Instructions		co	VER	CROP SE	EDING PL	AN AND RECO	ORD ver	sion 2.2					
Video Tutorial													
Producer Name:			1	NRCS Field	Office			Phone					
Producer Phone #			- 1	Practice Pur	pose:								
Conservation District							SD Cover Crop Technical Note 16.pdf						
Program					Mix : Optional om list>								
					PLA	NNED			APPLIED				
Field Number(s)						,							
Fertilization													
Seeding Equipment													
Acres													
Planned seeding win	dow												
Seeding Date													
Suggested Seeding I	Depth*												
Termination Method													
* Based on the deep rang	ge of the shallowest species	i.											
				CROP HIST	ORY	1							
(Current Crop:					Herbicide carryover							
						cover crop species.			low all species co	ompatibility and			
F	Previous Crop:					cropping interval res	strictions and gui	aeiines.					
		PLANNE	D CO	VER CRO)P								
					% of NRCS		Planned		Total Seed				
						NRCS Full Seeding	Seeding Rate		Required	Seeding Depth			
Seed Species			Variety		rate in Mix	Rate (PLS lbs/ac)	(PLS lbs/ac)	Acres to Seed	(PLS lbs)	(Inches)			
			Totals:										
							•			' i			
		ADDI IEI	2 (0)	/ER CROI	D								
		AI I LILI	3 00 1	LIN ONO		Bulk Seed							
						Total (LBS.)		Total Acres		Enter Applied			
						of Mix 🔻		Planted	_	Seeding Method			
					1								
				0/ D ::		Bulk Seed	Seed Planted						
		Variet	v	% Purity (or)	Germination	Individual species	(LBS)	Acres Planted	Seed Planted	% of NRCS Full			
Seed Species		variet	y	% in Mix	Germination %	(LBS.)	,		(lbs/acre)	Seeding Rate			
'									, ,				
	Totals f	or Mixed spec	ioe >		Totals>								
	Totals I	or iviixed spec	ies>		Totals>								
Planning													
Assistance By:							Applied Prac	ctice Meets SD					
		(Name)			(Date)			specifications:	Yes	No			
		,			. ,	Guide to				-			
Certified By:						Certification	Select the meti	hod used to certi	ify and enter dat	a below			
		(Name)			(Date)			1					
									J				
Comments:													
Į.													

1 Protection from Wind and Water Erosion		
Sond Species	Variety	% in Mix
Seed Species	variety	15%
Flax		
Oats		25%
Peas		10%
Radishes		12%
Rapeseed		18%
Sudangrass		10%
Vetch, Common		10%
		<u> </u>
2 Increase Soil Organic Matter		
2 morease son Organic Watter		
Seed Species	Variety	% in Mix
Clover, Crimson	,	12%
Cabbage, African		16%
Flax		10%
Millet, hay		15%
Octo		120/

12%

10% 10%

15%

% in Mix

10% 15%

20%

15%

10% 15%

15%

% in Mix 20% 60%

10%

20%

15%

% in Mix

10%

10%

10%

15% 15% 10%

15%

15%

% in Mix 10% 15%

Oats

Radishes

Ryegrass, Annual

Sorghum, Forage and Sudan Hybrids

4 Improved Water Quality by Utilizing Excess Soil Nutrients

6 Moisture Management or Increase Soil Organic Matter

Rye, Cereal planted on or before Oct.1

Seed Species

Barley

Rapeseed

Ryegrass, Annual Sunflowers

Seed Species

Cowpeas or Dry Beans

Clover, Red

Oats

Peas Radishes

Collards or Kale

Vetch, Chickling

Vetch, Common

8 Nitrogen for Subsequent Crop

10 Wildlife, Pollinator, and Beneficial Organism Improvement

Seed Species

Buckwheat /5

Seed Species

Cabbage, African

Flax

Oats Radishes

Rapeseed

Sunflowers Vetch, Common

3 Improved Soil Aggregation and Soil Organism Habitat (Soil Health)		
Seed Species	Variety	% in Mix
Flax		14%
Millet, hay		10%
Oats		20%
Peas		12%
Radishes		12%
Rapeseed		10%
Sunflowers		10%
Vetch, Common		12%

Variety

5 Reduction in Weed Pressure and Suppression of Pest Cycles		
Seed Species	Variety	% in Mix
Barley		15%
Mustard		10%
Oats		15%
Radishes		15%
Rapeseed		10%
Rye, Cereal planted on or before Oct.1		35%

rijo, coroar plantoa on or actor con		
Ryegrass, Annual		20%
	-	
	-	
7 Soil Compaction Reduction		
Seed Species	Variety	% in Mix
Collards or Kale		10%
Oats		20%
Peas		10%
Radishes		15%

Variety

Variety

Variety

10 10 10 10 10 10 10 10 10 10 10 10 10 1		
9 Concentration of Salts and Other Chemicals		
	Madata.	0/ 1- 14:
Seed Species	Variety	% in Mix
Barley		50%
Rapeseed		10%
Rye, Cereal planted on or before Oct.1		40%

