

Combine Seed Loss Guide

A method for determining seed loss from your combine based on weight, volume, or seed count with choppers and spreaders disengaged.

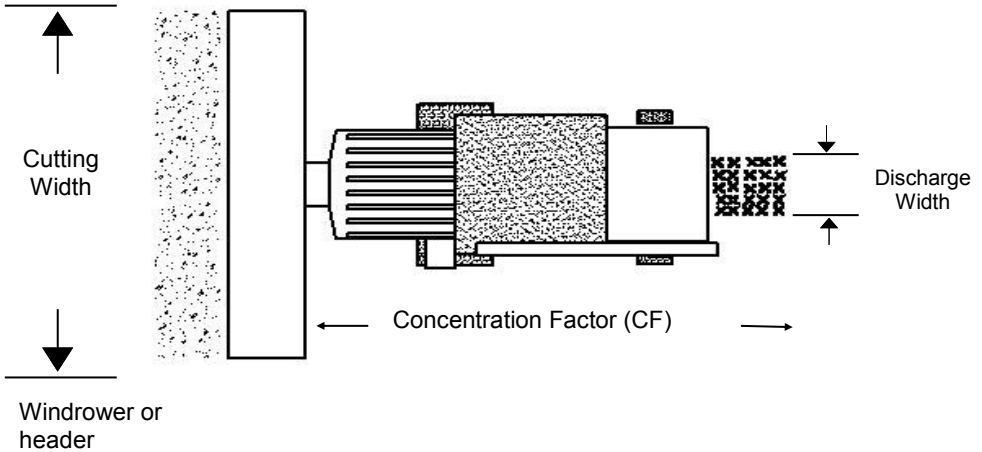
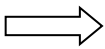


Table 1

STEP 1
Find your
CF—in
this table



Common Concentration Factors				
Discharge Width (ft)				CF (X)
	3	4	5	6
Cutting Width (ft)	12	16	20	24
	15	20	25	30
	18	24	30	36
	21	28	35	42
	24	32	40	48
	27	36	45	54
	30	40	50	60

STEP 2
Collect a
Sample
from
discharge
of known
area

Be Careful
Be Safe

Continue steps on next page



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STEP 3 Remove chaff from sample

Tips:

- Use round hole sieve
- Blow out (leaf blower and 5 gallon pail)

STEP 4 Determine weight (g), volume (ml), or seed count measurement.**STEP 5** Calculate loss in pan per sq ft of pan first. Collection pan can be any size; however, pan width equal to width of sieves is recommend (divide results by ft² of collection pan).**STEP 6** Select **Table 2, 3, 4, or 5** to find loss on a per acre basis**Table 2****Weighing Method - All Crops***(0.010413 grams/ft² over each ft² in an acre = 1 lb/ac)*

Concentration Factor (CF)									Loss lb/ac
CF	1	4	5	6	7	8	9	10	
Loss Collected Behind Combine in 1 square foot (Grams/ft ²)	0.1	0.4	0.5	0.6	0.7	0.8	0.9	1.0	10
	0.3	1.0	1.3	1.6	1.8	2.1	2.3	2.6	25
	0.5	2.1	2.6	3.1	3.6	4.2	4.7	5.2	50
	0.6	2.5	3.1	3.7	4.4	5.0	5.6	6.2	60
	0.8	3.1	3.9	4.7	5.5	6.2	7.0	7.8	75
	1.0	4.2	5.2	6.2	7.3	8.3	9.4	10.4	100
	1.3	5.2	6.5	7.8	9.1	10.4	11.7	13.0	125
	1.6	6.2	7.8	9.4	10.9	12.5	14.1	15.6	150
	1.8	7.3	9.1	10.9	12.8	14.6	16.4	18.2	175
	2.1	8.3	10.4	12.5	14.6	16.7	18.7	20.8	200

To find the value in this chart when using collection pans greater than 1 sq ft, divide the volume or weight measured by the square footage of the pan first.

Table 3**Volume Measurement Method - All Crops***(0.8348875 ml/ft² over each ft² in an acre = 1 bu/ac)*

Concentration Factor (CF)									Loss bu/ac
CF	1	4	5	6	7	8	9	10	
Loss Collected Behind Combine in 1 ft ² in Millilitres (ml/ft ²)	0.2	0.8	1.0	1.3	1.5	1.7	1.9	2.1	0.25
	0.4	1.7	2.1	2.5	2.9	3.3	3.8	4.2	0.5
	0.6	2.5	3.1	3.8	4.4	5.0	5.6	6.3	0.75
	0.8	3.3	4.2	5.0	5.8	6.7	7.5	8.3	1.0
	1.0	4.2	5.2	6.3	7.3	8.3	9.4	10.4	1.25
	1.3	5.0	6.3	7.5	8.8	10.0	11.3	12.5	1.5
	1.5	5.8	7.3	8.8	10.2	11.7	13.1	14.6	1.75
	1.7	6.7	8.3	10.0	11.7	13.4	15.0	16.7	2.0
	2.1	8.3	10.4	12.5	14.6	16.7	18.8	20.9	2.5
	2.5	10.0	12.5	15.0	17.5	20.0	22.5	25.0	3.0
	2.9	11.7	14.6	17.5	20.5	23.4	26.3	29.2	3.5
	3.3	13.4	16.7	20.0	23.4	26.7	30.1	33.4	4.0
	3.8	15.0	18.8	22.5	26.3	30.1	33.8	37.6	4.5
	4.2	16.7	20.9	25.0	29.2	33.4	37.6	41.7	5.0

To find the value in this chart when using collection pans greater than 1 sq ft, divide the volume or weight measured by the square footage of the pan first.

