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INTELLIGENCE MEMORANDUM

QUARTERLY ESTIMATE OF THE PRODUCTION OF AIRCRAFT  
IN THE SINO-SOVIET BLOC  
OCTOBER-DECEMBER 1956

CIA/RR IM-446

21 January 1957

WARNING

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FOREWORD

This memorandum is the seventh in a series to be issued on a quarterly basis summarizing production of aircraft in the Sino-Soviet Bloc. The estimates presented are issued to satisfy the requests of consumers for the most recent estimates of production of aircraft in the Bloc and are intended to supersede those contained in previous ORR publications. Changes in the present estimates from past estimates are the results of (1) a re-evaluation of the amount of floorspace utilized by individual workers, (2) revisions of specific airframe weights, and (3) more recent intelligence information. No interagency coordination has been attempted, and no dissemination of this memorandum outside of CIA is planned.

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Table 9

Estimated Production of Aircraft in the European Satellites and in Communist China, by Weight a/  
1954 Through 1956

Country	Type of Aircraft	Thousand Pounds of Airframe Weight							
		1954	1955	1956	1st Quarter of 1956	2d Quarter of 1956	3d Quarter of 1956	4th Quarter of 1956	Total
Czechoslovakia	Jet fighter	2,300	1,400	1,500	200	200	530	530	530
	Ground attack	1,700	500	0	0	0	0	0	0
	Jet trainer	550	1,900	1,700	650	650	180	180	180
	Piston trainer	450	960	960	240	240	240	240	240
	Transport	0	28	240	36	47	66	86	86
	Other	0	5	41	0	9	16	16	16
<b>Total</b>		<b>5,100</b>	<b>4,800</b>	<b>4,400</b>	<b>1,100</b>	<b>1,100</b>	<b>1,000</b>	<b>1,100</b>	<b>1,100</b>
Poland	Jet fighter	860	1,800	1,900	470	470	470	470	470
	Piston trainer	61	0	0	0	0	0	0	0
	Light helicopter	0	0	29	0	6	6	17	17
<b>Total</b>		<b>920</b>	<b>1,800</b>	<b>1,900</b>	<b>470</b>	<b>470</b>	<b>470</b>	<b>480</b>	<b>480</b>
Rumania	Piston trainer	22	22	24	6	6	6	6	6
	Piston trainer	17	17	18	6	6	6	6	6
	Transport	0	0	95	0	19	38	38	38
	Piston trainer	0	23	260	52	62	71	75	75
<b>Grand total</b>		<b>6,000</b>	<b>6,700</b>	<b>6,600</b>	<b>1,600</b>	<b>1,700</b>	<b>1,600</b>	<b>1,700</b>	<b>1,700</b>

a. These figures include production of spare parts and are rounded to two significant digits.

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Table 8

Estimated Production of Aircraft in the European Satellites and in Communist China, by Number a/  
1954 Through 1956

Country	Type of Aircraft	Units				
		1954	1955	1956	1956	
		1st Quarter of 1956	2d Quarter of 1956	3d Quarter of 1956	4th Quarter of 1956	
Czechoslovakia	Jet fighter	390	240	250	33	90
	Ground attack	210	60	0	0	0
	Jet trainer	90	310	270	105	30
	Piston trainer	190	360	360	90	90
	Transport	0	18	72	19	21
	Other	0	4	31	7	12
Total		880	1,000	980	260	240
Poland	Jet fighter	150	310	320	79	79
	Piston trainer	60	0	0	0	0
	Light helicopter	0	0	10	2	6
Total		210	310	330	81	85
Rumania	Piston trainer	24	24	24	6	6
Hungary	Piston trainer	24	24	18	6	6
East Germany	Transport	0	0	5	1	2
Communist China	Piston trainer	0	23	260	61	74
Grand total		1,140	1,380	1,600	410	410

a. Figures are rounded to two significant digits.

