes in freight charges. Thus for Maine potatoes the price received by producers varied from 42.3 cents per 100 pounds, in 1932, to 203.3 cents in 1929, while freight rates per 100 pounds remained constant at 55.5 cents.

Not quite so rigid, but much less sensitive to changing economic conditions than general wholesale prices or farm prices, are the various series of freight rates represented below.

(Footnote ³ concluded on p. 236)

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Average prices at the farm dropped slightly more than wholesale prices of raw farm products between July 1929 and February 1933—63 per cent as against 60 per cent. The initial spurt of recovery, between February and July 1933, carried the prices of farm products up about 50 per cent in both markets. For ten months thereafter farm prices as well

(Footnote ³ concluded)

INDEX NUMBERS OF FREIGHT RATES

VARIOUS COMMODITIES AND GROUPS WITH CORRESPONDING INDEX NUMBERS FOR WHOLESALE PRICES AND FARM PRICES, 1913-1934

	1929	1932	1934	1913	1929	1934
Grain, Chicago to Liverpool	100	89	99	100	131	130
Provisions, Chicago to Liverpool	100	97	89	100	199	177
Wheat, Chicago to New York						
By lake and canal	100	71	86	100	111	95
By lake and rail	100	84	77	100	149	115
By all rail	100	100	82	100	188	154
Cattle, U. S.	100	106	101	100	156	158
Hogs, U. S.	100	99	99	100	159	157
Sheep, U. S.	100	100	100	100	142	142
Total livestock, U. S.	100	101	99	100	155	153
Wheat, U. S.	100	99	99	100	148	147
Cotton, U. S.	100	65	58	100	163	95
All traffic through Sault Ste Marie						
Average charge per ton per mile	100	88	95	100	157	149
All traffic, Class I Railroads						
Average revenue per ton-mile	100	97	91	100	150	137
Wholesale prices, all commodities	100	68	79	100	136	107
Prices received by producers of farm products	100	44	62	100	145	89

SOURCES: The various indexes of freight rates are original data collected by the Department of Commerce and published in the annual *Statistical Abstract*. The wholesale price index is that of the U. S. Bureau of Labor Statistics.

The wholesale prices of farm products, as quoted in the compilations of the Bureau of Labor Statistics, do not necessarily reflect all the freight rigidities here cited. Much depends on the market to which a wholesale price quotation relates. But the presence of such charges accounts for some of the differences between price movements at the farm and price movements in wholesale and retail markets.

PRIMARY PRODUCERS

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TABLE 24

FARM PRICES, PRICES PAID BY FARMERS AND PER UNIT PURCHASING POWER OF FARM PRODUCTS, JULY 1929-JUNE 1936

July Feb. July Oct. May Sept. May Dec. Apr. June
1929 1933 1933 1933 1934 1934 1935 1935 1936 1936

RECESSION AND RECOVERY

Prices received:

All farm products ¹	100	37	56	53	56	70	74	75	71	73
Grains	100	28	78	57	64	93	93	74	74	72
Fruits	100	42	54	51	73	62	65	61	59	76
Cotton and cottonseed	100	30	58	49	62	76	72	68	66	66
Meat animals	100	32	40	38	38	49	71	72	75	72
Dairy products	100	49	58	60	60	65	70	78	75	70
Poultry products	100	40	46	62	48	70	74	91	65	69
Vegetables	100	60	63	76	55	83	79	84	66	62
Prices paid by farmers ²	100	66	70	76	79	82	83	80	79	78
Per unit purchasing power of farm products	100	57	81	70	70	85	89	94	90	93

RECOVERY

Prices received:

All farm products ¹	100	151	142	149	187	196	200	191	194
Grains	100	276	203	229	329	329	262	262	256
Fruits	100	127	120	172	145	153	144	139	180
Cotton and cottonseed	100	191	161	204	250	239	223	218	218
Meat animals	100	124	121	121	155	223	226	236	226
Dairy products	100	119	123	123	134	145	160	154	143
Poultry products	100	115	155	120	173	183	225	162	172
Vegetables	100	106	128	93	138	132	142	112	103
Prices paid by farmers ²	100	106	115	120	125	126	121	120	119
Per unit purchasing power of farm products	100	142	123	124	150	156	166	159	164

SOURCE: *The Agricultural Situation*, monthly bulletin of the Bureau of Agricultural Economics, Department of Agriculture

¹ Includes tobacco and a few other commodities not classified in the given subgroups.

² The commodities entering into the index of prices paid by farmers include goods bought for the farm family (food, clothing, furniture, building materials for the house, automobiles for family use, etc.) and goods bought

as wholesale prices fluctuated slightly. In May 1934 the level of farm prices was practically the same as it had been in July 1933. The second great advance of recovery then set in. Within four months farm prices advanced to a level 87 per cent above the depression low. More than half the losses of recession and depression had been made up. During the following fifteen months, to the end of 1935, a further net gain of about 7 per cent was scored. A decline of about 3 per cent occurred in average farm prices in the first six months of 1936.

The price movements of this period varied widely among the different classes of farm products. Grains, meat animals and cotton, the heaviest sufferers in the decline, scored the greatest advances. As of June 1936 vegetables stood farthest below the pre-recession level; fruits, meat animals and grains stood closest to it. It is to be noted that the drop of some 3 per cent in average farm prices in early 1936, after the termination of the Agricultural Adjustment Act, was influenced by substantial declines in the prices of poultry products and vegetables. Meat animals held their position, and grains and cotton declined slightly.

We have seen that the trading position of the farmer suffered a great loss during the recession, because prices paid failed to adjust themselves to the drop in prices received. Recovery brought a definite improvement, in this respect. During the first five months of rapid rise, when farm prices were gaining 51 per cent, prices paid by farmers were advancing only 6 per cent. Subsequently, a sharper advance occurred in prices paid, but by June 1936 these had risen only 19 per cent from their low point, while average prices

for use in production (feed, farm machinery, trucks, tractors, fertilizers, equipment and supplies, seed, etc.).

Index numbers of per unit purchasing power are secured by dividing indexes of prices received by indexes of prices paid.

received by farmers had almost doubled. Although the net loss from the pre-recession level was greater among prices received than among prices paid, the average per unit worth of the farmer's product was, in June 1936, only 7 per cent less than in 1929.

There were wide differences, of course, among farm products with respect to these gains and losses. The immediate record ends, in June 1936, with fruits 3 per cent below their July 1929 level of purchasing power, and with truck crops 22 per cent below. The other groups fell within these extremes.⁴

AGRICULTURAL PROCESSING TAXES AND PRICE CHANGES

In some degree the advance in 1933 and 1934 in the prices of commodities made from agricultural products was due to the levying of processing taxes. These taxes, designed to provide revenue for rental and benefit payments to farmers

⁴ The comparison of farm prices for specific months, particularly for different calendar months, may not be satisfactory as a procedure for determining actual changes in the worth of a farmer's products, because the farmer's marketings are not equally distributed throughout the year. Moreover, the prices in any one month may be unrepresentative of the average prices prevailing during the year. In the present instance the use of July 1929 as base causes no distortion for farm products as a broad class. The July index of prices received was only one per cent above the average of prices received during the calendar year 1929. For some groups the differences were greater.

Because of seasonal variations in marketings and purchases, however, it is well to trace changes in the per unit purchasing power of farm products by years. The accompanying index numbers of per unit purchasing power define these movements. As is to be expected, the swings are less pronounced on the annual than on the monthly basis. For all farm products there was a loss in per unit purchasing power of 36 per cent between 1929 and 1932. Subsequent gains reduced this loss, by 1935, to 9 per cent.

	1929	1932	1933	1934	1935	1932	1933	1934	1935
All groups of farm products	100	64	67	77	91	100	106	122	142

in connection with the crop reduction program under the Agricultural Adjustment Act, were levied upon the first domestic processing of goods intended for domestic consumption. The rate was to equal "the difference between the current average price at the farm and the fair exchange value of the commodity", although discretion was left to the Secretary of Agriculture to lower the tax if the domestic consumption of a given commodity were reduced. The commodities originally included were wheat, cotton, field corn, hogs, rice, tobacco, milk and its products. Later rye, flax, barley, grain sorghums, cattle, sugar beets, sugar-cane and peanuts were added to this list.

The actual incidence of these processing taxes may not be defined precisely. There are three possible consequences of the levying of such taxes: prices to the final buyer may be raised; prices received by the primary producer may be reduced; the price margin representing costs of fabrication may be reduced and the tax absorbed by the processor. (This statement refers, of course, to the direct effects on prices. No reference is here made to possible effects on production, consumption, stocks, exports and imports, etc.) If conditions were static, and we possessed full knowledge of the elasticities of demand and of supply for each product taxed, it would be possible to trace the incidence of these taxes and their effects on the volumes sold and consumed. Actually, the taxes were imposed under highly dynamic conditions, with considerable shifts occurring in the position and, possibly, in the shape of the curves of supply and of demand. These changes may not be precisely defined, and only qualified statements concerning the incidence of the processing taxes are justified.

Certain of the conditions prevailing tended to make the consumer pay the tax. The demand for most agricultural

products is inelastic. Moreover, the imposition of the taxes was, in general, coincident with reductions in the volume of primary products produced, and with increases in demand, as consumer incomes rose. On the other hand the supply of agricultural products is, in general, insensitive to changes in price, and this facilitates the passing of the tax to the seller of materials. Since considerable changes were occurring on both demand and supply sides when the tax was imposed, processors were probably able to pass a large part of the tax forward to consumers or back to primary producers.

The effects of the tax varied, of course, from commodity to commodity. In the main, however, the tax probably increased prices to consumers and gave primary producers somewhat lower returns than they would have secured with the same output, had there been no tax on processing operations. Fabricational margins were probably not materially affected.⁵

The relative importance of the taxes levied on the processing of four major commodities, at two dates, is shown in

	April 1934			April 1935		
	Price without tax	Tax	Tax as percentage of price without tax	Price without tax	Tax	Tax as percentage of price without tax
Corn, contract grades (bu.)	\$.467	\$.05	11	\$.890	\$.05	6
Wheat, #2, red winter, Chicago (bu.)	.838	.30	36	.992	.30	30
Hogs, light butchers (100 lbs.)	3.970	2.25	57	9.075	2.25	25
Cotton, New Orleans (lb.)	.119	.042	35	.118	.042	36

⁵ An interesting discussion, tending to the conclusion that taxes on the processing of hogs fell, in the main, on primary producers, appears in the *Journal of Farm Economics* for May 1935. "The Incidence of the AAA Processing Tax on Hogs", Geoffrey Shepherd, pp. 321-34.

the accompanying tabulation. These taxes, as of April 1934, ranged from 11 per cent of the current price, without tax, for corn, to 57 per cent for hogs. The percentages varied, of course, with changes in the market prices of the various products. In April 1935, after the notable price advances for corn and hogs, they had fallen to 6 per cent for corn and 25 per cent for hogs. For wheat and cotton, the figures stood at 30 and 36 per cent, respectively.