Buckwheat /5		1070
Canola		15%
Clover, Red		10%
Cowpeas or Dry Beans		10%
Flax		10%
Peas		10%
Phacelia		15%
Sunflowers		15%
Vetch, Common		5%
11 Local Mix		
Seed Species	Varietv	% in Mix
Seed Species	Variety	% in Mix
Seed Species	Variety	% in Mix
Seed Species	Variety	% in Mix
Seed Species	Variety	% in Mix
Seed Species	Variety	% in Mix
Seed Species	Variety	% in Mix
Seed Species	Variety	% in Mix
Seed Species	Variety	% in Mix
Seed Species	Variety	% in Mix
Seed Species	Variety	% in Mix

12 Local Mix		
Seed Species	Variety	% in
		_

13 Local Mix		
Seed Species	Variety	% in Mix
		ļ

Planned Planting Date

Co	ver C	rop Cost	Estimate f	or Planni	ng						
Producer name & phone			Phone:								
NRCS Office & Phone #			Phone:								
Planner			Plan written								
This cost estimate is based on an average costs of seed dealers and doesn't necessarily reflect the actual cost shared amounts that will be in a conservation contract. Seed costs can vary from dealer to dealer and prices can and have fluctuated drastically in response to supply and demand during the year. Please contact seed dealers to receive a timely quote for the kind and amount of seed you plan to plant.											
4 Seed dealers were used to determine the	eestimated	average cost of s		·	ated in the Spring of 202						
Seeding Mixture	%	Estimated Average Cost / LB	LBS PLS	cre	PLS LBS	es Cost					
	70	COST/LB	LBO F LO	COST	T E3 EB3						
			Per Ac	re	Total Ac	res					
Totals			LBS	cost	LBS	cost					

Total

Planned Planting Date

Cover Crop Seeding Plan	Vendor	Inform	atior	n She	et									
Producer name & phone		Phone	e:											
NRCS Office & Phone #		Phone	e:											
Planner		Plan w	vritten											
Note to Vendor: If any substitutions to species or varieties are considered please obtain prior approval by calling the producer and NRCS at the numbers above. If varieties recommended are not available they may be substituted with different SD adapted varieties or with "common seed". Please provide a seed tag to the producer for each bag or quantity of seed purchased. As always follow state seed laws concerning labeling. Thank You!														
Seeding Mixture														
Species / Species	Variety	% of NRCS Full seeding rate	Planned Seeding Rate (PLS lbs/ac)	Acres to Seed	Total Seed Required (PLS lbs)	Estimated % by weight of seed in mix								
			-		_									
		-												

Additional Notes to Vendor:

Seeding rates are based on Pure Live Seed (PLS) obtained from seed tag information or lab test results. To ensure the quality of all planting material, the minimum bulk seed germination allowed for each species is 85%. For seed lots testing below the minimum, the seed rate must be based on PLS and not the bulk seed rate. PLS = Purity * % total viable (germination + hard seed + dormant) / 100. When total viable percentages fall below 85%, actual seeding rates MUST be increased to compensate for non-viable seed.

Table 1: Cover Crop - Common Species and Properties

Reduce

erosion

G

G

F

F

Increase soil

organic matter

G

G

F

Seeding

depth,

inches

.25 - .75 \$

.75 - 2.0

.25 - .5

.5 - 1.5

.25 - .75

.25 - .5

.25 - .75

.25 - .75

Full seeding rate

lbs/acre/4

6.5

50

50

Cover Crop

Alfalfa

Barley

Brassica hybrids

Cabbage, African

Camelina, Winter

Clover, Balansa

Buckwheat /5

Average

cost/

LB.

