InterSeeder Technologies Operators Manual





InterSeeder Technologies LLC. • P.O. Box 33, Woodward, PA 16882

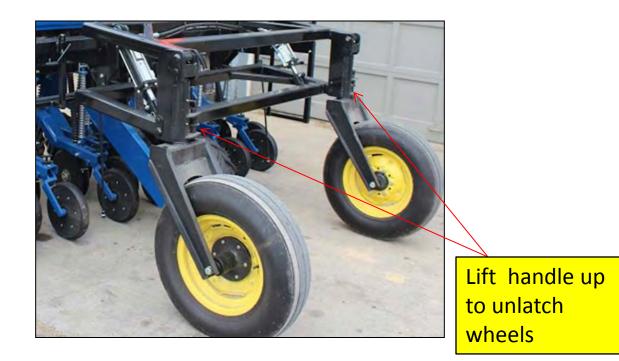
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Before you start

- ✓ Please read and understand this manual before using your InterSeeder
- ✓ Make sure your aware of all the safety warnings on the InterSeeder
- ✓ Always use the jack stands when unhooking the unit and when servicing
- ✓ Always use the cylinder locks when servicing in the raised position
- ✓ Never crawl under the unit in the raised position
- ✓ Stay clear of moving parts
- ✓ Never ride on the unit
- ✓ Do not turn tightly with the unit when planting in the down planting position
- ✓ Grease the unit each day of use and oil chains weekly
- ✓ Check oil level in the seed box transmission daily

Transporting

- ✓ Always transport the unit in the raised position, use the transport locks on each cylinder
- ✓ Remove the wheel lock on the rear wheels to allow the wheels to caster 360 degrees
- \checkmark Always plant with the wheels in the unlocked position
- ✓ Travel at a safe speed < 20 MPH</p>



Hitching to the tractor

- ✓ Use an appropriate sized tractor with ample front end weight
- ✓ 4 row machine 70 90 hp, 6 row machine 110 -130 hp
- ✓ This unit is a semi-mount hitch
- ✓ ONLY USE THE DRAFT ARMS OF THE TRACTOR , DO NOT USE THE CENTER LINK
- ✓ Only use the center link on the 2 row model
- ✓ Remove as much lateral movement as possible on your 3 point hitch
- ✓ Couple the hydraulic lines to the tractor remote as a <u>set</u> not as individuals
- $\checkmark~$ Stand clear of the hitch and unit when hitching



Leveling the InterSeeder

- \checkmark The unit performs best when it sets level from hitch to transport wheels
- \checkmark On the 4 and 6 row units set the tractor hitch to the float positon and lower the transport wheels on the rear
- ✓ On the 2 row, use the center link to achieve a level setting, set tractor hitch to float
- \checkmark With the opening coulters on the ground use the transport wheels to level the unit
- \checkmark The opening coulters should run either at the same level as seed depth or slightly deeper
- \checkmark Once the unit is level, use cylinder stops on the 4 and 6 row to maintain planting position
- \checkmark If the units tips towards the tractor in operation, raise tractor hitch slightly



Level from here to here

6 Row Gauge Wheels



- ✓ Gauge wheels are removed for transport and need to be remounted
- ✓ Center between corn rows 1 and 2, 5 and 6. Count in 4 units from each end set up as an *interseeder* and mount wheels directly in front of the fourth row unit.
- ✓ Adjust slightly to avoid tank mounts
- ✓ Wheels can be optional as well depending on soil conditions, use your judgment

Leveling the InterSeeder



Insert cylinder stops here to assist with leveling if needed

Seed Settings

✓ CALIBRATE YOUR INTERSEEDER FOR THE BEST RESULTS

- ✓ The seed chart is only a starting point, seed size will vary and effect rates
- ✓ There is a high and low range drive on the seed box , see seeding chart for drive type
- ✓ Use the lever on the seed box transmission to set seeding rate



High and low range gears are interchangeable, look for the door sticker to indicate which range



Calibration as a grain drill

- ✓ Accurately measure 200 ft, drive the unit and count the revolutions of the drive wheel
- $\checkmark\,$ Multiply the width of the machine by the length traveled
- ✓ EXP 15 ft X 200 = 3000 sqft / (43560 sq ft in an acre) = .068 of an acre
- $\checkmark~$ Place a tarp under the drill and prepare to catch the seed from the entire unit
- \checkmark Make sure the metering units are charged with seed / turn the drive wheel several time prior to catching seed on tarp
- ✓ Now turn drive wheel the amount of turns in 200 feet and catch all of the seed and weigh
- $\checkmark\,$ Remember there is 453 grams in 1lbs for conversion if needed

✓ Take the weight of the collected seed for example 2.3 lbs divide by percentage of an acre from above 2.3/.068 = 34lbs of seed per acre



Calibration as an InterSeeder

Here is a quick way to accurately calibrate the InterSeeder for your cover crop seeds. Keep in mind that seed sizes do vary among cover crop species. To get an accurate calibration we recommend you calibrate for each species you use. When using a mix we typically will set the calibration based on the species that dominates the mix. For example, annual rye grass and red clover with a 60/40 mix at 20lbs/acre, we would calibrate for annual rye at 20lbs/acre.

To calibrate is simple and takes about 15 minutes. First, measure off 100 feet setting a flag at the start and stop locations. Next, drive your tractor pulling the unit from the start location to the stop location and count the revolutions of the drive wheel using the white handle as a reference. Write down your drive wheel rpm for future reference, you will manually turn the drive wheel for calibrating in the next step. Now, remove 3 seed tubes next to one another. Add seed to the seed box and rotate the drive wheel until seed come out of each seed tube. Place a clean container under the seed tubes and turn the drive wheel the number of revolutions per 100ft and weigh the seed. For 30 inch corn rows the calibration formula is;

30 inch or 2.5ft X 100 ft = 250 square feet (This represents the area with in a thirty inch wide corn row 100 ft long.) 453 grams in 1 lb you will need to covert.