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Table 7

US Military Aircraft Acceptances, by Weight a/  
1954 Through 1956

Type of Aircraft	Thousand Pounds of Airframe Weight					
	1954	1955	1st Quarter of 1956	2d Quarter of 1956	3d Quarter of 1956	4th Quarter of 1956 b/
Bomber				1,355	2,702	3,145
Heavy	3,304	3,853	678	5,863	6,374	4,412
Medium	37,296	26,377	5,901	296	510	657
Light	1,834	2,724	547			
Ground attack	7,793	6,034	4,736	1,189	1,125	1,053
Fighter	35,390	43,161	30,635	7,145	7,259	9,163
Transport	30,614	20,697	13,103	4,549	2,883	2,060
Trainer	9,633	7,453	3,241	740	745	692
Other c/	4,831	4,397	1,160	1,441	1,143	1,483
Total	130,695	114,696	21,398	22,578	22,741	22,665

a. The source of these figures is the Office of the Assistant Secretary of Defense (Supply and Logistics), Statistics Branch, US Military Aircraft Acceptances, 1953-56, Number and Airframe Weight, December 1956. CONFIDENTIAL.

b. Includes preliminary data for December 1956.

c. Helicopters, flying boats, amphibians, and lighter-than-air.

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Table 6

US Military Aircraft Acceptances, by Number a/  
1954 Through 1956

Type of Aircraft	Units					
	1954	1955	1st Quarter of 1956	2d Quarter of 1956	3d Quarter of 1956	4th Quarter of 1956 b/
Bomber						
Heavy	28	34	6	12	24	28
Medium	767	530	128	132	142	103
Light	106	155	29	16	27	35
Ground attack	860	631	135	107	112	113
Fighter	3,518	4,017	600	607	642	813
Transport	634	536	99	121	80	62
Trainer	1,602	1,439	286	206	188	161
Other c/	1,235	701	218	233	260	382
Total	<u>8,750</u>	<u>8,043</u>	<u>1,501</u>	<u>1,434</u>	<u>1,475</u>	<u>1,697</u>

a. The source of these figures is the Office of the Assistant Secretary of Defense (Supply and Logistics), Statistics Branch, US Military Aircraft Acceptances, 1953-56, Number and Air-frame Weight, December 1956. CONFIDENTIAL.

b. Includes preliminary data for December 1956.

c. Helicopters, flying boats, amphibians, and lighter-than-air.

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Table 5

Estimated Production of Aircraft in the USSR, by Weight a/  
1954 Through 1956

Type of Aircraft	Thousand Pounds of Airframe Weight							
	1954	1955	1956	1st Quarter of 1956	2d Quarter of 1956	3d Quarter of 1956	4th Quarter of 1956	
Jet bomber								
Heavy	220	2,800	2,300	450	450	670	780	
Medium	8,300	17,000	25,000	5,900	6,200	6,500	6,800	
Light	23,000	18,000	12,000	3,300	3,200	3,200	2,500	
Turboprop bomber								
Heavy	0	540	6,100	990	1,400	1,700	2,000	
Jet fighter	27,000	25,000	28,000	5,900	6,600	7,600	8,000	
Transport								
Jet	0	310	1,900	370	370	560	560	
Piston	9,400	3,400	8,500	1,600	2,000	2,300	2,500	
Trainer								
Jet	8,100	8,000	3,200	890	740	780	800	
Piston	920	990	990	250	250	250	250	
Other b/	6,300	4,200	4,700	1,100	1,200	1,200	1,200	
Total	84,000	81,000	23,000	21,000	22,000	25,000	26,000	

a. These figures include production of spare parts and are rounded to two significant digits.  
b. Helicopters, gliders, and seaplanes.

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Table 4

Estimated Production of Aircraft in the USSR, by Number a/  
1954 Through 1956

Type of Aircraft	Units					
	1954	1955	1st Quarter of 1956	2d Quarter of 1956	3d Quarter of 1956	4th Quarter of 1956
<b>Jet bomber</b>						
Heavy	2	25	4	4	6	7
Medium	160	340	120	120	130	130
Light	1,300	980	180	170	170	140
<b>Turboprop bomber</b>						
Heavy	0	6	11	16	19	22
Jet fighter	3,800	3,200	640	700	790	820
Transport						
Jet	0	5	6	6	9	9
Piston	1,700	760	230	260	280	290
<b>Trainer</b>						
Jet	1,100	920	140	120	120	120
Piston	830	830	210	210	210	210
Other b/	640	380	100	110	110	110
<b>Total</b>	<b>2,400</b>	<b>7,500</b>	<b>1,600</b>	<b>1,700</b>	<b>1,800</b>	<b>1,900</b>

a. Figures are rounded to two significant digits.

b. Helicopters, gliders, and seaplanes.