1.90

0.30

2.77

0.86

4.50

2.24

4.25

2.52

Promote

biological

nitrogen

fixation

N

Ν

Ν

N

N

Suppress

G

G

G

G

Scavenge

nutrients

G

G

G

G

Clover, Crimson	15	.2575	\$ 1.45	F	F	F	Y	Р	F	F	SM	Р	Р	F	CB	S	Р	L	М	150,000	F
Clover, Red	5	.2575	\$ 1.94	G	F	F	Y	F	F	F	SL	F	F	F	CB	Υ	Р	L	М	275,000	G
Clover, Sweet	4	.25 - 1.0	\$ 1.85	G	G	F	Y	G	F	F	MM	G	G	F	CB	Υ	F	L	М	260,000	G
Collards or Kale	5	.255	\$ 3.20	F	F	G	N	G	F	G	MM	G	G	F	CB	N	G	L	N	175,000	F
Corn	12	1 - 1.5	\$ 2.80	G	G	G	N	G	F	G	DH	G	G	L	WG	N	P	Н	Н	2,500	F
Cowpeas or Dry Beans	30	1 - 1.5	\$ 1.32	Р	F	F	Υ	P	Р	F	SL	F	F	L	WB	N	Р	L	M	4,000	F
Fava beans	75	1 - 1.5	\$ 0.67	F	F	F	Υ	F	G	G	DM	F	F	L	CB	N	F	L	Р	2,500	Р
Flax	30	.2575	\$ 0.59	F	F	F	N	Р	P	Р	SM	F	Р	F	CB	N	Р	Н	Н	80,000	Р
Lentils	30	1 - 1.5	\$ 0.74	Р	P	P	Υ	P	P	Р	SL	P	P	F	CB	N	P	L	M	20,000	Р
Millet, hay	15	.5 - 1.0	\$ 0.77	G	G	G	N	G	G	G	SL	G	F	F	WG	N	Р	M	Н	180,000	Р
Millet, proso	25	.5 - 1.0	\$ 0.77	G	G	G	N	G	G	G	SL	G	F	F	WG	N	P	M	Н	80,000	Р
Mustard	6	.2575	\$ 2.93	F	F	F	N	G	F	P	MH	G	F	F	CB	N	Р	L	N	140,000	Р
Oats	70	.5 - 1.5	\$ 0.33	G	G	G	N	G	G	G	MM	G	F	L	CG	N	F	M	Н	16,000	F
Peas	70	1.5 - 3.0	\$ 0.44	F	Р	P	Υ	F	G	G	SL	F	F	Ĺ	CB	N	Р	Ĺ	М	3,500	F
Phacelia	4	.255	\$ 6.92	F	F	F	N	Р	Р	Р	DH	F	P	F	CB	N	P	L	M	225,000	F
Radishes	8	.2575	\$ 1.66	F	F	G	N	G	Р	G	DH	G	G	F	CB	N	Р	L	N	25,000	Р
Rapeseed	5	.2575	\$ 1.05	F	F	G	N	G	F	G	MM	G	G	F	CB	Υ	G	L	N	140,000	F
Rye, Cereal planted after Oct.1	60	.75 - 2.0	\$ 0.22	G	G	G	N	G	G	G	МН	G	G	L	CG	Y	G	Н	M	18,000	G
Rye, Cereal planted on or before Oct.1	40	.75 - 2.1	\$ 0.22	G	G	G	N	G	G	G	MH	G	G	L	CG	Υ	G	Н	M	18,000	G
Ryegrass, Annual	15	.5 - 1.5	\$ 0.91	G	G	G	N	F	G	G	MM	G	F	F	CG	S	F	M	M	190,000	G
Safflowers	30	.5 - 1.0	\$ 1.09	F	F	G	N	F	P	Р	DM	F	G	L	WB	N	F	M	M	15,000	Р
Sorghum, Forage and Sudan Hybrids	15	.5 - 1.5	\$ 1.40	G	G	G	N	G	G	G	MM	G	G	L	WG	N	F	M	Н	17,000	Р
Sorghum, Grain	5	.5 - 1.5	\$ 1.23	G	G	G	N	G	G	G	MM	G	G	L	WG	N	F	М	Н	17,000	Р
Soybeans	35	1 - 1.5	\$ 0.52	F	Р	F	Y	F	F	F	SM	F	F	L	WB	N	P	L	М	3,000	F
Sudangrass	20	.5 - 1.5	\$ 1.05	G	G	G	N	G	G	G	MM	G	G	L	WG	N	F	М	Н	25,000	Р
Sugar beets	4	.255	\$ 4.46	F	Р	G	N	F	P	G	DH	G	G	F	CB	N	G	L	N	22,000	Р
Sunflowers	7	.5 - 1.0	\$ 0.52	F	F	G	N	F	P	G	DM	F	G	L	WB	N	F	M	M	8,000	Р
Sunn hemp	15	1.5 - 2.0	\$ 2.72	F	F	F	Y	F	Р	F	DM	F	F	L	WB	N	P	L	M	15,000	Р
Teff grass	5	.1325	\$ 2.43	G	G	F	N	F	G	G	SM	G	F	F	WG	N	P	M	Н	1M	N
Triticale	60	.5 - 1.5	\$ 0.37	G	G	G	N	G	G	G	MH	G	F	L	CG	Υ	G	M	М	15,000	F
Turnips	4	.255	\$ 1.68	F	Р	G	N	G	Р	G	DH	G	G	F	CB	S	P	L	N	175,000	Р
Vetch, Chickling	50	.5 - 1.5	\$ 1.47	F	F	F	Y	F	F	Р	SL	F	F	L	CB	N	Р	L	М	2,500	F
Vetch, Common	25	.5 - 1.5	\$ 1.23	F	F	F	Y	F	F	G	SM	F	F	L	CB	N	P	L	М	8,000	F
Vetch, Hairy	15	.5 - 1.5	\$ 2.33	G	F	F	Υ	F	F	F	SM	G	F	L	CB	Υ	Р	L	М	14,000	G
Wheat, Spring	60	.5 - 1.5	\$ 0.26	G	G	G	N	G	G	G	MH	G	F	Ĺ	CG	N	G	М	М	15,000	F
Wheat, Winter	60	.75 - 2.0	\$ 0.25	G	G	G	N	G	G	G	МН	G	F	L	CG	Υ	G	М	М	15,000	F
		•					•	•	•		•	•		•		•	•				

/3 Seeding Dates May 1 through August 5 - warm season winter kill species Early spring through August 20 - cool season winter kill species August 1 through Winter - species that do not winter kill

SL= Shallow rooted/Low water use

SH= Shallow rooted/High water use

ML= Medium rooted/Low water use

MH= Medium rooted/High water use

DM= Deep rooted/Medium water use DH= Deep rooted/High water use

DL= Deep rooted/Low water use

SM= Shallow rooted/Medium water use

MM= Medium rooted/Medium water use

/1 Rooting Depth/Water Use

/4 Full Seeding rates

Shallow= 6 - 18 inches

Medium= 18 - 24 inches

Deep= 24 + inches

Seeding dates fluctuate annually. Seeding dates may be adjusted up to 15 days by the District Conservationist, based on local weather and site conditions.

Multiply by the percent desired if mixtures are used.