10 lbs seed /acre X 453 grams = 4350 grams 4350/43560 = .104 grams seeds per square foot in 1 acre .104 g X 250 = 26 grams per 250 square feet which is the area you measured off

So for every 1 lb of cover crop seed desired per acre, you will need 2.6 grams of seed collected from 3 seed tubes.

Seed Chart for grain drill operation, drive wheel turns 710 times per acre

KOWS

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LOW RANGE

710 turns Per acre

	GEARBOX SETTING		1 3		1 0			LUW				- 1	10		10	rei	a	10			
COATED	ALFALFA	5.6	7.1	8.8	10.4	11.9	10	12	14	16	18	20	22	24	26	28	30	32	34	36	T
UNCOATED	ALFALFA	4.0	5.1	6.4		8.6			17.6	19.5	21.9	24.1	26.3	28.7	31.3	33.8	36.4	39.4	42.4	45.	4
HAKARI	BROME	2.3	3.0			5.0			12.7	14.1	15.8	17.4	18.9	20.7	the second se		26.2	28.4	30.5	32	7
COATED RED	CLOVER	5.5		8.8			5.8	6.6	7.3	8.2	9.1	10.1	11.0	12.0		14.1	15.2	16.4	17.7		
TALL	FESCUE	3.1	7.1			11.9	13.9	15.8	17.6	19.5	21.9	24.1	26.3	28.7	313	33.B	36.3	39.4	42.3		
PERUM	FESTULOLIUM		4.0	5.0		6.7	7.8	8.9	9.9	11.0	12.3	13.6	14.8	16.2	17.6	19.0	20.5	22.2	23.9		
EVERLEAF FORAGE	OATS	3.3	4.1	5.2		7.0	8.1	9.3	10.3	11.4	12.8	14.1	15.4	16.8	18.3	19.8	21.3	23.1	24.8	26	
EVENLEAF FURAGE		4,3	5.5	6.9		9.3	10.9	12.4	13.8	15.3	17.1	18.9	20.6	22.5	24.5	26.5	28.5	30.9	33.2	36	21.7
	ORCHARD GRASS	2.0	2.6	3.2		4.3	5.0	5.7	6.3	7.0	7.9	8.7	9.5	10.3		12.2	13.1	14.2	15.3	16.	45
	RYE	8.2	10.4	13.0		17.6	20.5	23.3	25.9	28.8	32.3	35.5	38.7	42.3		49.8	53.6	58.1	62.5	66.	
TETRAPLOID ITALIAN		3.6	4.6	5.8		7.8	9.1	10.3	115	12.8	14.3	15.7	17.2	18.7	20.4	22.1	23.8	25.7			
DIPLOID PERENNIAL		2.8	3.5	4,4	5.2	5.9	6.9	7.9	8.8	9.7	10.9	12.0	13.1	14.3	15.6		18.1		27.7	29.	
SORGHUM	SADAN	6.8	8.5	10.7	12.6	14.5	16.9	19.2	21.4	23.8	26.6	29.3	32.0	34.9	38.0			19.6	21.1	22.	- 1
	SOYBEANS	6.0	7.6	9.5	11.2	12.8	15.0	17.1	19.0	21.1	23.6	26.0	28.3	30.9			44.2	47.9	51.5	55.	
	TIMOTHY	5.4	6.8	8.5	10.0	11.5	13.4	15.3	17.0	18.8	21.1	the second s	25.3		33.7	36.4	39.2	42.5	45.7		91 -
	TRITICAL	6.0	7.7	9.6		12.9	15.1	17.2	19.1	21.2	23.8	23.2		27.7	30.1	32.6	35.1	38.0	40.9		
	WHEAT	7.2	9.2	11.4	13.4	15.4	18.0	20.5			and the second se	26.1	28.5	31.2	34.0	36.7	39.5	42.8	46.0	49	
RINGS	ALFAMATE MIX	2.4	3.1	3.8	4.5	5.2	6.0		22.8	25.3	28.4	31.2	34.0	37.2	40.5	43.7	47.1	51.0	54.9		
KINGS	HILLSIDE MIX	2.7	3.4	4.3				6.9	7.6	8.5	9.5	10,4	11.4	12.4	13.5	14.6	15.8	17.1	18.4	19.	511
KINGS	MIX	2.5		3.9	5.0	5.8	6.7	1.7	8.5	9.5	10.6	11.7	12.7	13.9	15.1	15.4	17.6	19.1	20.5	22.	ST.
KINGS	OATS PLUS		3.1		4.6	5.3	6.2	7,0	7.B	8.7	9.7	10.7	11.6	12.7	13.9	15.0	16.1	17.5	18.8	20.	
KINGS		4.4	5.6	6.9		9.3	10.9	12.4	13.8	15.3	17.2	18.9	20.6	22.5	24.5	26.5	28.5	30.9	33.2	35.	
	SUPREME MIX	2.6	3.4	4.2	4,9	5.6	6.6	7.5	8.3	9.2	10.4	11.4	12.4	13.6	14.8	16.0	17.2	18.6	20.0	21	аг
KINGS	TRITICAL PLUS	5.3	6.7	8.4	9,8	11.3	13.2	15.0	16.7	18.5	20.8	22.8	24.9	27.2	29.7	32.0	34.5	37.4	40.2	43.	đΕ
		1	1	-	-		H	IGH F	ANG	-								1	-]
ALL	GEARBOX SETTING	4 1	6 1	8	10 1	12 1	14 1	16 1	18	and the second se							-	-			-
HAKARI	BROME	18.7	21.9	25.2	29.3	33.4	37.2	41.3	and the second second	20	22	24	26	28	30	32	34	36 1	38	40	T ₁
TALL	FESCUE	25.2	29.6	34.0	39.6	45.1			46.3	50.9	55.5	60.6	65.1	71.4	76.9	83.3	89.6		102.8		
PERUM	FESTULOLIUM	26.2	30.7	35.3	41.2		50.1	35.7	62.4	68.6	74.9	81.8	89.2	96.3	103.7	112.3	120.8	129.3	138.7	148.	Лp
EVERLEAF FORAGE	OATS	35.0	41.1			46.9	52.2	58.0	64.9	71.4	77.9	85.1	92.7	100.1	107.8	116.8	125.6	134.4		154.6	
CTLINE TOTOLE	ORCHARD GRASS	16.1	18.9	47.2	55.0	62.7	69.7	77.5	86.8	95.5	104.1	113.8	124.0	133.9	144.2	156.2	168.0	179.8	192.9	206.	
	AYE AYE			21.7	25.3	28.9	32,1	35.7	39.9	43.9	47.9	52.4	57.1	61.6	60.4	71.9	77.3	82.7	88.8	95.1	17
TETRAPLOID ITALIAN		66.0	77.4	89.0	103.7	118.1		145.9	163.4	179.8	195.1	214.2	233.5	252.1	271.5	294.2	316.3	338.5	363.3		a
	the state of the s	29.2	34.3	39.4	45.9	52.3	58.2	54.6	72.4	79.6	86.9	94.9	103.4	111.7	120.3	130.3	140.1	150.0	160.9		1P
SIPLOID ITALIAN	RYEGRASS	22.3	26.2	30.1	35.0	39.9	44.4	49.3	55.3	60.8	66.3	72.4	78.9	85.2	91.8	99.5		114.5			
SORGHUM	SADAN	54.4	63.8	73.4	85.5	97.4	108.3	120.4	134.8	148.3	161.8	176.7	192.6						299.6		1E
	SOYBEANS	48.2	56.6	65.0	75.8	86.4	96.0	106.7	119.5	131.5	143.4		170.7			215.1					án.
	TRITICAL	48.6	57.0	65.5	76.3	87.0	96.7	107.4	120.3		144.4		171.9		199.9			247.6	203./	284.7	lu.
	WHEAT	57.9	68.0	78.1	91.0	103.8	115.3	128.2	143.5	the same of the	172.2	188.1	HACH			216.6		249.2			
		19.4	22.7	26.1	30.5	34.7	38.6	42.9	48.0	52.8	57.6	52.9	205.1	221.5		258.4	277.9	AND DESCRIPTION OF A DE		341.5	
	ALFAMATE MIX	19.44							53.7	59.0	64.4	70.3	76.7	74.1	79.8	86.4	92.9	99.5	106.7	114.4	A
	ALFAMATE MIX HILLSIDE MIX			20.2	34.0	38.9	44.11														4
GNGS		21.7	25.4	29.2	34.0	38.8	43.1	47.9						and the second se	69.2	96.6		111.2		127.9	n
angs angs	HILLSIDE MIX	21.7 19.8	25.4	25.7	31.1	35.5	39.5	43.8	49.1	54.0	58.9	64.3	70.1	75.7	81.6	88.4	95.0	101.7	109.1	117.0	10
angs angs angs	HILLSIDE MIX MIX OATS PLUS	21.7 19.8 35.1	25.4 23.2 41.2	25.7	31.1 55.2	35.5	39.5 69.9	43.8	49.1 87.0	54.0 95.7	58.9	64.3 114.0	70.1	75.7	81.6	88.4 156.5	95.0 168.3	101.7	109.1	117.0	1C
KINGS KINGS KINGS KINGS KINGS KINGS	HILLSIDE MIX	21.7 19.8	25.4	25.7	31.1	35.5	39.5	43.8	49.1	54.0	58.9	64.3	70.1 124.2 74.9	75.7 134.2 80.9	81.6 144.5 87.1	88.4 156.5	95.0 168.3 101.5	101.7 180.1 108.6	109.1 193.3 116.5	117.0 207.1 124.9	R