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Table 3

Estimated Cumulative Production of Selected Aircraft in the USSR a/  
Through 1956

		Units
<u>Model</u>	<u>Type of Aircraft</u>	<u>Production to 1 January 1957</u>
Badger	Jet medium bomber	840
Beagle	Jet light bomber	6,500
Bear	Turboprop heavy bomber	74
Bison	Jet heavy bomber	48
Camel	Jet transport	35
Farmer	Jet fighter	1,400
Flashlight	Jet all-weather interceptor	1,100
Fresco	Jet fighter	9,800
Horse	Helicopter	47
Hound	Helicopter	500
New fighter	Jet fighter	150

a. Figures are rounded to two significant digits.

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Table 2

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Weight a/  
1954 Through 1956

Type of Aircraft	Thousand Pounds of Airframe Weight							
	1954	1955	1956	1st Quarter of 1956	2d Quarter of 1956	3d Quarter of 1956	4th Quarter of 1956	Total
<b>Jet bomber</b>								
Heavy	220	2,800	2,300	450	450	670	780	
Medium	8,300	17,000	25,000	5,900	6,200	6,500	6,800	
Light	23,000	18,000	12,000	3,300	3,200	3,200	2,500	
<b>Turboprop bomber</b>								
Heavy	0	540	6,100	990	1,400	1,700	2,000	
Jet fighter	30,000	29,000	31,000	6,500	7,300	8,600	9,000	
Ground attack	1,700	500	0	0	0	0	0	
Transport	0	310	1,900	370	370	560	560	
Jet Piston	9,400	3,400	8,900	1,600	2,100	2,400	2,800	
<b>Trainer</b>								
Jet	8,600	10,000	4,900	1,500	1,400	970	990	
Piston	1,500	2,000	2,400	660	560	570	570	
Other b/	6,300	4,200	4,800	1,100	1,200	1,200	1,300	
<b>Total</b>	<b>90,000</b>	<b>88,000</b>	<b>100,000</b>	<b>22,000</b>	<b>24,000</b>	<b>26,000</b>	<b>27,000</b>	

a. These figures include production of spare parts and are rounded to two significant digits.

b. Helicopters, gliders, seaplanes, and utility aircraft.

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Table 1

Estimated Production of Aircraft in the Sino-Soviet Bloc, by Number a/  
1954 Through 1956

Type of Aircraft	Units					
	1954	1955	1st Quarter of 1956	2d Quarter of 1956	3d Quarter of 1956	4th Quarter of 1956
Jet bomber						
Heavy	2	25	4	4	6	7
Medium	160	340	120	120	130	130
Light	1,300	980	180	170	170	140
Turboprop bomber						
Heavy	0	6	11	16	19	22
Jet fighter	4,300	3,800	760	810	960	980
Ground attack	210	60	0	0	0	0
Transport						
Jet	0	5	6	6	9	9
Piston	1,700	780	250	280	300	320
Trainer						
Jet	1,200	1,200	240	220	150	150
Piston	1,100	1,300	360	370	380	380
Other b/	640	390	100	120	130	130
Total	<u>11,000</u>	<u>8,800</u>	<u>2,000</u>	<u>2,100</u>	<u>2,200</u>	<u>2,300</u>

a. Figures are rounded to two significant digits.

b. Helicopters, gliders, seaplanes, and utility aircraft.

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at Plant No. 18 in Kuybyshev. On the basis of this program of modification, estimates of production at Plant No. 18 of the Bear, a heavy turboprop bomber, have been lowered. Since the publication of the last memorandum in this series, it has become apparent that a newly configured Bison aircraft was put into production near the end of the third quarter of 1956 at Plant No. 23 in Moscow. The latest model, which represents the seventh configurational modification of this aircraft, has an elongated nose, and the horizontal stabilizer has no dihedral. Beginning possibly as early as July 1956, a new type of aircraft [REDACTED] was also observed. Ten aircraft of this new type of series are believed to have been produced from the end of July to December 1956. In December a third type of series appeared. At least three aircraft were produced in this third and latest series by the end of December 1956. As of late December 1956, at least 48 Bison had been produced at Plant No. 23.

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Further evaluation of information concerning Plant No. 30 in Moscow leads to the conclusion that this plant is engaged in the production of the Crate (Il-14). A previous opinion held that the plant was modifying the Coach (Il-12) to the Crate.

Production of a new jet fighter continues at Plant No. 168 in Rostov. Although information is still limited, this airplane is probably the Faceplate, one of the jet fighters shown for the first time at the Aviation Day Air Show of June 1956. It is believed that Plant No. 31 in Tiflis has begun production of a new type of jet fighter. Recent observations of the factory airfield and the plant vicinity disclose a greatly reduced number of new Fresco (MIG-17) fighters in the area.