TABLE 25
RELATIVE PRICES OF IMPORTANT RAW MATERIALS AT
WHOLESALE, JULY 1929-JUNE 1936

	July 1929	Feb. 1933	July 1933	Oct. 1933	May 1934	Sept. 1934	May 1935	Dec. 1935	Apr. 1936	June 1936
<i>RECESSION AND RECOVERY</i>										
Corn	100	23	57	41	51	81	87	57	62	64
Wheat	100	34	78	64	64	84	78	87	79	74
Hogs	100	31	39	41	30	61	80	82	92	88
Sugar, raw	100	72	92	88	73	76	86	82	99	98
Cotton	100	32	57	50	61	70	66	63	62	64
Wool	100	46	79	87	88	80	69	84	89	90
Coal, bituminous	100	91	91	101	107	107	108	111	110	110
Pig iron	100	73	84	92	97	97	97	103	103	103
Copper, ingot	100	27	49	45	46	49	49	51	52	52
Lumber	100	69	82	78	83	86	76	78	78	78
<i>RECOVERY</i>										
Corn	100	247	175	220	350	376	247	268	277	
Wheat	100	225	186	187	242	226	252	230	215	
Hogs	100	126	133	99	199	262	270	302	287	
Sugar, raw	100	127	121	101	105	119	114	136	136	
Cotton	100	181	153	193	221	208	200	196	201	
Wool	100	174	191	194	175	151	184	196	196	
Coal, bituminous	100	100	111	118	118	119	122	121	121	
Pig iron	100	115	125	133	133	133	141	141	141	
Copper, ingot	100	182	170	174	184	184	190	194	195	
Lumber	100	119	112	120	125	110	112	112	112	

Recession and Recovery in the Prices of Important Raw Materials

Space limitations prevent a detailed survey of the price and production movements affecting individual raw materials during the six years of recession and recovery. In following the major changes of this era it is necessary to deal with rather broad categories, which may lack concrete significance to many readers. We therefore supplement the preceding general account with figures relating to the fortunes of important single commodities (Table 25). Comment is not attempted. Readers may compare the changes in the prices of individual commodities with the group measurements presented in preceding tables.

TIMING OF PRICE CHANGES DURING RECOVERY:
A MONTHLY RECORD

In tracing and appraising the price gains of recovery, our interest extends beyond the net changes over the period studied. The pace and character of the changes should be followed, month by month. During the period covered by this record major changes in monetary policy occurred, and it is desirable to consider their possible effects on the prices of commodities. Again, the incidence of the forces affecting prices may vary. The pressure towards price advance may shift from the most seriously depressed groups to other groups, already in positions of relative advantage. In Table 26 are given measurements of percentage changes, by months, in the prices of raw materials and manufactured goods, at wholesale. The same story appears in graphic form in Figure 11.

The detailed records in Section A of this table may be most readily followed in the summary by periods in Section B. The five months, February–July 1933, cover the first phase of the new monetary policy of the government, begin-

FIGURE 11

WHOLESALE PRICES OF RAW MATERIALS AND MANUFACTURED GOODS IN THE UNITED STATES, FEBRUARY 1933-JUNE 1936

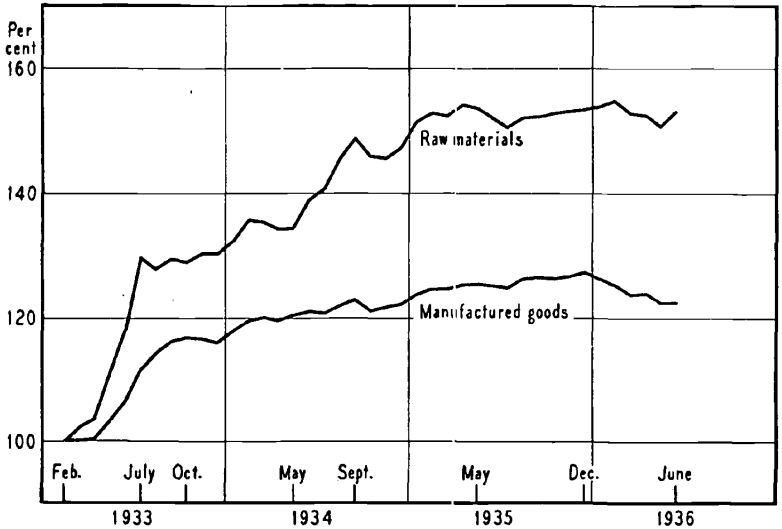


TABLE 26

RAW MATERIALS AND MANUFACTURED GOODS
PERCENTAGE CHANGES IN INDEX NUMBERS OF WHOLESALE
PRICES WITH NET DIFFERENCES AND CUMULATIVE
NET DIFFERENCES, FEBRUARY 1933-JUNE 1936

	ALL COMMODITIES	RAW MATERIALS	MANU- FACTURED GOODS	NET DIFFERENCE BETWEEN MOVEMENTS OF RAW MATERIALS AND MANUFACTURED GOODS	
				Month to month or period	Cumulated, Feb. 1933 to last month named
A. MONTHLY MOVEMENTS					
(per cent)					
1933					
Feb.-Mar.	+0.8	+2.3	0.0	+2.3	+2.3
Mar.-Apr.	+0.6	+1.3	+0.4	+0.9	+3.3
Apr.-May	+4.3	+7.5	+2.6	+4.9	+8.5

PRIMARY PRODUCERS

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TABLE 26 (cont.)

RAW MATERIALS AND MANUFACTURED GOODS
 PERCENTAGE CHANGES IN INDEX NUMBERS OF WHOLESALE
 PRICES WITH NET DIFFERENCES AND CUMULATIVE
 NET DIFFERENCES, FEBRUARY 1933-JUNE 1936

	ALL COMMODITIES	RAW MATERIALS	MANU- FACTURED GOODS	NET DIFFERENCE BETWEEN MOVEMENTS OF RAW MATERIALS AND MANUFACTURED GOODS Month to month or period	Cumulated, Feb. 1933 to last month named
A. MONTHLY MOVEMENTS (per cent)					
1933					
May-June	+4.1	+5.8	+3.4	+2.4	+11.5
June-July	+6.4	+9.8	+4.7	+5.1	+17.9
July-Aug.	+1.5	-1.4	+2.7	-4.1	+13.1
Aug.-Sept.	+1.4	+1.4	+1.5	-0.1	+13.4
Sept.-Oct.	+0.1	-0.8	+0.5	-1.3	+11.8
Oct.-Nov.	+0.1	+1.2	-0.2	+1.4	+13.7
Nov.-Dec.	-0.4	-0.1	-0.5	+0.4	+14.1
Dec.-Jan. 1934	+1.8	+1.9	+1.7	+0.2	+14.5
1934					
Jan.-Feb.	+1.6	+2.5	+1.3	+1.2	+16.2
Feb.-Mar.	+0.1	-0.4	+0.4	-0.8	+15.3
Mar.-Apr.	-0.5	-0.7	-0.4	-0.3	+14.7
Apr.-May	+0.6	+0.1	+0.7	-0.6	+14.0
May-June	+1.4	+3.3	+0.5	+2.8	+17.9
June-July	+0.3	+1.3	-0.2	+1.5	+19.9
July-Aug.	+2.0	+3.6	+1.1	+2.5	+23.7
Aug.-Sept.	+1.1	+2.0	+0.8	+1.2	+25.6
Sept.-Oct.	-1.1	-1.8	-1.5	-0.3	+24.8
Oct.-Nov.	-0.2	-0.3	+0.5	-0.8	+23.8
Nov.-Dec.	+0.6	+1.1	+0.4	+0.7	+25.0
Dec.-Jan. 1935	+2.0	+2.9	+1.4	+1.5	+27.6
1935					
Jan.-Feb.	+0.7	+1.0	+0.6	+0.4	+28.3
Feb.-Mar.	-0.1	-0.4	+0.1	-0.5	+27.6
Mar.-Apr.	+0.8	+1.2	+0.5	+0.7	+28.8
Apr.-May	0.0	-0.3	+0.1	-0.4	+28.3
May-June	-0.6	-1.1	-0.2	-0.9	+26.9
June-July	-0.5	-1.0	-0.2	-0.8	+25.5

TABLE 26 (cont.)

RAW MATERIALS AND MANUFACTURED GOODS
 PERCENTAGE CHANGES IN INDEX NUMBERS OF WHOLESALE
 PRICES WITH NET DIFFERENCES AND CUMULATIVE
 NET DIFFERENCES, FEBRUARY 1933-JUNE 1936

	ALL COMMODITIES	RAW MATERIALS	MANU- FACTURED GOODS	NET DIFFERENCE BETWEEN MOVEMENTS OF RAW MATERIALS AND MANUFACTURED GOODS Month to month or period	Cumulated, Feb. 1933 to last month named
A. MONTHLY MOVEMENTS (per cent)					
1935					
July-Aug.	+0.1	+1.2	+1.0	+0.2	+25.9
Aug.-Sept.	+0.2	0.0	+0.3	-0.3	+25.5
Sept.-Oct.	0.0	+0.4	-0.2	+0.6	+26.4
Oct.-Nov.	+0.2	+0.2	+0.3	-0.1	+26.4
Nov.-Dec.	+0.2	+0.1	+0.3	-0.2	+26.1
Dec.-Jan. 1936	-0.4	+0.4	-0.8	+1.2	+27.7
1936					
Jan.-Feb.	-0.1	+0.6	-0.7	+1.3	+29.6
Feb.-Mar.	-1.2	-1.4	-1.2	-0.2	+28.9
Mar.-Apr.	-0.1	-0.1	+0.1	-0.2	+28.5
Apr.-May	-1.2	-1.2	-1.4	+0.2	+28.5
May-June	+0.9	+1.7	+0.2	+1.5	+30.8
B. MOVEMENTS BY PERIODS (per cent)					
Feb. 1933-					
July 1933	+17.2	+29.5	+11.6	+17.9	+17.9
July 1933-					
Oct. 1933	+3.0	-0.6	+4.8	-5.4	+11.8
Oct. 1933-					
May 1934	+3.5	+4.4	+3.0	+1.4	+14.0
May 1934-					
Sept. 1934	+4.9	+10.6	+2.2	+8.4	+25.6
Sept. 1934-					
May 1935	+2.7	+3.4	-2.0	+1.4	+28.3
May 1935-					
Dec. 1935	+0.6	-0.3	+1.4	-1.7	+26.1
Dec. 1935-					
June 1936	-2.1	0.0	-3.7	+3.7	+30.8

ning with the prohibition of gold payments and the embargo on the export of gold and silver, on March 6, including the nationalization of gold, the passage of the credit expansion 'rider' to the Agricultural Adjustment Act and the abrogation of the gold clause, and ending with the rejection of the monetary stabilization program of the London conference on July 3. This was a period of rapid rise in the general price level, a rise that worked particularly to the advantage of depressed raw materials. The net gain of raw material prices in this period is measured by a difference of 17.9 between the index numbers for raw and processed goods, on the February 1933 base. The next phase, July–October 1933, was marked by a slight retrogression in the prices of raw materials, and by more substantial losses in their relative position. These three months cover the period of the inauguration of the new industrial codes authorized under the National Industrial Recovery Act. The record suggests that the forces released by this Act, combined with certain lagging consequences of the first phase of recovery,⁶ definitely tended to offset the ameliorative movements of the early months.