Seed chart for interseeding, drive wheel will turn 754 times in 1 acre

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LOW RANGE

754 turns Per acre

addition of the second se	GEARBOX SETTING		2	4	1 5	0	1 10		and the second se		-	1-	-			101	ce			
COATED	ALFALFA	4.5	5.8	7.2		9.7	10	12	14	16	18	20	22	24	26	28	1 30	1 32	34	1 36 1
JNCOATED	ALFALFA	3.3		5.2		7.0		12.9	14.3	15.9	17.8		and the second se		25.4	27.0	29.0			
TAKARI	BROME	1.9		3.0				9.3	10.3		12.8	14.1	15.4		183	19.				
COATED RED	CLOVER	4.5		7.2				5.4	6.0	6.6	7.4	8.2	8.9	9.7	10.6	11.				15.4
ALL	FESCUE	2.5		4.0		9.7	11.3	12.9	14.3	15.9	17.8	19.6	21.3	23.3						36.8
EROM	FESTULOLIUM	2.6				5.5		7.2	8.0	8.9	10.0	11.0	12.0							
VERLEAF FORAGE	OATS	3.5		4.2		5.7	5.5		8.4	9.3	10.4	11.5	12.5		14.9					20.7
	ORCHARD GRASS			5.6				10.1	11.2	12.4	13.9	15.3	16.7					and the second se		
	RYE RYE	1.6		2.6		3.5	4.1	4.6	5.2	5.7	6.4	7.1	7.7	8.4	9.2				27.0	28.9
CTRACE PUR PRATING		6.7	8.5	10.6		14.3	16.5	19.0	21.1	23.4	26.2	28.9	31.5		375				and the second se	
ETRAPLOID ITALIAN	N ATEGRASS	2.9		4.7	5.5	6.3	7.4	8.4	9.3	10.4	11.6	12.8	13.9						50.8	54.3
IPLOID PERENNIAL		2.2	2.9	3.6	4.2	4.8	5.6	6.4	7.1	7.9	8.9	9.8	10.6		16.6					24.1
ORGHUM	SADAN	5.5	7.0	8.7	10.2	11.8	13.7	15.6	17.4	19.3	21.6	23.8				13.7		16.0		
2	SOYBEAN5	4.9	6.2	7.7	9.1	10.4	12.2	13.9	15.4	17.1	19.2		26.0	28.4	30.9				41.9	44.8
	TIMOTHY	4.3	5.5	6.9	8.1	9.3	10.9	12.4	13.8			21.1	23.0	25.1	27.4	29.6	31.9	34.5	37.1	39.7
	TRITICAL	4.9	6.2	7.8	9.1	10.5	12.2	14.0		15.3	17.1	18.9	20.6		24.5		28.5	30.9	33.2	35.5
and the second sec	WHEAT	5.8	7.5	9.3	10.9	12.5	14.5		15.5	17.2	19.3	21.2	23.2	25.3	27.5	29.8	32.1	34.8	37.4	40.0
INGS	ALFAMATE MIX	2.0	2.5	3.1	3.6			16.7	18.5	20.6	23.0	25.3	27.6	30.2	32.9	35.5		41.5	44.6	47.7
INGS	HILLSIDE MIX	2.2	2.8	3.5	4.1	4.2	4.9	5.6	6.2	6.9	7.7	8.5	9.2	10.1	11.5	11.9	12.6	13.9	14.9	
INGS	MIX	2.0	2.5	3.2		4.7	5.5	6.2	5.9	7.7	8.6	9.5	10.3	11.3	12.3	13.3		15.5	16.7	17.8
INGS	OATS PLUS	3.5	4.5	5.6	3.7	4.3	5.0	5.7	6.3	7.0	7.9	8.7	9.5	10.3	11.3	12.2	13.1	14.2	15.3	
INGS	SUPREME MIX	2.1			6.6	7.6	8.9	10.1	11.2	12.5	14.0	15.4	16.7	18.3	19.9	21.5	23.2	25.1		16.3
NG5	TRITICAL PLUS		2.7	3.4	4.0	4.6	S.3	6.1	6.8	7.5	8.4	93	10.1	11.0	12.0	13.0	14.0		27.0	28.9
11002	THITTERE PLUS	4.3	5.5	6.8	8.0	0.2	10.7	12.2	13.6	15.1	16.9	18.6	20.2	22.1	24.1	26.0	28.0	15.1	16.3	17.4
	and the second se																			the second se
							-	IGH B	ANGE	_		-		-						
	GEARBOX SETTING	4	6 1	8 1	10	19 1		IGH R											4	
	BROME	4		8	10	12	14 1	16	18	20 1	22	24	26	28. 1	30	32	34	36 1	38	40
ALL	GEARBOX SETTING BROME FESCUE	15.2	17.8	8 20.5	23.8	27.2	14 30.2	16 33.6	18 37.6	20 41.4	45.1	49.3	53.7	28 58.0	30 62.5	32			38	40
ALL	BROME	15.2 20.5	17.8	27.6	23.8	27.2	14 30.2 40.7	16 33.6 45.3	18 37.6 50.7	20 41.4 55.8	45.1	49.3					72.8	77.9	83.6	89.6
ALL	BROME	15.2 20.5 21.3	17.8 24.0 25.0	27.6	23.8 32.2 33.5	27.2 36.7 38.1	14 30.2 40.7 42.4	16 33.6 45.3 47.1	18 37.6 50.7 52.7	20 41.4 55.8 58.0	45.1 60.9 63.3	49.3 66.5 69.1	53.7	58.0	62.5	67.7 91.3	72.8	77.9	83.6 112.7	89.5 120.8
RUM	BROME FESCUE FESTULOLIUM OATS	15.2 20.5 21.3 28.5	17.8 24.0 25.0 33.4	27.6 28.7 38.4	23.8 32.2 33.5 44.7	27.2 36.7 38.1 51.0	14 30.2 40.7 42.4 56.7	16 33.6 45.3 47.1 63.0	18 37.6 50.7 52.7 70.5	20 41.4 55.8 58.0 77.6	45.1 60.9 63.3 84.6	49.3	53.7 72.4	58.0	62.5 84.3	67.7 91.3 94.9	72.8 98.2 102.1	77.9 105.0 109.2	83.6 112.7 117.2	89.6 120.8 125.6
RUM	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS	15.2 20.5 21.3 28.5 13.1	17.8 24.0 25.0 33.4 15.4	27.6 28.7 38.4 17.7	23.8 32.2 33.5 44.7 20.6	27.2 36.7 38.1 51.0 23.5	14 30.2 40.7 42.4 56.7 26.1	16 33.6 45.3 47.1 63.0 29.0	18 37.6 50.7 52.7 70.5 32.5	20 41.4 55.8 58.0 77.6 35.7	45.1 60.9 63.3	49.3 66.5 69.1	53.7 72.4 75.3	58.0 78.2 81.4 108.8	62.5 84.3 87.6 117.2	67.7 91.3 94.9 126.9	72.8 98.2 102.1 136.5	77.9 105.0 109.2 146.1	83.6 112.7 117.2 155.8	89.5 120.8 125.6 168.0