/2 Crop types

CG = cool season grass

CB = cool season broadleaf

WB = warm season broadleaf

WG = warm season grass

/5 Buckwheat contamination

N/A= Not Applicable

L= Low

H= High

Y= Yes

N = No

M= Medium

S = Sporadic

Minimize/R

educe

surface soil

compaction

G

G

G

G

G

Р

Minimize/Re

duce subsoil

compaction

G

G

G

G

Seed size

(Large or

Fine)

F

Crop type

and seeding

dates /2 /3

CB

CG

СВ

WB

CB

СВ

СВ

CB

Winter

Survival

Ν

Ν

S

N

Salinity

Tolerance

G

G

G

G

C:N Ratio

М

Mycorrhizal

fungi

association

М

N

М

Shade

Tolerance

G

Seeds/lb

210,000

14,000

180,000

19,000

180,000

400,000

140,000

500,000

Rooting

depth/Plant

water use /1

DH

MM

MM

SL

MM

ML

MM

Provide

supplemen

tal grazing

G

G

Provide

supplem

ental hay

G

G

F

To reduce chances of buckwheat contamination in wheat do not rotate to wheat for grain for 2 years

Ratings

G=

F=

Good

Fair

Poor

Recommended Cover Crop Mixes for South Dakota

Crop Type	Purpose /Species	Percent
	Compaction (surface and subsurface)	7
CSG	oats, barley, wheat, cereal rye, triticale, annual ryegrass	10-50%
CSB - legume	field pea, common vetch, chickling vetch, red clover, alfalfa	0-20%
WSB - legume	cowpea, dry bean, sunn hemp	0-20%
WSG	teff, sorghum-sudan	0-40%
WSB	Sunflower, safflower	0-15%
Brassica	rapeseed, kale, collards, African cabbage, radish, turnip, hybrids	20-40%
	N Fixation and Nutrient Cycling]
CSB - legume	field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover	40-70%
Brassica	rapeseed, kale, collards, African cabbage, radish, turnip, hybrids	10-30%
WSB - legume	cowpea, soybean, sunn hemp	0-15%
	oat, barley, annual ryegrass	10-20%
	Nutrient Scavenger	
CSB - legume	crimson clover, chickling vetch, balansa clover	0-15%
Brassica	rapeseed, kale, collards, African cabbage, radish, turnip, hybrids	10-40%
WSG CSB	millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass flax, winter camelina	20-60% 0-10%
WSB - legume	cowpea, dry bean, soybean, sunn hemp	0-15%
WSB	sunflower, safflower	0-20%
CSG	annual ryegrass, barley, cereal rye, oat, spring wheat, triticale, winter wheat	10-20%
Г		٦
CSB - legume	Spring Moisture Utilization and N Fixation field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover	10-25%
WSB - legume	cowpea, soybean, sunn hemp	0-25%
CSG	winter wheat, cereal rye, triticale	50-80%
000	Spring Moisture Utilization, Nutrient Cycling, N Fixation	0.450/
CSB - legume Brassica	field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover rapeseed, kale, collards, African cabbage, radish, hybrids	0-15% 15-40%
WSB - legume	cowpea, soybean, sunn hemp	0-15%
CSG	winter wheat, cereal rye, triticale, annual ryegrass	50-85%
	Residue Cycling	
CSB - legume	field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover	20-40%
CSB	flax, winter camelina	0-15%
Brassica	rapeseed, kale, collards, radish, mustard, African cabbage, hybrids	25-40%
WSG WSB - legume	teff, millet cowpea, soybean, sunn hemp	0-10% 0-15%
CSG	Oat, annual ryegrass, barley	10-30%
Г		7
	Salinity	10-30%
Brassica	rapeseed, winter canola	10-30% 70-90%
Brassica CSG		
	rapeseed, winter canola	
	rapeseed, winter canola barley, cereal rye, triticale	_
CSG CSB - legume CSB	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia	70-90% 10-30% 0-15%
CSG CSB - legume CSB Brassica	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids	70-90% 10-30% 0-15% 5-40%
CSG CSB - legume CSB Brassica WSB	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat	70-90% 10-30% 0-15% 5-40% 0-15%
CSG CSB - legume CSB Brassica WSB WSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass	70-90% 10-30% 0-15% 5-40% 0-15% 0-30%
CSG CSB - legume CSB Brassica WSB	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat	70-90% 10-30% 0-15% 5-40% 0-15%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 0-15%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 10-30%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 10-30%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica*	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids	70-90% 10-30% 0-15% 5-40% 0-30% 0-15% 10-30% 10-30% 0-40%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 10-30%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica*	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 10-30% 10-30% 0-40% 0-15%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 0-15% 10-30% 0-40% 0-15% 0-5%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 10-30% 10-30% 0-15% 0-40% 0-15% 15-30%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 0-15% 10-30% 0-15% 0-5% 15-30% 0-20%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSB WSG CSB CSB	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 10-30% 10-30% 0-40% 0-15% 0-5% 15-30% 0-20% 0-15%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 0-15% 10-30% 0-15% 0-5% 15-30% 0-20%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSB WSG CSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 0-15% 10-30% 0-40% 0-15% 0-5% 15-30% 0-20% 0-15% 20-60%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB WSG CSG WSB WSG CSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean	70-90% 10-30% 0-15% 5-40% 0-15% 10-30% 10-30% 0-40% 0-15% 0-5% 15-30% 0-20% 0-15% 20-60% 0-40%
CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB CSG WSB CSG CSG CSB - legume	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 0-15% 10-30% 0-40% 0-15% 0-5% 15-30% 0-20% 0-15% 20-60% 0-40%
CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB CSB WSG CSG CSB CSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover rapeseed, kale, collards, radish, turnips, hybrids	70-90% 10-30% 0-15% 5-40% 0-15% 10-30% 10-30% 0-15% 10-30% 0-40% 0-15% 0-5% 15-30% 0-40% 0-15% 15-30%
CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB CSG WSB CSG CSG CSB - legume	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 0-15% 10-30% 0-40% 0-15% 0-5% 15-30% 0-20% 0-15% 20-60% 0-40%
CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB CSB WSG CSG CSB CSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover rapeseed, kale, collards, radish, turnips, hybrids	70-90% 10-30% 0-15% 5-40% 0-15% 10-30% 10-30% 0-15% 10-30% 0-40% 0-15% 0-5% 15-30% 0-40% 0-15% 15-30%
CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB CSB WSG CSG CSB CSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover rapeseed, kale, collards, radish, turnips, hybrids winter wheat, cereal rye, triticale, annual ryegrass	70-90% 10-30% 0-15% 5-40% 0-15% 10-30% 10-30% 0-15% 10-30% 0-40% 0-15% 0-5% 15-30% 0-40% 0-15% 15-30%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB CSG CSG CSB - legume Brassica* CSB CSG CSG CSB - CSG	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover rapeseed, kale, collards, radish, turnips, hybrids winter wheat, cereal rye, triticale, annual ryegrass	70-90% 10-30% 0-15% 5-40% 0-15% 10-30% 0-15% 10-30% 0-40% 0-15% 0-5% 15-30% 0-20% 0-15% 20-60% 0-40% 0-15% 15-40% 40-70%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG WSB CSB CSG CSB CSG CSB CSG CSB CSB CSB CSB CSB CSB CSB CSB CSB CS	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover rapeseed, kale, collards, radish, turnips, hybrids winter wheat, cereal rye, triticale, annual ryegrass Aerial Seed into Soybean going to Corn crimson clover, common vetch, red clover	70-90% 10-30% 0-15% 5-40% 0-15% 10-30% 10-30% 10-30% 0-40% 0-15% 0-5% 15-30% 0-20% 0-15% 20-60% 0-40% 15-40% 40-70%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG CSG CSB CSG CSB CSG CSB CSG CSB CSG CSB CSG CSB CSB CSB CSB CSB CSB CSB CSB CSB CS	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover rapeseed, kale, collards, radish, turnips, hybrids winter wheat, cereal rye, triticale, annual ryegrass Aerial Seed into Soybean going to Corn crimson clover, common vetch, red clover rapeseed, kale, collards, radish, turnips, hybrids winter wheat, cereal rye, triticale, annual ryegrass	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 0-15% 10-30% 0-40% 0-15% 0-5% 15-30% 0-15% 20-60% 0-40% 0-15% 40-70% 10-25%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG CSG CSB CSG CSB CSG CSB CSG CSB CSG CSB CSG CSB CSB CSB CSB CSB CSB CSB CSB CSB CS	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover rapeseed, kale, collards, radish, turnips, hybrids winter wheat, cereal rye, triticale, annual ryegrass Aerial Seed into Soybean going to Corn crimson clover, common vetch, red clover rapeseed, kale, collards, radish, turnips, hybrids	70-90% 10-30% 0-15% 5-40% 0-15% 0-30% 0-15% 10-30% 0-40% 0-15% 0-5% 15-30% 0-15% 20-60% 0-40% 0-15% 40-70% 10-25%
CSG CSB - legume CSB Brassica WSB WSG WSB - legume CSG CSB - legume Brassica* CSB WSG CSG CSB CSG CSB CSG CSB CSB CSB CSC CSB CSB CSB CSB CSB C	rapeseed, winter canola barley, cereal rye, triticale Soil Health - Increase crop diversity and organic matter field pea, lentil, common vetch, crimson clover, chickling vetch, balansa clover, red clover flax, winter camelina, phacelia rapeseed, kale, collards, radish, mustard, African cabbage, hybrids Sunflower, safflower, buckwheat millet, teff, sorghum-sudan, sudangrass cowpea, soybean, sunn hemp Oat, annual ryegrass, barley Cool Season Grazing field pea, lentil, common vetch, crimson clover, balansa clover rapeseed, kale, collards, radish, turnip, hybrids flax, camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass oats, barley, wheat, cereal rye, triticale, annual ryegrass Warm Season Grazing sunflower, cowpea, soybean, buckwheat flax, winter camelina millet, teff, grain or forage sorghum, sorghum-sudan, corn, sudangrass rapeseed, kale, collards, radish, turnip, hybrids Aerial Seed into Corn going to Soybean crimson clover, common vetch, red clover, balansa clover rapeseed, kale, collards, radish, turnips, hybrids winter wheat, cereal rye, triticale, annual ryegrass Aerial Seed into Soybean going to Corn crimson clover, common vetch, red clover rapeseed, kale, collards, radish, turnips, hybrids winter wheat, cereal rye, triticale, annual ryegrass Wildlife	70-90% 10-30% 0-15% 5-40% 0-15% 10-30% 10-30% 10-30% 0-40% 0-15% 15-30% 0-20% 0-15% 20-60% 0-40% 15-40% 40-70% 10-25% 10-25%

rapeseed, turnip, and hybrids of these species.