During the third stage, October 1933 to May 1934, conflicting but minor movements occurred in the relative prices of raw materials and manufactured goods. Additional attempts were made, by action on the monetary side, to stimulate price recovery. A government market for gold was established and the price of gold was progressively advanced; a silver-buying program was approved; the Gold Reserve Act of 1934, reducing the content of the gold dollar 41 per cent,

⁶ By these 'lagging consequences' I mean, first, a swing back of raw material prices, after the sharp initial advance that was stimulated to some extent by the desire to anticipate possibly higher costs under the codes. Supplementing this, a belated rise in the prices of fabricated goods was to be expected, as the effects of higher prices among raw materials were felt.

was adopted. The gain in the 'all commodities' index over these seven months amounted to fractionally more than 3 per cent. The improvement in the position of raw material prices, relatively to the prices of manufactured goods, is defined by a net difference of 1.4 between the respective index numbers.

The sharp advance in farm prices in the summer of 1934, accompanying drought and crop reduction, marks off the fourth period. It carried the average prices of all raw materials up 10.6 per cent; manufactured goods rose only 2.2 per cent. The net changes of the succeeding eight months, which extend to the end of the period of industrial operation under NRA codes, were slight. The seven months to the end of 1935, and to the termination of the AAA, brought a small net loss to raw materials; in the final period, in 1936, this loss was more than made up, as raw material prices held and the prices of manufactured goods declined.

The appreciable gains in the relative status of raw materials were scored during two brief periods—the first five months of sharp recovery and the four months of drought in the summer of 1934. Only under the pressure of the special conditions existing in these periods was substantial amelioration effected in the distortions of the raw-processed price relationship.

One important class of raw materials, agricultural products, calls for attention, in this survey of the timing of price changes, because of the distinctive price difficulties prevailing among them and because of the special efforts made to improve their status. Monthly changes in the wholesale prices of farm products and in prices at the farm, and the relations between changes in the prices of agricultural and of non-agricultural products, are shown in Table 27 and in Figure 12.

FIGURE 12

PRICES OF FARM PRODUCTS AND OTHER PRODUCTS IN THE UNITED STATES, FEBRUARY 1933-JUNE 1936

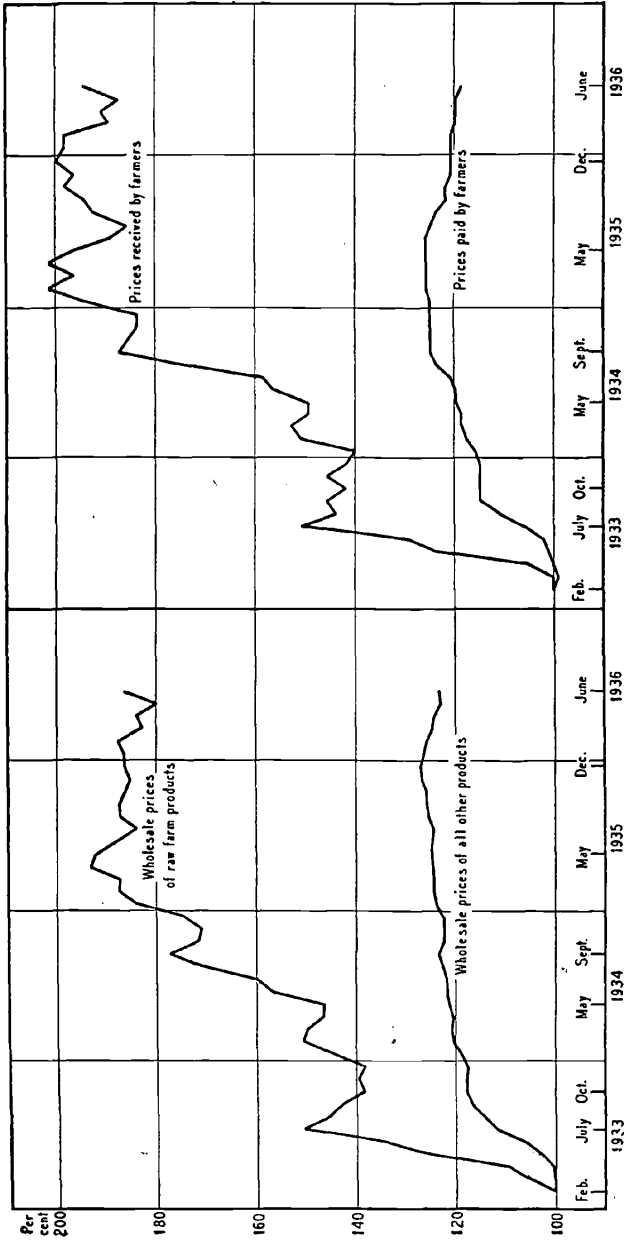


TABLE 27

PRICES OF FARM PRODUCTS AND OTHER COMMODITIES
 PERCENTAGE CHANGES IN INDEX NUMBERS WITH NET
 DIFFERENCES AND CUMULATIVE NET DIFFERENCES,
 FEBRUARY 1933-JUNE 1936

	WHOLESALE MARKETS				FARM AND RETAIL MARKETS			
	Prod- ucts of Ameri- can farms, raw	All other com- modi- ties	NET DIFFERENCE Month Cumu- lated, to Feb. or 1933 period to last to month period named		Farm prices, for all groups	Prices paid by farmers for com- modities bought	NET DIFFERENCE Month Cumu- lated, to Feb. or 1933 period to last to month period named	
A. MONTHLY MOVEMENTS (per cent)								
1933								
Feb.-Mar.	+5.2	0.0	+5.2	+5.2	0.0	-1.0	+1.0	+1.0
Mar.-Apr.	+3.8	+0.1	+3.7	+9.1	+5.5	+1.0	+4.5	+5.5
Apr.-May	+14.5	+2.5	+12.0	+22.5	+17.2	+1.0	+16.2	+22.6
May-June	+7.3	+3.3	+4.0	+28.2	+4.4	+1.0	+3.4	+27.1
June-July	+12.0	+5.4	+6.6	+38.7	+16.9	+3.9	+13.0	+45.0
July-Aug.	-3.5	+2.3	-5.8	+30.0	-4.8	+4.7	-9.5	+32.7
Aug.-Sept.	-1.5	+2.2	-3.7	+26.1	+1.3	+3.6	-2.3	+30.6
Sept.-Oct.	-3.3	+0.9	-4.2	+20.2	-2.5	0.0	-2.5	+26.9
Oct.-Nov.	+0.9	0.0	+0.9	+21.7	+2.6	0.0	+2.6	+30.6
Nov.-Dec.	-0.9	-0.2	-0.7	+20.7	-2.5	0.0	-2.5	+26.9
Dec.-Jan. 1934	+4.7	+1.1	+3.6	+25.0	-1.3	+0.9	-2.2	+24.2
1934								
Jan.-Feb.	+3.9	+1.2	+2.7	+30.1	+7.8	+1.7	+6.1	+33.1
Feb.-Mar.	-0.5	+0.2	-0.7	+29.0	+1.2	+0.8	+0.4	+33.9
Mar.-Apr.	-2.0	-0.1	-1.9	+26.3	-2.4	0.0	-2.4	+30.3
Apr.-May	-0.2	+0.7	-0.9	+25.1	0.0	+0.8	-0.8	+29.3
May-June	+7.1	+0.2	+6.9	+35.2	+4.9	0.0	+4.9	+36.6
June-July	+1.9	0.0	+1.9	+38.2	+1.2	+0.8	+0.4	+37.4
July-Aug.	+6.8	+0.7	+6.1	+48.3	+10.3	+2.5	+7.8	+50.7
Aug.-Sept.	+3.8	+0.7	+3.1	+53.9	+7.3	+0.8	+6.5	+62.5
Sept.-Oct.	-3.2	-0.7	-2.5	+49.1	-1.0	0.0	-1.0	+60.7
Oct.-Nov.	-0.3	-0.1	-0.2	+48.7	-1.0	0.0	-1.0	+58.8
Nov.-Dec.	+2.0	+0.1	+1.9	+52.0	0.0	0.0	0.0	+58.8
Dec.-Jan. 1935	+5.5	+1.2	+4.3	+60.2	+5.9	0.0	+5.9	+69.7
1935								
Jan.-Feb.	+1.8	+0.5	+1.3	+62.3	+3.7	+0.8	+2.9	+76.1
Feb.-Mar.	-0.1	-0.1	0.0	+62.3	-2.7	0.0	-2.7	+70.7
Mar.-Apr.	+3.2	+0.2	+3.0	+68.5	+2.8	0.0	+2.8	+76.1
Apr.-May	-0.5	+0.1	-0.6	+67.3	-2.7	0.0	-2.7	+70.7

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TABLE 27 (cont.)