ALL RUM VERLEAF FORAGE	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE	15.2 20.5 21.3 28.5 13.1 53.6	17.8 24.0 25.0 33.4 15.4 62.9	27.6 28.7 38.4 17.7 72.3	23.8 32.2 33.5 44.7 20.6 84.2	27.2 36.7 38.1 51.0 23.5 96.0	14 30.2 40.7 42.4 56.7 26.1 106.7	16 33.6 45.3 47.1 63.0 29.0 118.6	18 37.6 30.7 52.7 70.5 32.5 132.6	20 41.4 55.8 58.0 77.6 35.7 146.1	45.1 60.9 63.3 84.6	49.3 66.5 69.1 92.4	53.7 72.4 75.3 100.7 46.4	58.0 78.2 81.4 108.8 50.1	62.5 84.3 87.6 117.2 53.9	67.7 91.3 94.9 126.9 58.4	72.8 98.2 102.1 136.5 62.8	77.9 105.0 109.2 146.1 67.2	83.6 112.7 117.2 156.8 72.1	89.6 120.8 125.6 168.0 77.3
ILL RUM VERLEAF FORAGE	BROME FESCUE FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS	15.2 20.5 21.3 28.5 13.1 53.6 23.7	17.8 24.0 25.0 33.4 15.4 62.9 27.9	27.6 28.7 38.4 17.7 72.3 32.0	23.8 32.2 33.5 44.7 20.6 84.2 37.3	27.2 36.7 38.1 51.0 23.5 96.0 42.5	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5	18 37.6 50.7 52.7 70.5 32.5 132.6 58.8	20 41.4 55.8 58.0 77.6 35.7 146.1 64.7	45.1 60.9 63.3 84.6 38.9	49.3 66.5 69.1 92.4 42.5	53.7 72.4 75.3 100.7 46.4 169.7	58.0 78.2 81.4 108.8 50.1 204.9	62.5 84.3 87.6 117.2 53.9 220.6	67.7 91.3 94.9 126.9 58.4 239.0	72.8 98.2 102.1 136.5 62.8 257.1	77.9 105.0 109.2 146.1 67.2 275.1	83.6 112.7 117.2 156.8 72.1 295.2	89.6 120.8 125.6 168.0 77.3 316.3
ALL RUM VERLEAF FORAGE TRAPLOID ITALIAN PLOID ITALIAN	BROME FESCUE FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS RYEGRASS	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1	17.8 24.0 25.0 33.4 15.4 62.9 27.9 21.3	27.6 28.7 38.4 17.7 72.3 32.0 24.4	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1	18 37.6 50.7 52.7 70.5 32.5 132.6 58.8 44.9	20 41.4 55.8 58.0 77.6 35.7 146.1	45.1 60.9 63.3 84.6 38.9 159.4 70.6	49.3 66.5 69.1 92.4 42.5 174.1 77.1	53.7 72.4 75.3 100.7 46.4 189.7 94.0	58.0 78.2 81.4 108.8 50.1 204.9 90.8	62.5 84.3 87.6 117.2 53.9 220.6 97.7	67.7 91.3 94.9 128.9 58.4 239.0 105.9	72.8 98.2 102.1 136.5 62.8 257.1 113.9	77.9 105.0 109.2 146.1 67.2 275.1 121.9	83.6 112.7 117.2 156.8 72.1 295.2 130.8	89.6 120.8 125.6 168.0 77.3 316.3 140.1
ILL RUM VERLEAF FORAGE TRAPLOID ITALIAN PLOID ITALIAN	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS RYEGRASS SADAN	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2	17.8 24.0 25.0 33.4 15.4 62.9 27.9 21.3 51.9	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5 69.5	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1 88.0	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5	18 37.6 50.7 52.7 70.5 32.5 132.6 58.8	20 41.4 55.8 58.0 77.6 35.7 146.1 64.7 49.4	45.1 60.9 63.3 84.6 38.5 159.4 70.6 53.9	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8	53.7 72.4 75.3 100.7 46.4 189.7 84.0 64.1	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3	62.5 84.3 87.6 117.2 53.9 220.6 97.7 74.6	67.7 91.3 94.9 126.9 58.4 239.0 105.9 80.8	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0	83.6 112.7 117.2 155.8 72.1 295.2 130.8 99.8	89.6 120.8 125.6 168.0 77.3 316.3 140.1 106.9
ALL RUM VERLEAF FORAGE TRAPLOID ITALIAN PLOID ITALIAN	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS RYEGRASS SADAN SOYBEANS	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2 39.2	17.8 24.0 25.0 33.4 15.4 62.9 27.9 21.3 51.9 46.0	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6 52.9	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5 69.5 61.6	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2 70.2	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1	18 37.6 30.7 52.7 70.5 32.5 132.6 58.8 44.9 109.5	20 41.4 55.8 58.0 77.6 35.7 146.1 64.7 49.4 120.5	45.1 60.9 63.3 84.6 38.5 159.4 70.6 53.9 131.4	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8 143.6	53.7 72.4 75.3 100.7 46.4 189.7 84.0 64.1 156.5	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3 169.0	62.5 84.3 87.6 117.1 53.9 220.6 97.7 74.6 182.0	67.7 91.3 94.9 128.9 58.4 239.0 105.9 80.8 197.2	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9 212.0	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0 226.9	83.6 112.7 117.2 155.8 72.1 295.2 130.8 99.8 243.5	89.6 120.8 125.6 168.0 77.3 316.3 140.1 106.9 250.9