Sunflower, safflower, buckwheat

millet, teff, sorghum-sudan, grain sorghum sudangrass

WSB

WSG

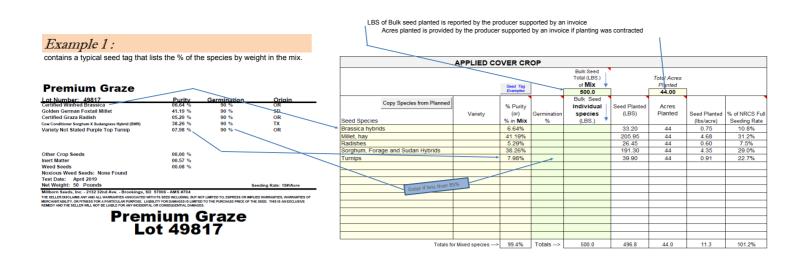
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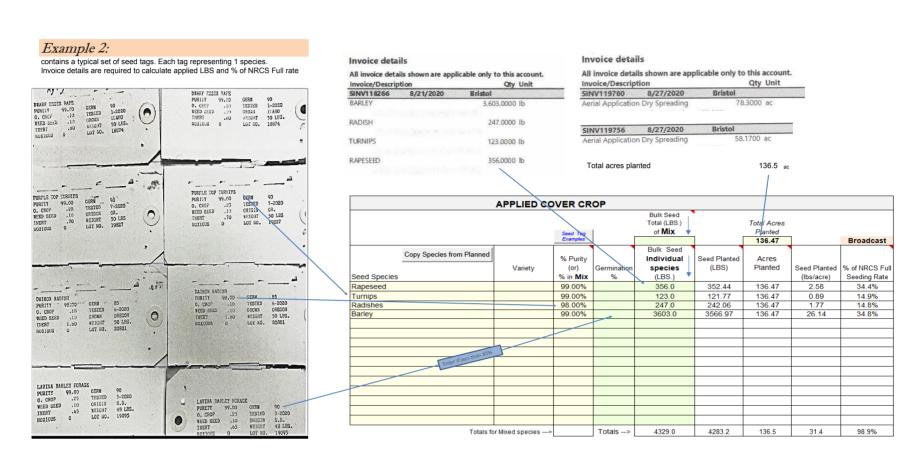
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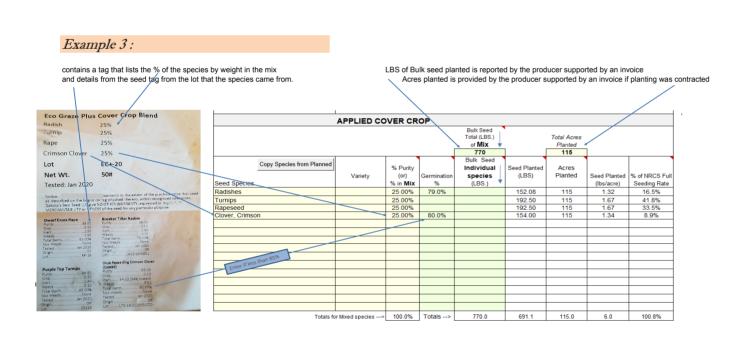
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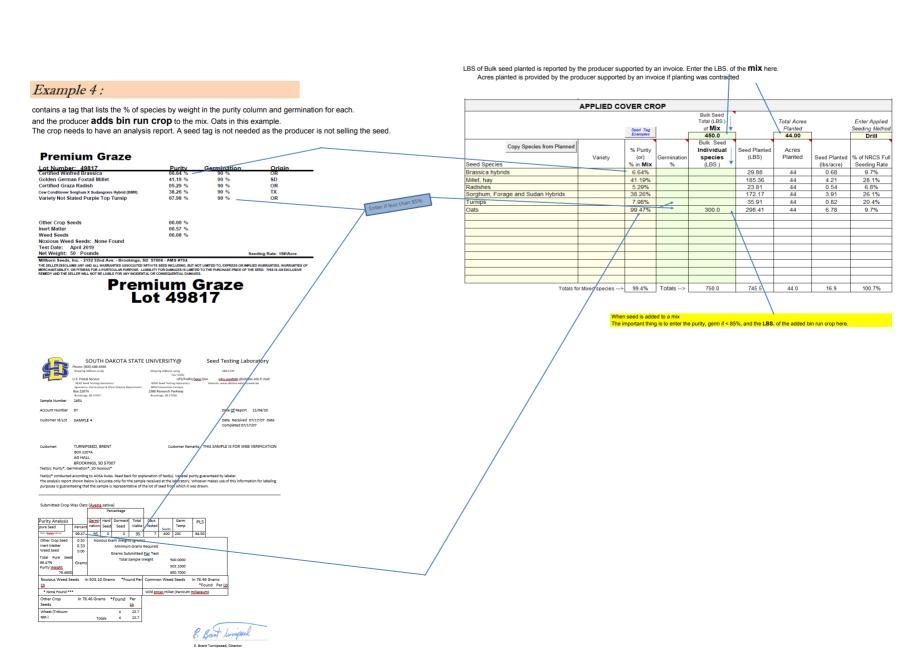
10-30%

Seed Tags vary from dealer to dealer but are required to contain certain information. They may however contain additional information that makes them confusing in some cases. When the seed is in a mix (2 or more species mixed together) on one seed tag it can be presented in various ways. Here are 4 examples of Seed Tags from Mixes and examples of the completed Applied section of the Cover Crop Worksheet.