PRICES OF FARM PRODUCTS AND OTHER COMMODITIES,
PERCENTAGE CHANGES IN INDEX NUMBERS WITH NET
DIFFERENCES AND CUMULATIVE NET DIFFERENCES,
FEBRUARY 1933-JUNE 1936

	WHOLESALE MARKETS				FARM AND RETAIL MARKETS			
	Prod- ucts of Ameri- can farms, raw	All other com- modi- ties	NET DIFFERENCE		Farm prices, all groups	Prices paid by farmers for com- modities bought	NET DIFFERENCE	
			Month or period to month named	Cumu- lated, Feb. 1933 to month named			Month or period to month named	Cumu- lated, Feb. 1933 to month named
A. MONTHLY MOVEMENTS (cont.) (per cent)								
<i>1935</i>								
May-June	-2.3	-0.1	-2.2	+63.0	-3.7	0.0	-3.7	+63.4
June-July	-2.0	-0.2	-1.8	+59.6	-1.9	-0.8	-1.1	+60.7
July-Aug.	+1.9	+0.8	+1.1	+61.9	+3.9	-0.8	+4.7	+68.9
Aug.-Sept.	0.0	+0.3	-0.3	+61.5	+0.9	-1.6	+2.5	+72.7
Sept.-Oct.	-0.5	+0.1	-0.6	+60.5	+1.9	0.0	+1.9	+76.4
Oct.-Nov.	-0.7	+0.6	-1.3	+58.4	-0.9	-0.8	-0.1	+75.6
Nov.-Dec.	+0.5	+0.2	+0.3	+59.1	+1.9	0.0	+1.9	+79.2
Dec.-Jan. 1936	+0.1	-0.6	+0.7	+60.2	-0.9	0.0	-0.9	+77.4
<i>1936</i>								
Jan.-Feb.	+0.7	-0.3	+1.0	+61.8	0.0	0.0	0.0	+77.4
Feb.-Mar.	-2.8	-0.9	-1.9	+57.8	-4.6	-0.8	-3.8	+69.3
Mar.-Apr.	+0.8	-0.2	+1.0	+59.6	+1.0	0.0	+1.0	+71.1
Apr.-May	-2.2	-1.1	-1.1	+56.9	-1.9	0.0	-1.9	+67.5
May-June	+3.6	+0.1	+3.5	+63.2	+3.9	-0.8	+4.7	+75.7
B. MOVEMENTS BY PERIODS (per cent)								
Feb. 1933-								
July 1933	+50.4	+11.7	+38.7	+38.7	+50.9	+5.9	+45.0	+45.0
July 1933-								
Oct. 1933	-8.1	+5.5	-13.6	+20.4	-6.0	+8.4	-14.5	+26.9
Oct. 1933-								
May 1934	+5.9	+3.0	+2.9	+25.1	+5.1	+4.3	+0.8	+29.3
May 1934-								
Sept. 1934	+21.0	+1.7	+19.3	+53.9	+25.6	+4.1	+21.5	+62.5
Sept. 1934-								
May 1935	+8.4	+1.2	+7.2	+67.3	+4.9	+0.8	+4.1	+70.7
May 1935-								
Dec. 1935	-3.1	+1.8	-4.9	+59.1	+1.9	-3.9	+5.8	+79.2
Dec. 1935-								
June 1936	+0.2	-3.0	+3.2	+63.2	-2.8	-1.7	-1.1	+75.7

Here, again, the record may be most readily followed in the summary by periods, in Section B of Table 27. Agricultural products gained in relative price during the first upward rush of the spring and early summer of 1933. Their differential gain in wholesale markets, in relation to all non-farm products, was 38.7 (the net difference in July 1933 between index numbers on the February 1933 base). The relapse in the autumn months, as the push of the first rush weakened and as the force of rising prices was felt by manufactured goods, cut this gain almost in half. The seven following months of mixed movements brought a small net advantage to raw farm products. The stimulus to agricultural prices provided by drought brought a substantial rise to a new level, in the summer of 1934, a level above that of July 1933. In the three succeeding periods only small changes occurred. The persisting gains of farm products were substantial, however, as is shown by the final figures given.

To the comparisons dealing with trading relations in wholesale markets we may add a survey of changes in the actual buying and selling relations of farmers, which are also shown in Table 27. The movements of index numbers of farm prices and of prices paid by farmers parallel those of the wholesale price measurements previously reviewed, but the relative margins of advantage of farm producers, during the several phases of the recovery movement, are wider. In June 1936 the differential gain of farm prices, starting from the February 1933 base, amounted to 75.7.

These several exhibits show very clearly that the real gains of agricultural products, and the gains of raw materials generally, were scored during two short periods. The advance began with the first push of detachment from the gold standard and of escape from the fears engendered during the bank-

ing crisis of the winter of 1932-33. The stimulus of this rise was definitely selective, in that it was felt most strongly by the prices of the most depressed commodities, primary products. The period of further monetary experimentation was marked by minor cross-currents of change, with no distinct consequences. Drought, with crop reduction, brought the second great stimulus to farm products, the most important element of the raw materials group. This gain was held, and even increased somewhat, during the months that followed the drought. During the first six months of 1936, following the termination of the AAA, a differential movement in favor of farm products occurred in wholesale markets; there was a small net loss in farm markets.

CHANGES IN THE AGGREGATE PURCHASING POWER OF PRIMARY PRODUCERS DURING RECOVERY

We have seen that the per unit purchasing power of raw materials, in wholesale markets, increased 16 per cent between February 1933 and June 1936. For raw products of American farms the average per unit gain amounted to 41 per cent, when purchasing power is measured with reference to prices in wholesale markets; in terms of goods actually purchased for productive and living purposes the gain was 64 per cent. But the economic status of producing groups is dependent rather upon aggregate income and purchasing power than upon per unit prices and purchasing power. In Table 28 we trace the shifts brought by recovery in the aggregate purchasing power of different classes of primary producers. The measurements relate to changes in the gross income of major producing groups, and to corresponding

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changes in purchasing power. We do not here deal with the final net incomes of these groups, as consumers.

TABLE 28

AGGREGATE VALUES OF PRIMARY PRODUCTS AND AGGREGATE PURCHASING POWER OF PRIMARY PRODUCERS

INDEX NUMBERS, 1929-1935

(1)	(2) AGGREGATE VALUE OF PRODUCT	(3) AGGREGATE COMMAND OVER GOODS, AT WHOLESALE, AND FACTORS AFFECTING IT ¹ Aggregate command over goods ²	(4) Purchasing power per unit	(5) Number of physical units
All primary producers				
1929	100	100 (100)	100	100
1932	43	64 (69)	79	88
1933	50	73 (71)	81	87
1934	59	75 (76)	88	86
1935	68	81 (80)	93	87
Producers of:				
Raw farm products ³				
1929	100	100 (100)	100	100
1932	45	66 (65)	65	99
1933	54	78 (66)	69	96
1934	61	71 (73)	78	93
1935	71	85 (80)	88	91
Raw mineral products				
1929	100	100 (100)	100	100
1932	42	61 (72)	115	62
1933	43	62 (76)	113	67
1934	56	71 (80)	112	72
1935	62	73 (82)	106	77
Raw forest products				
1929	100	(100)	100	100
1932	25	(37)	97	38
1933	36	(52)	108	48
1934	42	(54)	109	49
1935	45	(54)	97	55

¹ Command over goods relates to purchasing power in wholesale markets.

The changes between 1929 and 1932 in the purchasing power of primary producers have been discussed in Chapter III. We have noted a drop of about 57 per cent in the aggregate value of raw materials, representing a loss of about 36 per cent in total command over goods, at wholesale. Declining volume (12 per cent loss) and reduced purchasing power per unit (21 per cent loss) accounted for this reduction in aggregate purchasing power.⁷ Three years of recovery brought an advance of approximately 27 per cent in the aggregate purchasing power (in wholesale markets) of primary producers, a gain due entirely to increased per unit worth of their products; for this gain paralleled a loss of

The index numbers of wholesale prices, derived from those of the Bureau of Labor Statistics, are as follows: 1929, 100; 1932, 68; 1933, 69; 1934, 79; 1935, 84.

² The two sets of entries relating to aggregate command over goods are derived independently. Those appearing as the main series represent the measurements of 'aggregate value of product' deflated by an index of wholesale prices. The entries in parentheses are the products of the corresponding measurements of 'purchasing power per unit' and 'number of physical units'. The independently derived measurements agree fairly closely, for all primary producers; differences are greater for the subgroups. For farm products the differences are due in some degree to the fact that the main series relate partly to crop years, while the derived series relate to calendar years. For forest products the index numbers of aggregate value and purchasing power are derived from price and production data.

³ When the price and value figures relating to farm products are deflated by prices paid by farmers, we have the following record. The columns correspond to those in the table.

1929	100	100 (100)	100	100
1932	45	64 (63)	64	99
1933	54	76 (65)	67	96
1934	61	76 (71)	77	93
1935	71	87 (82)	91	91

⁷ The figures are not entirely consistent since they are derived independently. See footnote ² to Table 28.

about 1 per cent in physical output. In 1935 the total physical income of primary producers (as approximated above) was some 20 per cent less than in 1929; their total physical production was 13 per cent less.⁸

The three major groups of primary producers represented in Table 28 fared quite differently, with respect to changes in total purchasing power. In 1932 producers of farm and mineral products were fairly close together, with aggregate money income from 55 to 58 per cent below the 1929 level, and with aggregate real income reduced by from 30 to 40 per cent. Low per unit purchasing power and high production contributed to this result for farmers, while low production and relatively high per unit purchasing power were factors in the changes affecting mineral producers. Producers of raw forest products maintained the per unit worth of their products close to the 1929 level, but suffered a drastic decline (exceeding 60 per cent) in physical output. The result was a loss of more than 60 per cent in aggregate purchasing power.

The changes from 1932 to 1935 that helped to restore the real incomes of farmers were advances in per unit worth. Physical volume of production declined some 8 per cent. Among mineral producers increasing output raised real income; the three years of recovery brought an actual loss in the per unit purchasing power of their products. Forest products, which gained substantially in physical output, scored the greatest gain in aggregate purchasing power.

The estimates of aggregate command over goods, for these

⁸ Changes in aggregate purchasing power are estimated on the assumption that changes in the prices of the goods bought by primary producers paralleled the general movements of prices at wholesale. This assumption is justified, for purposes of general comparison, but the estimates should not be taken to measure with accuracy the actual change in the purchasing power of any group of producers.

three groups of producers, are somewhat rough, but they indicate the general nature of the changes brought by recession and recovery. Taking account of the margins of error involved, we may say that in 1935 the aggregate physical income of agricultural producers was about 15 or 20 per cent less than in 1929, having risen some 25 per cent from the low level of 1932. The physical income of producers of raw minerals in 1935 was from 18 to 27 per cent less than in 1929; here also a gain of about 20 per cent had been made from the 1932 level. The aggregate real income of producers of raw forest products in 1935 was some 46 per cent less than in 1929; the rise from the 1932 level had amounted to more than 40 per cent.