### 3. Production in the European Satellites and in Communist China.

In the fourth quarter of 1956 the European Satellites produced an estimated total of 340 aircraft, about 15 percent of total production of all aircraft in the Sino-Soviet Bloc. Communist China is estimated to have produced 74 aircraft, all piston-engine trainers, during the fourth quarter of 1956, representing about 3 percent of estimated total production by the Bloc.\* Czechoslovakia and Poland remain the largest producers among the Satellites, accounting for about 59 percent and 21 percent, respectively, or a combined total of about 80 percent of Satellite production of aircraft by number.

\* Estimated production of aircraft in the European Satellites and Communist China from 1954 through 1956 is given by number in Table 8, p. 11, below, and by airframe weight in Table 9, p. 12, below.

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2. Production in the USSR.

The USSR continues to produce most of the aircraft manufactured in the Sino-Soviet Bloc.\* Of the 2,300 aircraft estimated to have been produced by the Bloc in the fourth quarter of 1956, 1,900 aircraft, about 83 percent, were produced in the USSR. In terms of airframe weight, about 94 percent of the estimated total production of aircraft in the Bloc took place in the USSR. This figure emphasizes again the fact that the Satellites produce relatively lighter aircraft.

In 1956 the Soviet share of estimated total production of aircraft by the Sino-Soviet Bloc decreased by about 3 percent in terms of numbers and showed no appreciable change in terms of airframe weight. For the second consecutive year the USSR produced about 88 percent of all the combat aircraft produced by the Sino-Soviet Bloc.

It is estimated that total Soviet production of combat aircraft during the fourth quarter of 1956 exceeded that of the US by about 2 percent in terms of numbers and by about 8 percent in terms of airframe weight.\*\*

Recent intelligence information has resulted in several changes in previously published estimates of Soviet production of aircraft. Since the publication of the last memorandum in this series,\*\*\* information has become available which changes the estimate of activity at Plant No. 64 in Voronezh. It is now tentatively assumed that since 1955 this plant has been engaged in Badger (Tu-16) production rather than in a program of Badger modification. Recent information indicates that a program of Bull (Tu-4) modification has been in progress

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\* Estimated production of aircraft in the USSR from 1954 through 1956 is given by number in Table 4, p. 7, below, and by airframe weight in Table 5, p. 8, below.

\*\* Production of combat aircraft in the USSR from 1954 through 1956 is compared with that in the US by number in Figure 1, following p. 12, and by airframe weight in Figure 2, following p. 12. For additional comparison, US military acceptances from 1954 through 1956 are given by number in Table 6, p. 9, below, and by airframe weight in Table 7, p. 10, below.

\*\*\* CIA/RR IM-437, Quarterly Estimate of the Production of Aircraft in the Sino-Soviet Bloc, July-September 1956, 25 October 1956.

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CIA/RR IM-446  
(ORR Project 33.1658)

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QUARTERLY ESTIMATE OF THE PRODUCTION OF AIRCRAFT  
IN THE SINO-SOVIET BLOC  
OCTOBER-DECEMBER 1956\*

1. Trends in Production.

In the fourth quarter of 1956, estimated production of aircraft by the Sino-Soviet Bloc remained about the same as in the previous quarter.\*\* A slight increase was noted in production of transport aircraft in the USSR, and Soviet production of fighters also continued to show an upward trend.\*\*\* Bloc production in terms of airframe weight registered an increase of about 3 percent above production in the previous quarter. The increase in airframe weight reflects the rising rates of production of Bear and Crate (Il-14) aircraft and the replacement of the Fresco (MIG-17) fighter by the heavier Farmer, by the Flashlight, and by an unidentified new fighter. About 56 percent of the aircraft produced by the Bloc during the fourth quarter of 1956 are believed to have been combat types.\*\*\*\*

Although total production of aircraft, by number, in the Sino-Soviet Bloc during 1956 was about 2 percent less than in 1955, production in terms of airframe weight increased about 14 percent as a result of the trend toward greater weight in modern aircraft. Combat types of aircraft accounted for about 55 percent of total production of aircraft by the Sino-Soviet Bloc in 1956.

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\* The estimates and conclusions contained in this memorandum represent the best judgment of ORR as of 31 December 1956.