Covercrop_ver2.1 /2.2 Tutorial Video

YouTube Link to Video

Cover crop Tutorial

Full Video

Presented by: Demo for USDA/NRCS and Partners

2/27/21

Marcia Deneke, State Agronomist, Huron, SD Stacy Turgeon, Agronomist, Chamberlain, SD

Mark Washechek, Contractor, NOWCC, Brookings, SD

Jason Miller, Conservation Agronomist, Pierre, SD

Valerie Riter, Conservation Agronomist, Rapid City, SD

Eric Barsness, Conservation Agronomist, Brookings, SD

	Timeline		Timeline
		<u>Plan Extras</u>	23:43 - 29:34
		Cost Estimate	
Introduction	0:00 - 2:37	Vendor sheet	
Table 1 - Cover crop data	2:38 - 9:25	Spreadsheet Functions Application	29:35-42:56
Cover Crop Mixes	9:26 - 14:19	Certification	
Recommended Mixes			
Prepared Mixes		Certification Examples	42:57 - 69:21
		Seed Tag examples	
Spreadsheet Functions	14:20 – 23:42	Certification Process	
General overview			
Planning		Closing	69:22 – 69:32
		Contact Information	

2021 Data	Print	1	Purpose	Termination	Diagnost Speeding Month	Fertilization	Seeding	Cover Crops	Craplist	County	Conservation District	Program CStP Enhancement	Certification					
Data is from South Dakota Technical Guide including:	FIIII	I	Purpose	remination	Planned Seeding Month	Fertilization	Equipment	Cover Crops	Croplist	County	Conservation district	Program CStP Enhancement	Certification					
Practice Standard 340 Cover Crop	Cover eren werkeheet	TDUE	Reduce erosion from wind and water	Crimn		Starter only	Drill	Alfolfo	Alfalfa		American Creek	CRP E340A	Seed Tag(s)	0/ Full acading rate	Seed Tag(s)	- % Full seeding rate	Field check date	e % full
	Cover crop worksheet	TRUE		Crimp	May 1 through August 5 – warm season winter kill species	Starter only		Alfalfa		Aurora	American Creek		J()	% Full seeding rate	• ,	•		
Agronomy Technical Note 16	Prepared Mixes	FALSE	Maintain or increase soil health and organic matter content	Frost	Early spring through August 20 – cool season winter kill species	Starter & inoculant	Broadcast	Barley	Barley	Beadle	Aurora	CStP E340B	Field Method 1	% cover	Field Method 1		Field check date	
	Table 1 Purpose Rating	FALSE	Reduce water quality degradation by utilizing excessive soil nutrients	Harvest	August 1 through Winter – species that do not winter kill	None		Brassica hybrids	Buckwheat	Bennett	Beadle	CTA E340C	Field Method 2	Plants / sq ft.	Field Method 2	- Plants / sq ft.	Field check date	
	Cost Estimates	FALSE	Suppress excessive weed pressures and break pest cycles	Herbicide		Inoculant only		Buckwheat /5	Canola	BonHomme	Bennett	EQIP E340D	Field Method 3	LBS of Air dry Veg. Ea				
	Vendor	FALSE	Improve soil moisture use efficiency	Mow				Cabbage, African	Chickpeas	Brookings	Bon Homme	Flood Plain E340E	Field Method 4	LBS of Air dry Veg. We	est Ri [,] Field Method 4	- LBS of Air dry Veg. West Rive	r Field check date	a LBS
	Recommended Cover Crop Mixes	FALSE	Minimize soil compaction	Tillage				Camelina, Winter	Corn	Brown	Brookings	PL-566 E340F						
	Table 2 Purpose Rating	FALSE						Canola	Corn Silage	Brule	Brown-Marshall	WRP/WRE E340G						
								Clover, Balansa	Dry Beans	Buffalo	Brule-Buffalo	E340H						
								Clover, Crimson	Fallow or Prevent Plant	Butte	Butte	E340I						
								Clover, Red	Field Peas	Campbell	Campbell	E340101Z						
								Clover, Sweet	Flax	Charles Mix	Charles Mix	E340102Z						
								Collards or Kale	Forage Sorghum	Clark	Clark	E340106Z1						
								Corn	Full season Covercrop	Clay	Clay	E340106Z2						
Prepared Mix								Cowpeas or Dry Beans	Grain Sorghum	Codington	Clearfield-Keyapaha	E340106Z4						
			4 00 100	•				Fava beans	Grass	Corson	Codington	E340107Z						
1 1 Protection from Wind and Water Erosion			1 B9:I23	9	23			Flax	Lentils	Custer	Corson							
2 2 Increase Soil Organic Matter			2 B30:144	30	44			Lentils	Melons	Davison	Custer							
3 3 Improved Soil Aggregation and Soil Organism Habitat (Soil Health)			3 B51:l65	51	00			Millet, hay	Millet	Day	Davison							
4 4 Improved Water Quality by Utilizing Excess Soil Nutrients			4 B72:186	72	80			Millet, proso	Mustard	Deuel	Day							
5 5 Reduction in Weed Pressure and Suppression of Pest Cycles			5 B93:I107 6 B114:I128	93	107			Mustard	Oats	Dewey	Deuel							
6 6 Moisture Management or Increase Soil Organic Matter 7 7 Soil Compaction Reduction			7 B135:I149	114	140			Oats	Potatoes	Douglas	Dewey							
8 8 Nitrogen for Subsequent Crop			8 B156:I170	155	170			Peas	Rapeseed	Edmunds	Douglas Fact Pannington							
9 9 Concentration of Salts and Other Chemicals			9 B177:I191	177	101			Phacelia Radishes	Rye Safflowers	Fall River	East Pennington Edmunds							
10 10 Wildlife, Pollinator, and Beneficial Organism Improvement			10 B198:I212	177	242			Rapeseed	Soybeans	Faulk	Elk Creek							
1 11 Local Mix			11 B219:1233	190	233			Rye, Cereal planted after Oct.1	·	Grant	Fall River							
2 12 Local Mix			12 B240:1254		254 254			Rye, Cereal planted on or before Oct.1	Spring Wheat Sudangrass	Gregory Haakon	Faulk							
13 13 Local Mix			13 B261:I275		275			Ryegrass, Annual	Sunflowers	наакоп Hamlin	Grant							
J 19 EOWI ITIM			10 0201.1210	201	213			Safflowers	Winter Wheat	Hand	Gregory							