ILL RUM FERLEAF FORAGE TRAPLOID ITALIAN PLOID ITALIAN	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS RYEGRASS SADAN SOYBEANS TRITICAL	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2 39.2 39.5	17.8 24.0 25.0 33.4 15.4 62.9 27.9 21.3 51.9 46.0 46.3	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6 52.9 53.2	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5 69.5	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1 88.0	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1 97.8 86.7	18 37.6 50.7 52.7 70.5 32.5 132.6 58.8 44.9 109.5 97.1	20 41.4 55.8 58.0 77.6 35.7 146.1 64.7 49.4 120.5 106.8	43.1 60.9 63.3 84.6 38.9 159.4 70.6 53.9 131.4 116.5	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8 143.6 127.3	53.7 72.4 75.3 100.7 46.4 189.7 84.0 64.1 156.5 138.7	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3 169.0 149.8	62.5 84.3 87.6 117.2 53.9 220.6 97.7 74.6 182.0 161.3	67.7 91.3 94.9 128.9 58.4 239.0 105.9 80.8 197.2 174.8	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9 212.0 188.0	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0 226.9 201.2	83.6 112.7 117.2 156.8 72.1 295.2 130.8 99.8 243.5 215.9	89.6 120.8 125.6 168.0 77.3 316.3 140.1 106.9
ILL RUM PERLEAF FORAGE TRAPLOID ITALIAN PLOID ITALIAN RGHUM	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS RYEGRASS SADAN SOYBEANS TRITICAL WHEAT	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2 39.2 39.5 47.1	17.8 24.0 25.0 33.4 15.4 62.9 27.9 21.3 51.9 46.0 46.3 55.2	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6 52.9 53.2 63.5	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5 69.5 61.6	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2 70.2	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1 88.0 78.0	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1 97.8 86.7 87.3	18 37.6 50.7 52.7 70.5 32.5 132.8 58.8 44.9 109.5 97.1 97.8	20 41.4 55.8 58.0 77.6 35.7 146.1 64.7 49.4 120.5 106.8 107.5	43.1 60.9 63.3 84.6 38.9 159.4 70.6 53.9 131.4 116.5 117.3	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8 143.6 127.3 128.1	53.7 72.4 75.3 100.7 46.4 189.7 84.0 64.1 156.5 138.7 139.7	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3 166.0 149.8 150.8	62.5 84.3 87.6 117.2 53.9 220.6 97.7 74.6 182.0 161.3 162.4	67.7 91.3 94.9 126.9 58.4 239.0 105.9 80.8 197.2 174.8 176.0	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9 212.0 188.0 189.3	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0 226.9 201.2 202.5	83.6 112.7 117.2 156.8 72.1 295.2 130.8 99.8 243.5 215.9 217.3	89.6 120.8 125.6 168.0 77.3 316.3 140.1 106.9 250.9
ALL RUM VERLEAF FORAGE TRAPLOID ITALIAN PLOID ITALIAN DRGHUM	BROME FESCUE FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS SADAN SOYBEANS TRITICAL WHEAT ALFAMATE MIX	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2 39.2 39.5	17.8 24.0 25.0 33.4 15.4 62.9 27.9 21.3 51.9 46.0 46.3 55.2 18.5	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6 52.9 53.2	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5 69.5 61.6 62.0	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2 70.2 70.7	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1 88.0 78.0 78.6 93.7	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1 97.8 86.7 87.3 104.1	18 37.6 50.7 52.7 70.5 32.5 132.8 58.8 44.9 109.5 97.1 97.8 116.6	20 41.4 55.8 58.0 77.6 35.7 146.1 64.7 49.4 120.5 106.8 107.5 128.3	43.1 60.9 63.3 84.6 38.9 159.4 70.6 53.9 131.4 116.5 117.3 140.0	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8 143.6 127.3 128.1 152.9	53.7 72.4 75.3 100.7 46.4 189.7 84.0 64.1 156.5 138.7 139.7 166.6	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3 169.0 149.8 150.8 180.0	62.5 84.3 87.6 117.2 53.9 220.6 97.7 74.6 182.0 161.3 162.4 193.8	67.7 91.3 94.9 126.9 58.4 239.0 105.9 80.8 197.2 174.8 176.0 209.9	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9 212.0 188.0 189.3 225.8	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0 226.9 201.2	83.6 112.7 117.2 156.8 72.1 295.2 130.8 99.8 243.5 215.9 217.3	89.6 120.8 125.6 168.0 77.3 316.3 140.1 1.06.9 250.9 231.3