For agricultural producers it is possible to refine somewhat the rough estimates of Table 28, and to secure more exact measurements of the changes in the aggregate purchasing power of their income. The entries in Table 29 indicate the nature of the absolute and relative changes in gross farm income between 1929 and 1935. The cumulative decline of agricultural returns, a decline due almost entirely to falling unit purchasing power rather than to declining production, carried the gross income of farmers down 55 per cent between 1929 and 1932. Prices paid by farmers for goods used in production and family maintenance dropped 30 per cent. If we correct by this index in estimating the change in agricultural purchasing power we have a more exact measure than that given in Table 28. (In that table, in default of suitable specific deflators for the different producing groups, an index of wholesale prices was used throughout.) We find that in 1932, as the net result of changes in farm output,

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prices received and prices paid, the total real income of farmers was 36 per cent less than in 1929. The succeeding

TABLE 29

GROSS INCOME FROM FARM PRODUCTION AND AGGREGATE PURCHASING POWER OF AGRICULTURAL PRODUCERS, 1929-1935

	A. GROSS INCOME (millions of dollars)						
	1929	1930	1931	1932	1933	1934	1935
Gross income arising from productive operations							
Crops	5,434	3,818	2,746	2,295	3,032	2,977	3,425
Animal products	6,507	5,636	4,222	3,042	3,096	3,704	4,585
Total	11,941	9,454	6,968	5,337	6,128	6,681	8,010
Rental and benefit payments					278	595	498
Total gross income	11,941	9,454	6,968	5,337	6,406	7,276	8,508

B. INDEX NUMBERS OF GROSS INCOME AND PURCHASING POWER

(Purchasing power is measured with reference to prices paid by farmers)

	1929	1930	1931	1932	1933	1934	1935	1932	1933	1934	1935
Gross income from productive operations	100	79	58	45	51	56	67	100	115	125	150
Total gross income ¹	100	79	58	45	54	61	71	100	120	136	159
Prices paid by farmers	100	95	81	70	71	80	82	100	102	114	117
Aggregate purchasing power derived from productive operations	100	83	72	64	72	70	82	100	113	110	128
Total purchasing power ¹	100	83	72	64	76	76	87	100	118	119	136

SOURCE: *Crops and Markets*, July 1935, p. 271; *Agricultural Situation*, February 1936, p. 4; "Agricultural Income from Production in 1935", mimeographed release of Bureau of Agricultural Economics, December 19, 1935; and "Income from Farm Production in the United States in 1935", also a mimeographed release dated September 1936. The data relate to crop years for crops, calendar years for animal products.

¹ Includes receipts from rental and benefit payments.

year brought advances of 15 per cent in gross income, 13 per cent in aggregate purchasing power. If we take account of rental and benefit payments by the Federal government, these figures are raised to 20 and 18 per cent, respectively. Total agricultural purchasing power in 1933 remained, however, 24 per cent below the 1929 aggregate even when rental and benefit payments to farmers are included in their gross income.⁹

By 1935 further substantial gains had been scored in the money incomes of farmers. Gross income from productive operations was 50 per cent above the 1932 level, in spite of a drop of 8 per cent in the net volume of agricultural production. Adding to this the income from rental and benefit payments we have a gain from 1932 to 1935 of 59 per cent in the total gross income of farmers. However, the prices of commodities bought for use in production and family maintenance were also feeling the push of advancing values. A gain of 17 per cent in this average partly offset the increase of income. The purchasing power of total gross income, including rental and benefit payments and receipts from livestock sales to the government, increased about 36 per cent between 1932 and 1935. In 1935 the index of aggregate farm purchasing power stood 13 per cent below the 1929 level; this represents a substantial loss of real income but the position was distinctly better than in 1932.¹⁰

⁹ Total production of all types of goods in the United States, in 1933, was approximately 33 per cent less than in 1929. This includes, of course, the output of the heavily depressed capital goods industries. The output in 1933 of manufactured goods intended for human consumption was 23 per cent less than in 1929. (Cf. Table 60, Ch. VIII.)

¹⁰ The index of aggregate farm purchasing power, in physical terms, may be compared with measurements of the total physical output of goods in the United States. For all types of goods production in 1935 was some 22 per cent less than in 1929. If we take account only of manufactured goods intended for human consumption, the index for 1935 was approximately 9 per cent less than in 1929. (Cf. Table 60, Ch. VIII.)

The purchasing power of gross farm income, it is clear, has been much more stable than the per unit selling prices of farm products. Between 1929 and 1932 selling prices fell some 54 per cent, on the average. Buying prices were falling at the same time, however, and production was being maintained, with the result that the net loss of aggregate purchasing power amounted to no more than 36 per cent. This was severe, of course, but much less severe than the price figures alone would indicate. There is danger of misreading the record of economic changes, and drawing erroneous conclusions concerning the effects of recession, if attention be confined to price disparities alone. Relative movements in the status of different economic groups are properly measured with reference to income rather than price changes. Because of the nature of intergroup trade, and the tendency for the relations of aggregate values to remain constant, the fluctuations in gross income, for different groups, usually correspond much more closely than do price changes. Relatively high production tends to accompany relatively low prices, after a recession, while low production volume is usually found where high prices have been maintained.¹¹ This was notably true of the gross income of farmers and of manufacturing industries, from 1929 to 1932.

This does not mean that we may think of the welfare of

¹¹ Whether prices or production will be more flexible, when market conditions force a change in aggregate value of output, depends upon the relative elasticities of demand and upon the degree of control exercised over price and production by members of the producing groups in question. In agriculture, where demand has been relatively inelastic, where there has been no effective control over supply on the part of producers as a group, and where prices have in the past been free of restraints and controls, adaptation to a changed aggregate value has been effected, usually, through sharp price fluctuations. In basic manufacturing industries, where price rigidities are more important and where production may in general be effectively controlled, production changes have played a more important part in the alterations of aggregate values necessary to maintain intergroup trade.

consuming groups in terms of gross income alone. Equal changes in gross income resulting from unequal price and production changes may represent quite different movements of net income. For when gross income is sustained through the maintenance of a high volume of output, as was true of agricultural income from 1929 to 1932, correspondingly high production expenses may squeeze net income to a very low figure indeed. Fixed charges in the form of taxes, interest, etc., take a far greater proportionate part of the reduced gross income of farmers in depression than of the larger gross income of prosperity. The income available for personal expenditure is correspondingly reduced. Thus from 1929 to 1932 the gross income of farmers was declining some 55 per cent and the cash available to farmers after payment of production expenses was cut about 70 per cent. On recovery, of course, the situation is reversed: net income rises more sharply than gross income.

Table 30 indicates the nature of the changes occurring during recovery in various expenditures from the cash in-

TABLE 30

AGGREGATE BUSINESS CASH ACCOUNT OF THE FARMERS OF
THE UNITED STATES, 1929-1935

ESTIMATED ELEMENTS

	<i>Percentages of 1929 figure</i>					<i>Percentages of cash income</i>				
	1929	1932	1933	1934	1935	1929	1932	1933	1934	1935
Cash income	100	42	52	60	69	100.0	100.0	100.0	100.0	100.0
Current expenditures										
Cash wages to hired labor	100	40	37	40	42	9.2	8.7	6.5	6.0	5.6
Feed, seed and fertilizer	100	44	46	49	52	11.8	12.3	10.5	9.6	8.8
Containers, spray material and twine	100	73	70	68	74	1.3	2.3	1.8	1.5	1.4
Cost of operating tractors, autos and trucks	100	77	77	84	93	4.5	8.3	6.7	6.4	6.1

TABLE 30 (cont.)

AGGREGATE BUSINESS CASH ACCOUNT OF THE FARMERS OF
THE UNITED STATES, 1929-1935

ESTIMATED ELEMENTS

	Percentages of 1929 figure					Percentages of cash income				
	1929	1932	1933	1934	1935	1929	1932	1933	1934	1935
Other current expenditures (fire insurance, ginning, harness, irrigation, etc.)	100	73	75	74	74	2.5	4.3	3.6	3.1	2.7
Interest payable	100	87	81	67	61	6.5	13.6	10.2	7.3	5.7
Taxes payable	100	79	68	64	64	5.8	10.9	7.6	6.2	5.4
Total	100	61	59	58	59	41.6	60.4	46.9	40.1	35.7
Capital expenditures										
Machinery, tractors and repairs	100	21	25	37	66	4.9	2.4	2.4	3.1	4.7
Autos and trucks	100	20	28	46	64	3.9	1.8	2.1	3.0	3.5
Farm buildings and repairs on farm buildings	100	27	38	43	61	2.7	1.7	1.9	1.9	2.4
Total	100	22	29	42	64	11.5	5.9	6.4	8.0	10.6
Total production expenses	100	52	52	54	60	53.1	66.3	53.3	48.1	46.3
Cash available after production expenses (net cash income)	100	30	52	66	79	46.9	33.7	46.7	51.9	53.7
Prices paid by farmers for living	100	68	69	77	78					
Net cash income deflated by prices paid by farmers for living	100	44	75	86	101					

SOURCE: *Crops and Markets*, July 1935, pp. 271-72, and "Income from Farm Production in the United States in 1935" (mimeographed), September 1936

come of farmers. The net cash income of farmers increased 73 per cent from 1932 to 1933, 120 per cent from 1932 to 1934, and 163 per cent from 1932 to 1935. These gains exceed materially, of course, corresponding increases of 20, 36 and 59 per cent in gross income. (Rental and benefit pay-

ments are included in net cash income, as well as in gross income.) The advances of these three years left net cash income in 1935 approximately 21 per cent below the level of 1929. When account is taken of reductions in the prices paid by farmers for living the estimates indicate that the actual 1935 purchasing power of their net cash income was equal to that of 1929. With reference to the buying power of net cash income it appears that by 1935 the difficulties brought to agricultural producers by the depression had been corrected. Of course, expenditures on capital equipment in 1935 were lower than in 1929; a somewhat larger percentage of cash income was being used for family maintenance. But when full account is taken of this, the figures indicate a 1935 position only slightly below that of 1929. (See Chapter VIII, note 3, for figures of real farm income, after provision for depreciation.)

These income returns may be made more specific by considering the actual operating results secured by sample groups of farmers between 1922 and 1934, as these have been compiled by the Bureau of Agricultural Economics (Table 31). A striking picture of the effect of recession on the cash returns of individual farmers is presented here. After a slow improvement from 1922 to 1929, which reduced the percentage of farmers operating at a net loss from 14 to 8, and increased the percentage making net incomes of \$1,000 or more from 35 to 45, three years of recession changed the picture completely. The percentage suffering net losses rose to approximately 43, while the percentage earning \$1,000 or more declined to less than 5. The chief effects of the first two years of recovery appear in the figures relating to the deficit group. This was reduced from 42.7 per cent of the total to 18.4 per cent—a very considerable accomplishment. The average net result per farm in 1934 (\$624) was still less than

TABLE 31
AVERAGE NET INCOMES OF SAMPLE GROUPS OF FARMERS,
1922-1934¹

A. ABSOLUTE NUMBERS								
	1922	1925	1929	1930	1931	1932	1933	1934
Number of reports	6,094	15,330	11,805	6,228	7,437	6,383	6,855	7,626
Net result per farm	\$917	\$1,297	\$1,298	\$538	\$154	\$66	\$516	\$624
B. PERCENTAGE DISTRIBUTION BY INCOME CLASSES								
Proportion of farmers obtaining:								
\$1,000 or more	34.7	45.5	44.7	23.3	9.2	4.4	15.8	21.6
0 to \$999	50.8	44.1	47.4	47.2	54.6	52.9	67.1	60.0
Net loss	14.5	10.4	7.9	29.5	36.2	42.7	17.1	18.4

¹ Adapted from more detailed tables appearing in *Agricultural Yearbook*, 1932, p. 895; and *Crops and Markets*, July 1935, p. 303. Net results represent cash receipts, less cash outlay, plus increase in inventory of personal property. Taxes are deducted, but interest is not.