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Cover Crops	Croplist	County	Conservation District	Program	<u>C</u>
Alfalfa	Alfalfa	Aurora	American Creek	CRP	F
				CStP	-
Barley	Barley	Beadle	Aurora		-
Brassica hybrids	Buckwheat	Bennett	Beadle	CTA	ь
Buckwheat /5	Canola	BonHomme	Bennett	EQIP	E
Cabbage, African	Chickpeas	Brookings	Bon Homme	Flood Plain	E
Camelina, Winter	Corn	Brown	Brookings	PL-566	E
Canola	Corn Silage	Brule	Brown-Marshall	WRP/WRE	Е
Clover, Balansa	Dry Beans	Buffalo	Brule-Buffalo		E
Clover, Crimson	Fallow or Prevent Plant	Butte	Butte		E
Clover, Red	Field Peas	Campbell	Campbell		E
Clover, Sweet	Flax	Charles Mix	Charles Mix		E
Collards or Kale	Forage Sorghum	Clark	Clark		E
Corn	Full season Covercrop	Clay	Clay		E
Cowpeas or Dry Beans	Grain Sorghum	Codington	Clearfield-Keyapaha		E
Fava beans	Grass	Corson	Codington		E
Flax	Lentils	Custer	Corson		
Lentils	Melons	Davison	Custer		
Millet, hay	Millet	Day	Davison		
Millet, proso	Mustard	Deuel	Day		
Mustard	Oats	Dewey	Deuel		
Oats	Potatoes	Douglas	Dewey		
Peas	Rapeseed	Edmunds	Douglas		
Phacelia	Rye	Fall River	East Pennington		
Radishes	Safflowers	Fall River Faulk	Edmunds		
Rapeseed	Soybeans	Grant	Elk Creek		
Rye, Cereal planted after Oct.1	Spring Wheat		Fall River		
Rye, Cereal planted on or before Oct.1	Sudangrass	Gregory	Faulk		
Ryegrass, Annual	Sunflowers	Haakon	Grant		
Safflowers		Hamlin			
Sorghum, Forage and Sudan Hybrids	Winter Wheat	Hand	Gregory Haakon		
Sorghum, Grain		Hanson	Hamill		
-		Harding	Hamlin		
Soybeans		Hughes			
Sudangrass		Hutchinson	Hand		
Sugar beets		Hyde	Hanson		
Sunflowers		Jackson	Harding		
Sunn hemp		Jerauld	Hughes		
Teff grass		Jones	Hutchinson		
Triticale		Kingsbury	Hyde		
Turnips		Lake	Jackson		
Vetch, Chickling		Lawrence	Jerauld		
Vetch, Common		Lincoln	Jones		
Vetch, Hairy		Lyman	Kingsbury		
Wheat, Spring		Marshall	Lake		
Wheat, Winter		McCook	Lawrence		
		McPherson	Lincoln		
		Meade	Marshall		
		Melette	McCook		
		Miner	McPherson		
		Minnehaha	Mellette		
		Moody	Miner		
		Oglala Lakota	Minnehaha		
		Pennington	Moody		
		Perkins	Oglala Lakota		
		Potter	Pennington		
		Roberts	Perkins		
		Sanborn	Potter		
		Spink	Roberts		
		Stanley	Sanborn		
		Sully	South Brown		
			Spink		
		Todd	Stanley		
		Tripp	Sully		
		Turner			
		Union	Todd Tri County		
		Walworth	Tri-County		
		Yankton	Turner		
		Ziebach	Union		
			Walworth		
			Yankton		

.13 - .25 .25 - .5 .25 - .75 .25 - 1.0 .5 - 1.0 .5 - 1.5 .75 - 2.0 1 - 1.5 1.5 - 2.0 1.5 - 3.0