ALL FRUM VERLEAF FORAGE TRAPLOID ITALIAN PLOID ITALIAN DRGHUM NGS	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS RYEGRASS SADAN SOYBEANS TRITICAL WHEAY ALFAMATE MIX HILLSIDE MIX	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2 39.2 39.5 47.1	17.8 24.0 25.0 33.4 15.4 62.9 27.9 21.3 51.9 46.0 46.3 55.2	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6 52.9 53.2 63.5	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5 69.5 61.6 62.0 74.0 24.7	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2 70.2 70.2 70.7 84.3 28.2	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1 88.0 78.0 78.6 93.7 31.4	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1 97.6 86.7 87.3 104.1 34.8	18 37.6 50.7 52.7 70.5 32.5 132.8 58.8 44.9 109.5 97.1 97.8 116.6 39.0	20 41.4 55.8 56.0 77.6 35.7 146.1 64.7 49.4 120.5 106.8 107.5 128.3 42.9	43.1 60.9 63.3 84.6 38.9 159.4 70.6 53.9 131.4 116.5 117.3 140.0 46.8	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8 143.6 127.3 128.1 152.9 51.1	53.7 72.4 75.3 100.7 46.4 189.7 84.0 64.1 156.5 138.7 139.7 166.6 55.7	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3 169.0 149.8 150.8 180.0 60.2	62.5 84.3 87.6 117.1 53.9 220.6 97.7 74.8 182.0 161.3 162.4 193.8 64.8	67.7 91.3 94.9 128.9 58.4 239.0 105.9 80.8 197.2 174.8 176.0 209.9 70.2	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9 212.0 188.0 189.3 225.8 75.5	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0 226.9 201.2 202.5 241.6 80.8	83.6 112.7 117.2 156.8 72.1 295.2 130.8 99.8 243.5 215.9 217.3	89.6 120.8 125.6 168.0 77.3 316.3 140.1 106.9 250.9 231.3 232.9 277.8
ALL FRUM VERLEAF FORAGE TRAFLOID ITALIAN PLOID ITALIAN DRGHUM NGS NGS NGS	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS SADAN SOYBEANS TRITICAL WHEAT ALFAMATE MIX HILLSIDE MIX MIX	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2 39.2 39.5 47.1 15.7	17.8 24.0 25.0 33.4 15.4 62.9 27.9 21.3 51.9 46.0 46.3 55.2 18.5	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6 52.9 53.2 63.5 21.2 23.7	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5 69.5 61.6 62.0 62.0 74.0 24.7 27.7	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2 70.2 70.7 84.3 28.2 31.5	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1 106.7 47.3 36.1 88.0 78.0 78.6 93.7 81.4 35.0	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1 97.8 85.7 87.3 104.1 97.8 85.7 87.3 104.1 34.8 38.9	18 37.6 50.7 52.7 70.5 32.5 132.8 58.8 44.9 109.5 97.1 109.5 97.1 116.6 39.0 43.6	20 41.4 55.8 58.0 77.6 35.7 146.1 64.7 49.4 120.5 106.8 107.5 128.3 128.3 42.9 48.0	43.1 60.9 63.3 84.6 38.5 159.4 70.6 53.9 131.4 116.5 117.3 140.0 46.8 52.3	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8 143.6 127.3 128.1 152.9 51.1 57.2	53.7 72.4 75.3 100.7 46.4 189.7 84.0 64.1 156.5 138.7 138.7 166.6 55.7 62.3	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3 169.0 149.8 150.8 150.8 150.8 180.0 60.2 67.3	62.5 84.3 87.6 117.3 53.6 220.6 97.7 74.8 182.0 161.3 162.4 193.8 64.8 72.5	67.7 91.3 94.9 126.9 58.4 239.0 105.9 80.8 197.2 174.8 176.8 209.9 70.2 78.5	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9 212.0 188.0 189.3 225.8	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0 226.9 201.2 202.5 241.6	83.6 112.7 117.2 156.8 72.1 295.2 130.8 99.8 243.5 215.9 217.3 259.3 86.7	89.6 120.8 125.6 168.0 77.3 316.3 140.1 106.9 260.9 231.3 232.9 277.8 92.9
ALL ERUM VERLEAF FORAGE ETRAPLOID ITALIAN IPLOID ITALIAN DRGHUM NGS NGS NGS NGS	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS SADAN SOYBEANS TRITICAL WHEAT ALFAMATE MIX HILLSIDE MIX MIX OATS PLUS	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2 39.2 39.5 47.1 15.7 17.6	17.8 24.0 25.0 33.4 62.9 27.9 21.3 51.9 46.0 46.3 55.2 18.5 20.7 18.9	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6 52.9 53.2 53.5 63.5 21.2 23.7 21.7	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5 69.5 61.6 62.0 74.0 24.7 74.0 27.7 27.7 25.3	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2 70.2 70.7 84.3 28.2 31.5 28.6	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1 89.0 78.0 78.6 93.7 31.4 35.0 32.1	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1 97.8 86.7 87.3 104.1 34.8 38.9 35.6	18 37.6 50.7 52.7 70.5 32.5 132.6 58.8 44.9 109.5 97.1 97.8 116.6 99.0 143.6 39.9	20 41.4 55.8 58.0 77.6 35.7 146.1 64.7 49.4 120.5 106.8 107.5 128.3 42.9 48.0 43.9	43.1 60.9 63.3 84.6 38.5 159.4 70.6 53.9 131.4 116.5 140.0 46.8 52.3 47.9	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8 143.6 127.3 128.1 152.9 51.1 57.2 52.3	53.7 72.4 75.3 100.7 46.4 189.7 84.0 64.1 156.5 138.7 166.6 55.7 62.3 57.0	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3 169.0 149.8 150.8 180.0 60.2 67.3 61.5	62.5 84.3 87.6 117.1 53.9 220.6 97.7 74.8 182.0 161.4 193.8 64.8 72.5 66.3	67.7 91.3 94.9 128.9 58.4 239.0 105.9 80.8 197.2 174.8 176.0 209.9 70.2 78.5 71.8	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9 212.0 188.0 189.3 225.8 75.5	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0 226.9 201.2 202.5 241.6 80.8	83.6 112.7 117.2 156.8 72.1 295.2 130.8 99.8 245.5 215.9 215.9 217.3 259.3 86.7 96.9	89.5 120.8 125.6 168.0 77.3 316.3 140.1 106.9 250.9 231.3 232.9 231.3 232.9 237.8 92.5 103.9