Cash income alone is included in this table. No account is taken of the cash value of farm products consumed on the farm.

half of the pre-recession return, but was many times higher than in 1932. In purchasing power, of course, this was much closer to the 1929 level than the dollar figures indicate.

These data, like those previously given for farmers in the aggregate, relate to cash receipts. In defining the true position of farmers account should be taken of that substantial portion of their real income which consists of farm products consumed on the farm. The physical contribution of the farm is relatively constant from year to year, though its cash value fluctuates with changing prices. This value was estimated by the Bureau of Agricultural Economics at slightly below one billion dollars in 1933, slightly higher in 1934. If we add this item to the purchasing power of the aggregate cash available to farmers after meeting production expenses (see Table 59), we may estimate a reduction of some 43 per cent in the real income of farmers between 1929 and

1932, of 11 per cent between 1929 and 1934.¹² On this basis the farm situation at the end of 1934 was brighter, relatively, than the situation of income recipients in general. The purchasing power of the total national income in 1934 was, roughly, 20 per cent below the 1929 level. By 1935 the real income of farmers appears to have been restored to the 1929 level.

FARM PRICES, FARMERS' INCOMES, AND THE BURDEN OF FARMERS' DEBTS

In 1929 farm mortgage debts plus other farm debts (short- and long-term) amounted to approximately 12,000 million dollars. This constituted some 10 per cent of the total private debt of the country, and about 8 per cent of all debts (including governmental debts).¹³ Interest payments on farmers' debts in 1929 came to approximately 700 million dollars, about 6.5 per cent of the total cash income of farmers. In magnitude these figures were probably not excessive, relatively to total non-farm debts and to the position of the farmer in the national economy.¹⁴ Farm mortgage debt, the most important element of total farm debt, amounted to about 9,250 million dollars in 1929, with interest payments of about 550 million dollars.

An extensive discussion of the farm debt problem is not in order here. We are interested in it only in relation to the changing level of agricultural prices. The importance of this

¹² These figures differ, of course, from those given at earlier points for the purchasing power of gross farm income.

¹³ Based upon estimates of the National Industrial Conference Board; *Conference Board Bulletin*, February 20, 1933, "Debt and Its Burden."

¹⁴ The total value of agricultural production in 1929 (gross income of farmers) was about 17 per cent of the total value of all finished goods; the receipts of farmers, less cash outlay on production, constituted about 9 per cent of the total retail value of consumers' goods.

relationship is suggested by the long term of the average farm mortgage—25 to 35 years, or more.¹⁵ Such a fixed long-term debt charge may be a major obstacle to readjustment during a period of changing commodity values; for reduction of the total income with falling prices would tend, of course, to raise the percentage of net income required to meet such fixed obligations.

Precisely this happened during the recession of 1929–32. Total interest charges, which amounted to approximately 6.5 per cent of the total cash income of farmers in 1929, constituted 13.6 per cent in 1932. If we lump together taxes and interest charges we have a composite of relatively fixed charges which made up 24.5 per cent of total cash income in 1932, as against 12.3 per cent in 1929. Falling prices and a fixed burden of taxes and interest were two millstones between which net farm income was compressed.

This situation is a phase of one of the major problems faced by an economy such as ours today, in which heavy fixed obligations co-exist with a monetary standard that fluctuates in terms of commodity values. The situation on both sides is highly complex. A price level is an average of many diverse values. Identical price levels at two dates are almost certain to represent quite different combinations of constituent prices. On the other hand, the debt burden existing at a given time is made up of innumerable individual obligations, incurred at various times (and thus at various price levels) and extending for varying future periods. Moreover, the individuals who must meet capital charges and current interest charges on their obligations receive incomes from many sources. A given variation in the price level will affect their debt-paying ability in highly diverse ways.

¹⁵ D. L. Wickens, "Farm-Mortgage Credit"; *Technical Bulletin No. 288*, U. S. Department of Agriculture, February 1932, p. 3.

Because of these complexities, the limitations attaching to the use of all averages are particularly important in dealing with price level changes in relation to debt charges. This applies with special force to the farm debt situation created by the recession of 1929-33. A restoration of the pre-recession price level would not necessarily correct the inequities created by the fall of farm prices and farm income. Only if the precise price and income relations of the pre-recession period were restored would these numerous and diverse inequities be corrected—and such restoration is inconceivable. Again, the restoration of the per unit purchasing power of individual agricultural products to the level of any previous date would not necessarily restore the debt-paying capacity of farmers, for such purchasing power is measured in terms of relations between two sets of current prices. The earlier ratio might be restored with total money incomes far below those of the earlier date. And debt-paying ability depends upon total money incomes.

Advancing farm incomes and considerable reductions in the aggregate amount of interest charges payable by farmers had greatly eased the farm debt situation by 1935. The actual reduction in interest payments between 1929 and 1935 amounted to 270 million dollars. The proportion of total cash income devoted to interest payments fell from 13.6 per cent in 1932 to 5.7 per cent in 1935 (the 1929 percentage was 6.5). Interest and taxes together required 11.1 per cent of total cash income in 1935, as against 24.5 per cent in 1932, and 12.3 per cent in 1929. These figures (which are estimates of the U. S. Department of Agriculture) provide further striking evidence of the improvement three years had brought in the position of farmers.

RECENT CHANGES IN THE PRICES OF AGRICULTURAL PRODUCTS,
IN RELATION TO THEIR PRE-WAR PURCHASING POWER

One of the most revolutionary features of the recovery program was the legislative declaration (in the Agricultural Adjustment Act) of a policy to establish and maintain the purchasing power of producers of important agricultural products upon a level equal to the average prevailing from August 1909 to July 1914. (For tobacco the level of purchasing power set as standard was the average of August 1919–July 1929.)¹⁶ Combined with this was a declaration of intention to protect consumers through limiting the percentage of consumers' retail expenditures for agricultural commodities, or products derived therefrom, to the percentage that was returned to the farmer in the pre-War period, August 1909–July 1914. The 'purchasing power' referred to in the Act was the average per unit purchasing power of farm products, measured with reference to the prices paid by farmers for commodities used in production and family maintenance.

Here was an unprecedented move, an attempt to 'establish and maintain', within a price system the chief elements of which are uncontrolled, a constant set of relations between the prices of two major classes of commodities—those pro-

¹⁶ The Soil Conservation Act, which was enacted on March 1, 1936, after the voiding of the Agricultural Adjustment Act by the Supreme Court, sets up an income standard of parity, rather than a parity based on price relations. This objective, which supplements the general purpose of soil conservation, is the re-establishment of the ratio between the purchasing power of the net income per person on farms and that of the income per person not on farms that prevailed during the five-year period, August 1909–July 1914. This ratio is to be re-established at as rapid a rate as the Secretary of Agriculture considers practicable and in the general public interest. In interpreting the Act, Secretary Wallace has stated that production control of individual farm commodities is not possible under the new plan, and that therefore it may not be feasible to obtain exact parity of prices on a pre-War basis.

duced by farmers and those bought by farmers. Two elements of a highly variable complex were to be placed in definite relationship, and held there.

It is not the purpose here to appraise this procedure, though certain problems and difficulties involved may be briefly indicated. The selection of a base period, with reference to which the standard is defined, was necessarily arbitrary. The period selected was relatively favorable to agricultural producers, since it came at the end of a long period—more than a century, indeed, if irregular fluctuations be ignored—of advance in the relative per unit value of farm products. This gain was due to the pushing out of the margin of cultivation in agriculture, and to the fact that productivity in non-agricultural industries had increased at a more rapid rate than in agriculture. The events of the post-War period, as we have seen, reversed this pre-War trend. The standard set in the Act was distinctly higher than any that had prevailed since the prosperous period culminating in 1920. The justification advanced was that, in the nature of the case, technological improvement is more rapid in industry than in agriculture and that “the purchasing power of farm products must continue to rise relative to industrial products”.¹⁷ This condition would presumably justify the expectation that, if technical and market forces were left to work themselves out, the per unit purchasing power of agricultural products would increase progressively. That it would justify the legal freezing of the exchange ratio of agricultural and industrial products at a fixed value is not clear. Indeed, the setting of such a fixed ratio under these conditions would appear to deprive agricultural producers of the opportunity for pro-

¹⁷ Cf. *Economic Bases for the Agricultural Adjustment Act*, Mordecai Ezekiel and Louis H. Bean (U. S. Government Printing Office, 1933), pp. 26-8.

gressive improvement of their status that would be promised them by the tendencies cited.

In setting a definite exchange ratio between two classes of goods, no allowance was made, of course, for changes in their costs of production. Here we lack definite and comparable information. It is certain that real production costs have fallen markedly in manufacturing industries over the last two decades (i.e., that productivity has increased),¹⁸ but very substantial reductions have also occurred in the per unit cost of producing important agricultural staples. During the last twenty years productive technique in agriculture, in which improvement lagged far behind manufacturing industries during the first stages of the industrial revolution, began to catch up. The movement has been spotty, and many producers have failed to take advantage of it, a fact which accounts for much of the agricultural distress of the first post-War decade. But the gains in many fields of agricultural production have been striking.¹⁹ Such changes in production costs may not be ignored in seeking to define desirable relations between agricultural and other producers.

Various other considerations bear on the general proposal thus to crystallize a set of exchange relationships, as well as on the choice of a base period. The products of agriculture are not, in general, subject to modifications in quality, as are certain of the important industrial products for which they exchange. This modification may be in the direction of

¹⁸ Cf. *Economic Tendencies*, pp. 192 ff., 289 ff., and *Bulletin 53* of the National Bureau of Economic Research.