\*\* Estimated production of aircraft in the Sino-Soviet Bloc from 1954 through 1956 is given by number in Table 1, p. 4, below, and by airframe weight in Table 2, p. 5, below.

\*\*\* Estimated cumulative production of selected Soviet aircraft through 1956 is given in Table 3, p. 6, below.

\*\*\*\* For the purposes of this memorandum, combat types include bomber, fighter, and ground attack aircraft. Other aircraft such as helicopters and transports have uses under both combat and noncombat conditions.

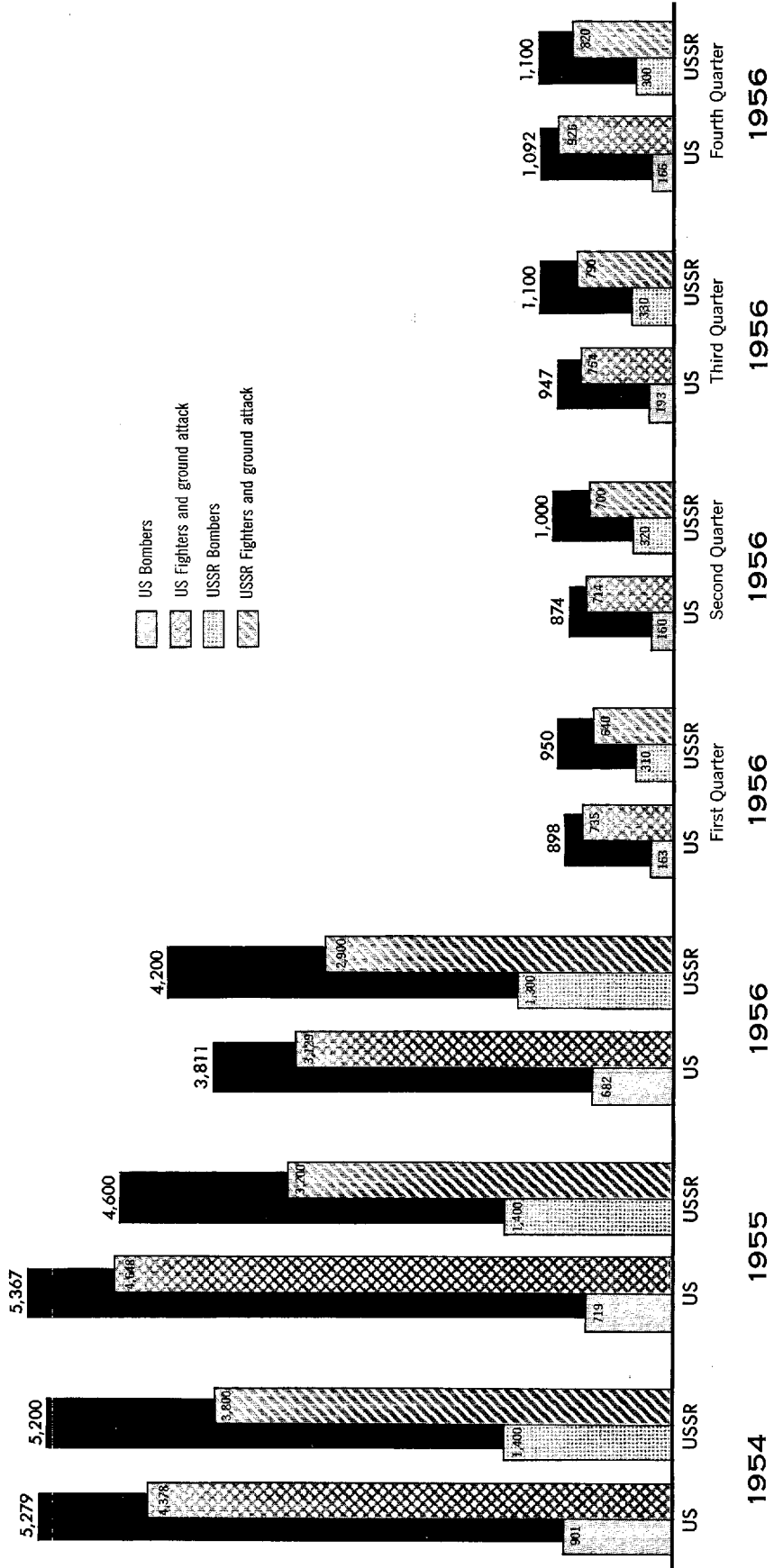
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Figure 1

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US<sup>a</sup> and USSR<sup>b</sup>  
**PRODUCTION OF MILITARY AIRCRAFT, BY NUMBER**  
 1954 Through 1956



<sup>a</sup> US totals include preliminary data for December 1956.