ALL ERUM VERLEAF FORAGE ETRAPLOID ITALIAN IPLOID ITALIAN ORGHUM INGS NGS NGS NGS NGS	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS SADAN SOYBEANS TRITICAL WHEAT ALFAMATE MIX HILLSIDE MIX MIX OATS PLUS	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2 39.2 39.2 39.5 47.1 15.7 17.6 16.1 28.5	17.8 24.0 25.0 33.4 15.4 62.9 27.9 21.3 51.9 46.0 46.3 55.2 18.5 20.7 18.9 33.5	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6 52.9 53.2 63.5 21.2 23.7 21.7 38.5	23.8 32.2 33.5 44.7 20.6 84.2 5 69.5 61.6 62.0 74.0 24.7 72,7 27,7 25.3 44.8	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2 70.2 70.7 84.3 28.2 31.5 28.8 51.1	14 30.2 40.7 42.4 56.7 26.1 106.7 26.1 106.7 36.1 88.0 78.0 78.6 93.7 31.4 35.0 32.1 56.8	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1 97.6 86.7 87.3 104.1 34.8 38.9 35.6 63.1	18 37.6 50.7 52.7 70.5 32.5 132.6 58.8 44.9 109.5 97.1 97.8 116.6 99.0 43.6 39.9 70.7	20 41.4 55.8 58.0 77.6 35.7 146.1 64.7 49.4 120.5 128.3 42.9 48.0 43.9 43.9 77.7	43.1 60.9 63.3 84.6 38.5 159.4 159.4 159.4 159.4 159.4 117.3 140.0 46.8 52.3 47.9 84.8	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8 143.6 127.3 128.1 152.9 51.1 57.2 57.2 52.3 92.6	53.7 72.4 75.3 100.7 46.4 169.7 84.0 64.1 156.5 138.7 139.7 166.6 55.7 62.3 57.0 100.9	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3 169.0 149.8 150.8 180.0 60.2 67.3 61.5	62.5 84.3 87.6 117.1 53.6 220.6 97.7 74.8 182.0 161.3 162.4 193.8 64.8 72.5 66.3	67.7 91.3 94.9 128.9 58.4 239.0 105.9 80.8 197.2 174.8 176.0 209.9 70.2 78.5 71.8	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9 212.0 189.3 212.0 189.3 225.8 75.5 84.4	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0 226.9 201.2 202.5 241.6 80.8 90.3 82.6	83.6 112.7 117.2 156.8 72.1 295.2 130.8 99.8 243.5 215.9 217.3 259.3 86.7 96.9 88.7	89.5 120.8 125.6 168.0 77.3 316.3 140.1 106.9 250.9 231.3 732.9 277.8 277.8 277.8 277.8 92.9 277.8 92.9
AKARI ALL ERUM VERLEAF FORAGE ETRAPLOID TTALIAN IPLOID TTALIAN ORGHUM INGS INGS INGS INGS INGS INGS	BROME FESCUE FESTULOLIUM OATS ORCHARD GRASS RYE RYEGRASS SADAN SOYBEANS TRITICAL WHEAT ALFAMATE MIX HILLSIDE MIX MIX	15.2 20.5 21.3 28.5 13.1 53.6 23.7 18.1 44.2 39.2 39.5 47.1 15.7 17.6 16.1	17.8 24.0 25.0 33.4 62.9 27.9 21.3 51.9 46.0 46.3 55.2 18.5 20.7 18.9	27.6 28.7 38.4 17.7 72.3 32.0 24.4 59.6 52.9 53.2 53.5 63.5 21.2 23.7 21.7	23.8 32.2 33.5 44.7 20.6 84.2 37.3 28.5 69.5 61.6 62.0 74.0 24.7 74.0 24.7 72,7 25.3	27.2 36.7 38.1 51.0 23.5 96.0 42.5 32.5 79.2 70.2 70.7 84.3 28.2 31.5 28.6	14 30.2 40.7 42.4 56.7 26.1 106.7 47.3 36.1 89.0 78.0 78.6 93.7 31.4 35.0 32.1	16 33.6 45.3 47.1 63.0 29.0 118.6 52.5 40.1 97.8 86.7 87.3 104.1 34.8 38.9 35.6	18 37.6 50.7 52.7 70.5 32.5 132.6 58.8 44.9 109.5 97.1 97.8 116.6 99.0 143.6 39.9	20 41.4 55.8 56.0 77.6 35.7 146.1 64.7 49.4 120.5 128.3 42.9 48.0 43.9 43.9 43.9 43.9 43.9	43.1 60.9 63.3 84.6 38.5 159.4 70.6 53.9 131.4 116.5 117.3 146.0 46.8 52.3 47.9 84.8 51.1	49.3 66.5 69.1 92.4 42.5 174.1 77.1 58.8 143.6 127.3 128.1 152.9 51.1 57.2 52.3	53.7 72.4 75.3 100.7 46.4 189.7 84.0 64.1 156.5 138.7 166.6 55.7 62.3 57.0	58.0 78.2 81.4 108.8 50.1 204.9 90.8 69.3 169.0 149.8 150.8 180.0 60.2 67.3 61.5	62.5 84.3 87.6 117.1 53.6 220.6 97.7 74.8 182.0 161.3 162.4 193.8 64.8 72.5 66.3	67.7 91.3 94.9 128.9 58.4 239.0 105.9 80.3 197.2 174.8 176.0 209.9 70.2 78.5 71.8	72.8 98.2 102.1 136.5 62.8 257.1 113.9 86.9 212.0 189.3 225.8 75.5 84.4 77.2	77.9 105.0 109.2 146.1 67.2 275.1 121.9 93.0 226.9 201.2 202.5 241.6 80.8 90.3	83.6 112.7 117.2 156.8 72.1 295.2 130.8 99.8 243.5 215.9 217.3 259.3 86.7 96.9 88.7 157.1	89.5 120.8 125.6 168.0 77.3 316.3 140.1 106.9 250.9 231.3 232.9 231.3 232.9 237.8 92.5 103.9