¹⁹ Cf. E. G. Nourse, "Agriculture", *Recent Economic Changes*, II, 547-602; O. E. Baker, "Agricultural and Forest Land", *Recent Social Trends*, I, 90-121; O. E. Baker, "Population Trends in Relation to Land Utilization", *Proceedings of the International Conference of Agricultural Economists*, 2nd Conf., 1930 pp. 284-306; L. O. Bercaw, "Labor Requirements of Farm Products", *Agricultural Economics Bibliography No. 26*, 1929, U. S. Department of Agriculture.

poorer quality, but in general industrial products have been marked by improvements. This has been notably true of automobiles and mechanical agricultural equipment. A constant ratio of the prices of agricultural and industrial products, under these conditions, would mean, in fact, a steady advance in the real purchasing power of agricultural products. A restoration of the price relations of 1909-14 would mean the establishment of exchange relations more favorable to agriculture than those then prevailing. More rapid reduction of production costs in industry would, of course, work in the other direction.

Equally important with the points suggested above was the failure of the Act to take account of actual and potential changes in consumer demand. Quite apart from possible substantial changes in demand arising from the substitution of synthetic products for agricultural products (e.g., the use of rayon in place of cotton), a growing share of the consumer's dollar is absorbed, with advancing living standards, by highly fabricated products and luxury goods. A diminishing portion is spent on foods and on the staple articles of clothing that are primarily products of agriculture. This movement may be paralleled, indeed, by a shift in food-consuming habits as light urban occupations increase in importance, relatively to the heavier tasks of direct production, which, in turn, tends to lower the consumption of the primary products of agriculture.

The ignoring of these various tendencies in the setting of a definite ratio of exchange, the restoration and maintenance of which were defined as the objects of administrative policy, would, presumably, have generated economic difficulties had the Act been enforced over a long period. Attention should be called, in addition, to the difficulty of holding constant, among a complex and ever-changing set of variables, one specific relationship. An almost infinite number of forces,

operating from both supply and demand sides, bear upon this relationship. To assume that it may be maintained at one certain value through manipulation of the few factors of agricultural supply that may be subject to control is to hold to a highly simplified and unreal conception of the forces in operation.

A practical obstacle to the attainment of a given economic objective through the maintenance of a constant ratio between the average prices of two groups of commodities arises from the difficulty of measuring price changes accurately. This restriction does not apply to the great standardized staples sold in organized markets, but it does apply with exceptional force to fabricated industrial products, and to commodities sold in retail markets generally. Quality changes constitute one obstacle to accuracy of measurement for these commodities. Wide differences in the quoted prices prevailing at one time in different markets (even in different retail outlets) are another obstacle. Still another arises out of the continual appearance of new commodities and the changing importance of individual articles even in a fixed group of commodities. The danger of setting faulty standards through errors in the methods of measurement adopted is very real, in view of the limitations of the knowledge our existing index numbers provide.

The period during which the Agricultural Adjustment Act was enforced was probably too short to warrant a judgment of the efficacy of measures taken under it to restore the pre-War purchasing power of agricultural products in general. (The Act, indeed, envisaged the gradual, not the immediate, restoration of pre-War parity of specific agricultural products with products purchased.) Nevertheless, the record of changes in the general price series since February 1933 is instructive. These series are plotted in Figure 12, which should be studied with reference to the chronological

TABLE 3 2

PRICES RECEIVED FOR FARM PRODUCTS, PRICES PAID BY FARMERS AND AVERAGE PER UNIT
PURCHASING POWER OF FARM PRODUCTS
MONTHLY CHANGES, FEBRUARY 1933-JUNE 1936

(August 1909-July 1914=100)

	1933		1934		1935		1936	
	Prices received	Ratio	Prices received	Ratio	Prices received	Ratio	Prices received	Ratio
Jan.			77	66	107	85	109	89
Feb.	55	54	83	70	111	87	109	89
Mar.	55	55	84	70	108	85	104	86
Apr.	58	57	82	68	111	87	105	87
May	68	67	82	68	108	85	103	85
June	71	69	86	71	104	82	107	89
July	83	78	87	71	102	81		
Aug.	79	71	96	77	106	85		
Sept.	80	69	103	82	107	87		
Oct.	78	67	102	81	109	89		
Nov.	80	69	101	80	108	89		
Dec.	78	67	101	80	110	90		

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record of events bearing on prices and on agricultural conditions (see p. 282). The record of price and purchasing power changes, on the 1909-14 base, is given in Table 32.

The general price changes during the period of recovery have already been reviewed. We survey them here briefly with reference to the point now at issue. At the depression low in February and March 1933 average prices paid by farmers stood almost exactly at the pre-War level; prices received were 45 per cent below that level. The index of per unit purchasing power was 54, as compared with the parity figure of 100. By May, when the Act was signed, farm prices had advanced some 24 per cent and the index of per unit purchasing power had risen to 67. For the next two months the advance continued, raising the index that measures average per unit purchasing power to 73 in July. More than half the deficiency, measured against the pre-War base, had been made good. The succeeding slump in farm prices, and the accompanying rise in industrial prices as the effects of the earlier advance spread throughout the price system and as the cost-raising influences of other legislation were felt, carried the ratio down to 66, in January 1934. Subsequent fluctuations in the two price series altered this ratio somewhat, but by May 1934 it had advanced only to 68. This was well above the depression low but only slightly higher than the 67 recorded during the month when the Act was signed. The four months following, months of drought and of sharp reduction of crop prospects, raised this index to 82 in September 1934. In June 1936, the last month covered by the record, the index stood at 89.²⁰ The two great spurts we have

²⁰ There exist, of course, wide differences among individual commodity prices in respect of the degree of recovery towards the parity prices defined in the Agricultural Adjustment Act. (Not all these commodities were included under the AAA program; see the following note.) The following tabulation indicates the magnitude of these differences.

(Footnote ²⁰ concluded on p. 275)

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noted, one initiated prior to the passage of the Agricultural Adjustment Act, one synchronizing with the 1934 summer

(Footnote ²⁰ concluded)

PRICES RECEIVED BY FARMERS AS PERCENTAGES OF PARITY
PRICES UNDER THE AGRICULTURAL ADJUSTMENT ACT,

1933-1935

(August 1909-July 1914=100)

	OLD BASIS **						NEW BASIS †	
	Feb. 1933	July 1933	May 1934	Sept. 1934	May 1935	Dec. 1935	May 1935	Dec. 1935
Wheat	36	92	65	83	78	84	76	81
Corn	30	81	63	96	104	68	102	66
Oats	33	92	68	100	98	53	96	51
Barley	29	72	56	100	84	50	82	48
Rye	30	102	60	87	68	45	66	44
Flax	51	104	80	82	72	75	71	73
Cotton	44	80	73	84	76	75	75	73
Cottonseed	40	70	83	114	141	123	138	119
Apples	68	85	98	68	94	65	91	63
Potatoes ‡	53	131	87	72	50	76	50	74
Hay	49	55	62	87	89	50	87	48
Hogs	40	51	36	66	87	99	84	96
Beef cattle	63	71	66	64	103	97	100	94
Veal calves	70	64	59	62	81	95	79	92
Lambs	70	83	98	66	88	114	86	110
Sheep	47	53	65	43	64	76	63	74
Butterfat *			70	75	86	93	84	90
Chickens	82	85	81	88	109	115	106	111
Eggs *	48	72	69	80	107	72	104	70
Wool	49	119	110	88	72	108	70	105
Horses	43	47	45	41	52	54	51	52
Tobacco, Maryland †					95	89	93	86
Tobacco, flue cured ‡						95		92

SOURCE: Department of Agriculture, monthly mimeographed release on "Average Prices Received by Farmers for Farm Products, With Comparisons".

* Adjusted for seasonal variation.

** Parity price based on index of prices paid by farmers for commodities bought.

† Parity price based on index of interest, taxes, and prices paid by farmers.

‡ For tobacco and potatoes, parity prices are based on the period, August 1919-July 1929=100.

of drought, had gone far towards correcting the disparity between average prices of farm products and of goods bought by farmers. A difference of 46 per cent had been reduced to one of 18 per cent in September 1934. Subsequent gains cut this to 10 per cent at the end of 1935, when the act was voided. Conscious crop reduction measures undoubtedly contributed to this advance in farm prices and the corresponding improvement of agricultural purchasing power, but factors independent of the Agricultural Adjustment Act apparently played major roles in the agricultural recovery recorded to the end of 1935.²¹

²¹ It is impossible to isolate the effects of different forces working toward higher agricultural prices during the period of recovery, but some light is thrown on the situation by tracing price changes in three groups of farm products—those originally under the AAA program: corn, wheat, hogs, cotton, tobacco leaf, rice, milk; those brought under this program at later dates: barley, rye, cattle, peanuts, flaxseed, sugar; and products not controlled under the AAA: oats, hay, hops, seeds, beans, apples, lemons, oranges, onions, potatoes, sheep, poultry, wool, hides and skins, eggs. Changes in the wholesale prices of these three groups are summarized below, together with figures relating to non-agricultural raw materials, and manufactured goods.

	PERCENTAGE CHANGES IN WHOLESALE PRICES				
	Com- modities originally under the AAA program	Commodi- ties later brought under the AAA program	Commodi- ties not controlled under the AAA program	Non-agri- cultural raw materials	Manu- factured goods
<i>Feb. 1933–July 1933</i>	+54.4	+31.6	+56.0	+11.7	+11.6
<i>July 1933–Oct. 1933</i>	–6.0	–9.1	–10.7	+8.2	+4.8
<i>Oct. 1933–May 1934</i>	+3.2	+13.9	+6.4	+2.7	+3.0
<i>May 1934–Sept. 1934</i>	+31.1	+11.3	+6.7	+0.2	+2.2
<i>Sept. 1934–May 1935</i>	+5.2	+30.3	+0.6	–2.4	+2.0
<i>May 1935–Dec. 1935</i>	–3.5	–8.1	+2.4	+3.6	+1.4
<i>Dec. 1935–June 1936</i>	–0.5	–10.1	+11.1	–0.2	–3.7

The average gain, during the first period, in the prices of farm products not covered by the AAA program was somewhat greater than the gains scored by the groups of commodities included, at early or late stages, in that program. Since the prices of these excluded commodities would have been affected only indirectly and with a considerable time lag by action under

SUMMARY

The effect of recession and recovery upon the economic status of any group of producers is conditioned by a host of factors, some of transient importance, some firmly rooted and enduring. Productive capacity when the recession begins, stocks of goods, the character of the market (domestic or foreign, composed of final consumers or fabricators), the elasticity of demand—these are some of the obvious conditions affecting the severity of the strains of recession and the ability of any group to meet them. Of particular importance, as circumstances affecting the elasticity of supply, are the degree of coherence among the members of the producing group in question and the degree of control over supply that they exercise. Related to all these factors is the relative freedom of the prices of the products of this group, the degree to which they are free to respond to market forces of demand and supply.