Table 4**Seed Count Method - Wheat***(20 kernel/ft² over each ft² in an acre = 1 bu/ac)*

Concentration Factor (CF)									Loss bu/ac
CF	1	4	5	6	7	8	9	10	
Loss Collected Behind Combine in 1 ft ² in # of Kernels (#/ft ²)	5	20	25	30	35	40	45	50	0.25
	10	40	50	60	70	80	90	100	0.5
	15	60	75	90	105	120	135	150	0.75
	20	80	100	120	140	160	180	200	1.0
	25	100	125	150	175	200	225	250	1.25
	30	120	150	180	210	240	270	300	1.5
	35	140	175	210	245	280	315	350	1.75
	40	160	200	240	280	320	360	400	2.0
	50	200	250	300	350	400	450	500	2.5
	60	240	300	360	420	480	540	600	3.0
	70	280	350	420	490	560	630	700	3.5
	80	320	400	480	560	640	720	800	4.0
90	360	450	540	630	720	810	900	4.5	
100	400	500	600	700	800	900	1000	5.0	

To find the value in this chart when using collection pans greater than 1 sq ft, divide the seed count by the square footage of the pan first.

Table 5**Seed Count Method - Barley***(14 kernel/ft² over each ft² in an acre = 1 bu/ac)*

Concentration Factor (CF)									Loss bu/ac
CF	1	4	5	6	7	8	9	10	
Loss Collected Behind Combine in 1 ft ² in # of Kernels (#/ft ²)	4	14	18	21	25	28	32	35	0.25
	7	28	35	42	49	56	63	70	0.5
	11	42	53	63	74	84	95	105	0.75
	14	56	70	84	98	112	126	140	1.0
	18	70	88	105	123	140	158	175	1.25
	21	84	105	126	147	168	189	210	1.5
	25	98	123	147	172	196	221	245	1.75
	28	112	140	168	196	224	252	280	2.0
	35	140	175	210	245	280	315	350	2.5
	42	168	210	252	294	336	378	420	3.0
	49	196	245	294	343	392	441	490	3.5
	56	224	280	336	392	448	504	560	4.0
63	252	315	378	441	504	567	630	4.5	
70	280	350	420	490	560	630	700	5.0	

To find the value in this chart when using collection pans greater than 1 sq ft, divide the seed count by the square footage of the pan first.

Table 6**Number of seeds per square foot to equal 1 bu/acre loss if distributed evenly behind full combine cut width**

Crop	Seeds/sq ft to equal 1 bu/acre loss	Crop	Seeds/sq ft to equal 1 bu/acre loss
Barley	14	Sorghum	20
Corn	2	Soybean	4
Durum	16	Sunflower	3
Oat	10	Wheat	20
Pea	3		

Seed count method is not recommended for canola or flax due to small seed size

Function	Problem	Adjustment (make only one at a time)
Under-Threshing	straw - seed left in heads or pods	increase threshing speed, decrease concave clearance, add concave blanks, slow down
	cleaner - unthreshed heads	increase threshing speed, decrease concave clearance, add concave blanks, slow down
	returns - unthreshed heads	increase threshing speed, decrease concave clearance, add concave blanks, slow down
	graintank - part heads, no small kernels	increase threshing speed, decrease concave clearance, add concave blanks, slow down
Over-Threshing	straw - broken up excessively	drive faster, decrease threshing speed, increase concave clearance
	cleaner - high chaff load, cracked grain	drive faster, decrease threshing speed, increase concave clearance
	grain tank - cracked grain	decrease threshing speed, increase concave clearance
Separating	straw - grain loss	increase threshing speed, decrease concave clearance, use wider spaced wire concaves, reduce vane angle, slow down
	straw - excessive chaff	decrease threshing speed, increase concave clearance, use narrow wire space concaves, increase vane angle
Cleaning	What fan speed?	feed combine slowly - increase fan speed until start blowing a few seeds over chaffer sieve
	chaff - seed (threshed)	increase chaffer sieve opening, even out chaff/grain loading, decrease chaffer opening, decrease cleaning sieve opening
	grain - light trash	increase fan speed, decrease chaffer opening, decrease cleaning sieve opening
	return - clean grain	open sieve, open chaffer, decrease fan speed

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