Seeding Rate

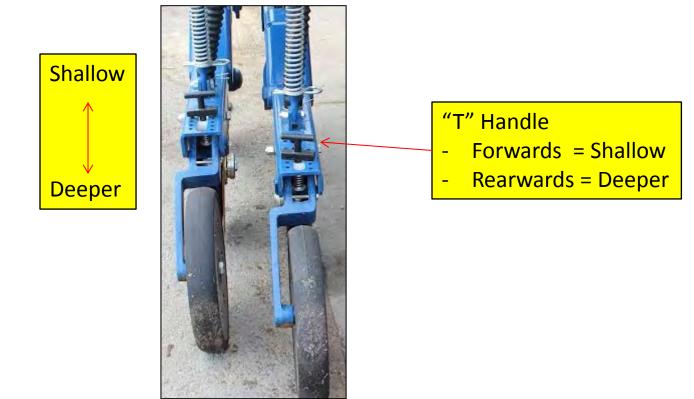
- Calibrate drill and refer to seed chart for setting
- ✓ Slide seed rate handle to # setting for seed rate
- ✓ Check RANGE = HIGH or LOW
- Move handle beyond setting and then bring it back to the correct position

Align arrow on handle With # on sticker, tighten handle



Setting Seed Depth

- ✓ Remember to have the InterSeeder leveled for planting
- $\checkmark\,$ Run the opening coulter at desired seed depth or deeper
- ✓ Double disk opener depth is set by the "T" handle near the packing wheel
- $\checkmark\,$ Move "T" handle forward towards the tractor to shallow the seed depth
- ✓ Move "T" handle rearward away from the tractor to deepen the seed depth
- ✓ CHECK SEED DEPTH OFTEN AS SOIL CONDITIONS CONSTANTLY CHANGE

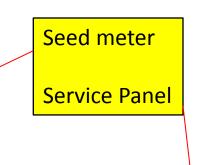


The Seed Box

✓ KEEP THE SEEDBOX CLEAN WHEN NOT IN USE

- $\checkmark\,$ The seed box uses a sponge meter to regulate seed
- $\checkmark\,$ Keep seed clean of debris and foreign material that could damage sponges
- ✓ Sponges can be replaced if damaged by scraping off old sponge and gluing on new
- ✓ Contact InterSeeder for replacement parts and adhesive
- $\checkmark\,$ Sweep out seed box service panel when not in use to prevent rodent damage
- $\checkmark~$ Oil chains weekly that drive the seed box







Helpful Tips

- ✓ Operate the unit between 3 and 5 mph depending on field conditions
- $\checkmark\,$ If you need additional weight, add water to the tanks
- $\checkmark\,$ Do not turn tightly with the drill in the planting position
- ✓ Use clean seed
- ✓ Calibrate to be accurate on seed rate
- ✓ Remember to add seed meter cover plates to the units removed for interseeding they will lay in the seed box and cover the sponge meter

✓ WHEN USING LIQUID N, RINSE THE UNIT OFF EACH DAY OF USE TO PREVENT CORROSION FROM LIQUID SPLASH ONTO THE DRILLING UNITS