With respect to these conditions there are important differences among primary producers, but the group as a whole possesses certain distinctive attributes. Producing units are more numerous and more widely scattered than are members of other major producing groups, and among them is less of the coherence that makes possible common economic action in the face of an emergency. One result of this (and of other conditions as well) is that producers of raw materials exercise a relatively low degree of control over supply. Supply is

the Agricultural Adjustment Act, it is fair to conclude that forces other than those connected with the Act played important parts in the agricultural price rise of the spring and early summer of 1933. Monetary conditions and changes in the general economic outlook were strong contributory factors. During the fourth period, which covers the drought of the summer of 1934, the prices of commodities included under the original Act gained most. Shortage resulting from the drought, superimposed upon shortage due to crop reduction, constituted a lever pushing prices upward.

relatively inelastic, in the face of changing market conditions. Again, a very large proportion of raw materials is purchased by producers, and only a relatively small proportion is ready for sale to final consumers. The demands of such producers, particularly those engaged in the fabrication of capital goods and of durable consumption goods, are notoriously irregular. Fluctuations in final demand are reflected in accentuated form in the purchases of materials by intermediate fabricators. In the markets for raw materials in general, then, we find rather extreme movements of demand (shifts in the positions of demand curves, as well as shifts along demand curves) and relatively inelastic supply, with keen competition among producers unable or unwilling to act in concert or to reduce their individual production in the face of falling demand.

Price movements reflect these conditions. Changes in demand, with relatively inflexible supply, lead to wide variations in the prices of raw materials over time. Such fluctuations are the more notable because of the relative stability of many other elements of the price system. Price control through public agencies, price agreements among producers, price maintenance through trade marking and branding, price stabilization through combination and monopoly have been characteristic of modern political and industrial development. Over wide areas of the economic system price rigidities have prevailed and price freedom has been curtailed.²² It is true that markets for raw materials have not remained entirely free. The period just preceding the recession was marked by numerous valorization efforts, through which the prices of materials were pegged at stated levels. But difficulties of many sorts, some antedating the world recession, terminated these efforts. In the main, price freedom

²² Cf. *Economic Tendencies in the United States*, pp. 323-32.

has persisted in the markets for raw materials to a greater degree than in any other part of the price system. This fact is directly pertinent to the story of recession and recovery in the prices of primary products.

All these statements relate to average conditions among a rather heterogeneous group of primary producers. There is some logical justification for treating this group as a unit, in contrasting its fortunes with those of groups engaged in manufacturing operations, or in other economic activities. Yet there are marked differences among different classes of primary producers. It is not true of lumbering and mining interests that only a low degree of control is exercised over current supply. It is not true that all raw mineral products are marked by a high degree of price freedom. Indeed, operating conditions vary considerably for different classes of farmers and in different sections of the country. The conditions noted, then, are of the nature of statistical averages, to which there are notable exceptions. Attention has been drawn to the nature and magnitude of these exceptions in various sections, in which figures for different classes of primary producers have been given.

Because farmers stand in a distinctive position among primary producers, and because price and production changes among farm products were of dominant importance in the raw material situation during recession and recovery, the fortunes of farmers have been discussed as a group apart, as well as in combination with other primary producers. Lack of coherence among producers and inability to secure common action in controlling production or regulating prices are pronounced among farmers. Also, many non-business considerations persist in the conduct of farming operations. Finally, the relative inelasticity of domestic demand²³ and

²³ The degree of inelasticity of demand for seven important farm products

the traditional dependence upon foreign markets for the disposal of important quantities of domestic production have been notable features of the agricultural situation.

Industries producing agricultural raw materials have placed their impress upon the record of recession among primary producers, as it has been reviewed in this and preceding chapters. Production maintained close to the prosperity level, sharply falling prices, substantially lowered purchasing power and a definite loss of relative position, in respect of trading relations with other producing groups, characterized the condition of agricultural producers from the middle of 1929 to the early months of 1933. Weakness attendant upon the more 'normal' features of the recession was accentuated by high world productive capacity (stimulated by special War-time and post-War conditions) by accumulated stocks of important materials, by the weak international financial position of some raw material producing countries, and by the failure of valorization schemes through which the prices of some primary products had been pegged

is indicated by the following coefficients, derived by Henry Schultz ("The Shifting Demand for Selected Agricultural Commodities, 1875-1929," *Journal of Farm Economics*, April 1932). The list does not include certain farm

Wheat	— (0.27±0.12)	1922-29		
Corn	— (0.49±0.16)	1915-29,	excl.	1917-21
Hay	— (0.52±0.16)	1915-29,	"	" "
Sugar	— (0.31±0.08)	1915-29,	"	" "
Potatoes	— (0.31±0.03)	1915-29,	"	" "
Oats	— (0.57±0.42)	1915-29,	"	" "
Barley	— (0.39±0.24)	1915-29,	"	" "

products the demand for which may be elastic, such as fruits, vegetables and some cuts of meat. But it is clear that for farm products as a whole elasticity of demand is less than unity.

The unfavorable effects on the farmer of inelasticity of demand, at retail, are accentuated by the relatively rigid distributive and fabricative elements that stand between the sale by the farmer and the purchase by the final consumer. Farm prices are rendered weaker under conditions of business depression by the intervention of these rigid elements.

during the pre-recession prosperity. Sharply declining exports of agricultural products, resulting from reduced purchasing power of foreign buyers, stoppage of our foreign lending, and definite efforts on the part of many countries to achieve more nearly self-sufficient national economies, combined with reduced domestic consumption to create extremely burdensome surpluses of agricultural products and to depress agricultural prices to abnormally low levels.

At the low point of the depression the various groups of primary producers, in combination, were turning out goods in volume some 12 per cent below that of 1929. The average purchasing power of a unit of raw materials had been reduced some 20 per cent. (The corresponding gain among manufactured goods exceeded 10 per cent.) Finally, we have noted a loss of aggregate purchasing power on the part of primary producers—that is, of real income, in physical terms—of from 30 to 35 per cent. In all these respects there were pronounced differences among producers of raw agricultural products, raw mineral products and raw forest products. Farmers maintained output and suffered most severely in per unit purchasing power; producers of raw forest products cut output most severely (62 per cent) and maintained per unit purchasing power substantially unchanged; mineral producers reduced output materially (about 40 per cent), and gained about 15 per cent in the average per unit worth of their products. In aggregate purchasing power farmers and mineral producers lost from 30 to 40 per cent, while producers of raw forest products lost more than 60 per cent.

When the forces of recovery were loosed on this situation their first effects were felt on the price side. Indeed, if we take account of the entire field of primary production we find an actual loss in volume of production over the years of recovery from 1932 to 1935. Rising prices were the factor that enhanced the aggregate purchasing power of primary

producers. In tracing and appraising this recovery on the price side, to the end of 1935, it is convenient to distinguish five periods, during each of which fairly distinct forces were at work.

- a. Five months, February 1933–July 1933
 - Prohibition of gold payments and embargo on export of gold and silver, March 6.
 - Emergency banking bill passed, March 9.
 - Signing of Agricultural Adjustment Act, with provision for processing tax on farm products and credit expansion rider, May 12.
 - Rejection of monetary stabilization program of London Conference, July 3.
- b. Ten months, July 1933–May 1934
 - Drafting and enforcement of codes, under the National Industrial Recovery Act (signed June 16).
 - Establishment of government market for gold; progressive advance in price of gold begins, October 25.
 - Approval of silver-buying program, December 21.
 - Reduction and stabilization of gold content of dollar, January 31.
- c. Four months, May 1934–September 1934
 - Drought in the farm belt.
- d. Eight months, September 1934–May 1935
 - Continued operation of industry under the codes of fair competition, ended by Supreme Court decision of May 27, 1935.
- e. Seven months, May 1935–December 1935
 - Continued operation of agriculture under AAA, ended by Supreme Court decision of January 6, 1936.

Of course, the items listed under each caption do not by any means exhaust the forces in operation over the period in question, but they suggest the major factors. Substantial gains were recorded in the fortunes of primary producers in the first and third periods. The first phase covers the initial

spurt that followed the checking of the banking crisis and the departure from the gold standard. Action on the monetary front seemed to be the energizing influence during this stage. The second period was dominated by the initiation and enforcement of the industrial codes. Costs and prices advanced in manufacturing industries, and the striking gains scored by primary products in the first rush of recovery were reduced. It is true that action on the monetary front continued during this second stage. A government market for gold was established, the price of gold was progressively raised, and action affecting silver was begun. But the price level showed only a slight change, and the incidence of price-raising forces was definitely shifted from the depressed raw materials of industry to fabricated products.

In the third phase the drought was the dominant factor. Potential supplies of crops and of animals were sharply reduced. Previous actions under the Agricultural Adjustment Act had, of course, contributed to such reduction, but in magnitude these were dwarfed by the drought. A new fillip was given to agricultural prices, and a chain of events was started that affected the prices of animal products long after the drought itself had become history.

There was no clearly dominant force during the fourth phase, which extends to the end of the operations of the NRA. Raw animal products experienced a price rise, as the effects of shortages were felt. Raw materials as a class improved their position relatively to manufactured goods, but the gain was slight. Neither on the industrial nor the monetary front was any action taken that materially affected either the level of prices or the relations among major commodity groups. In the final period, from May 1935 to the end of the year (in fact, to the end of operations under the AAA, which was declared void on January 6, 1936), minor losses were suffered by primary products. In December 1935 the prices

of raw and manufactured goods stood substantially in the relations that had prevailed after the drought of 1934. If the story be carried through the first months of 1936 no further changes in these relations are to be observed.

Any brief summary of the conditions existing during the recovery of 1933-36 does some violence to the facts. Many forces were acting upon the economic system. Recognizing that we are, in some degree, oversimplifying a complex situation, we have selected for emphasis certain main forces operating during the several periods distinguished. Monetary factors and related psychological elements contributed to the first great rise, while actual and impending scarcity of farm products promoted the advance in the third period, the summer of 1934. Over the entire phase of recovery, supporting the prices of raw materials and supplementing the specific factors making for higher prices, the influence of improved consumer demand was felt, as it worked backward from the final markets for finished products. The net result of all these changes was to elevate raw material producers well above their depression lows, with respect to both the per unit worth of their products and their total income. In aggregate purchasing power these producers stood in the early summer of 1936 fairly close to other major producing groups, but still below the pre-recession level of well-being. This aggregate return was secured through a physical output relatively higher than that of manufacturing industries, a real per unit value relatively lower than that of manufactured goods.