<sup>b</sup> USSR totals are rounded.

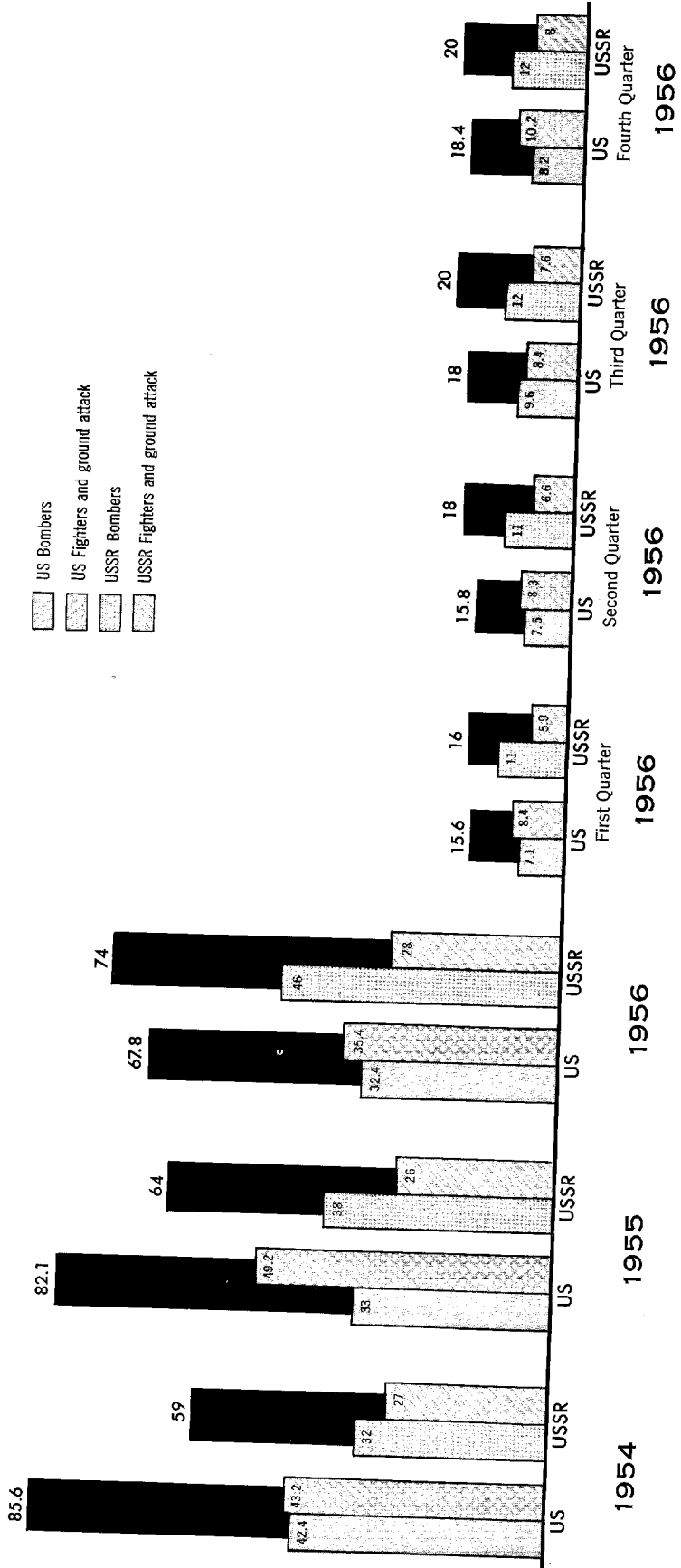
<sup>c</sup> Bombers and fighters.

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Figure 2

US<sup>a</sup> and USSR<sup>b</sup>  
**PRODUCTION OF MILITARY AIRCRAFT<sup>c</sup>, BY WEIGHT<sup>d</sup>**  
 1954 Through 1956

(Million pounds of airframe weight)



<sup>a</sup> US totals include preliminary data for December 1956.

<sup>b</sup> USSR totals are rounded.

<sup>c</sup> Bombers and fighters.

<sup>d</sup> US figures do not include spare parts production.

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