LET'S START MAKING BETTER BALES

BETTER BALING TWINE SELECTION GUIDE

7 QUESTIONS TO ASK THE END-USER

QUESTION	POSSIBLE ANSWERS	PLEASE NOTE
1. **Which baler(s) brand and model number do you use?**	**Standard density balers**	Require a lower strength twine.
	High density balers	Require a higher strength twine.
	Single knotter balers	Typically require a higher strength twine, due to friction.
	Ultra-High density balers	Require the highest strength twine on the market in most conditions.
2. **What type of crops do you primarily bale?**	**Alfalfa, silage and some grass hay's**	Typically do not require the strongest twine for each baler model.
	Timothy, Sudan, Rye and Teff grass hay's	Require a bit more twine strength due to their moderately springy nature.
	Grain hay: Barley, Oats, Wheat, Triticale	React very similar in the baler compared to straw. In these crops, we would recommend being on the higher end of the twine recommendations per model.
	Straw and Cornstalks	Most all types of straw typically require the strongest twine per baler model, but it also depends on the end-user's operating preference and target bale weight.
3. **What are your typical baling conditions?**	**Moderate conditions**	May only require the lower to medium range of twine for their baling needs depending on the crop being baled.
	Hot, dry and extreme conditions	Often require the strongest twine per application and baler model.

QUESTION	POSSIBLE ANSWERS	PLEASE NOTE
4. **What's your preferred driving speed while baling?**	**Lower driving speeds (2 – 6mph)**	Offer more suitable conditions for the lower strength twines per model.
	High driving speeds (6 – 12mph+)	Require higher strength twines. Depending on the type and volume of crop being baled.
5. **How many flakes per bale do you prefer?**	**Higher number of flake counts (38 – 45 flakes per bale)**	Help to better compress the bale in the chamber and does not place as much stress on the twine.
	Lower flake counts per bale (35 flakes per bale or less)	Puts a greater stress on the twine leading to a faster rate of expansion of the bale, when leaving the chamber, therefore requiring a higher strength twine per baler model.
6. **What's your ideal bale weight?**	**This is especially important information to know for the end-users who are baling grass crops and straw. The higher the bale weight per model that they are targeting, the higher the strength of twine is needed to maintain the bale integrity.**	
7. **Which do you prefer?**	**Highest efficiency**	A bit smaller twine diameter will perform better in the knotters, with less misties and fewer adjustments/ maintenance.
	Highest strength & heaviest bales	The absolutely highest demanding operators would prefer the heaviest bales and highest strength twine needed to make them, but may require more knotter maintenance and adjustment throughout the season.

IMPAX™

TECHNOLOGY INSIDE

Impax™ Technology Inside

Impax™ revolutionary, patented technology achieving the impossible - strong, smaller diameter twine providing all the benefits: facilitates use within the knotting system of the baler, reduces in-season maintenance and minimizes downtime, thanks to far fewer mis-ties and broken bales. All these lead to an increase in baling efficiency throughout the season, allowing the operator to concentrate on getting the job done. **THAT'S TOTAL WORKABILITY.**

JOHN DEERE BRAND	SPOOL LENGTH (FT)	KNOT STRENGTH PERFORMANCE	SPOOL DIMENSIONS
XtraTwine Impax LSB Mega Spool	6000	400	14.4"H X 12.2"D
XtraTwine Impax LSB	4850	400	12.6"H X 11.4"D
XtraTwine Impax LSB Mega Spool	5500	450	14.4"H X 12.2"D
XtraTwine Impax LSB	4730	450	13.4"H X 11.4"D
XtraTwine Impax LSB Mega Spool	5200	500	14.4"H X 12.2"D
XtraTwine Impax LSB	4350	500	13.4"H X 11.4"D
XtraTwine Impax HD Mega Spool	5000	600	14.4"H X 12.2"D
XtraTwine Impax HD	4700	600	14.2"H X 11.4"D
XtraTwine Impax HD	4800	700	14.8"H X 11.8"D

PROUDLY MADE IN USA

New generation of Twine

UNMATCHED BALER OUTPUT

MORE BALES PER HOUR

SUPERIOR KNOTTING PERFORMANCE

LESS DOWNTIME

KNOT PROTECTION

PEACE OF MIND

RECYCLABLE & SUSTAINABLE

REDUCED CARBON FOOTPRINT

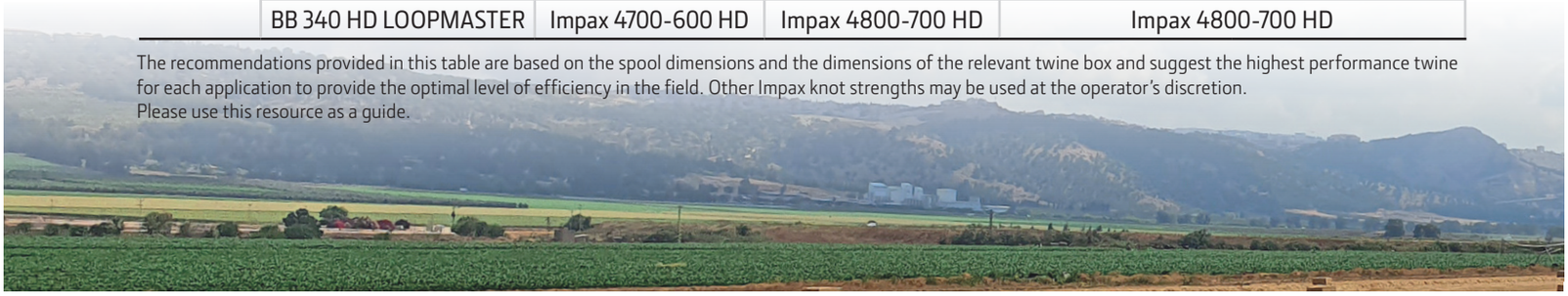
LESS WEAR & TEAR

MAJOR SAVINGS

RECOMMENDED IMPAX TWINE TO BALER MODEL

BRAND	BALER TYPE	FORAGE		STRAW	
		Standard	Extreme	Standard	Extreme
JOHN DEERE	100	Impax 4730-450		Impax 4730-450	Impax 4350-500
	L330				
	L340				
	L331	Impax 4850-400	Impax 4730-450	Impax 4730-450	Impax 4350-500
	L341			Impax 4350-500	
	L331R				
	L341R				
	L341R HD	Impax 4730-450	Impax 4350-500	Impax 4700-600 HD	Impax 4800-700 HD
CASE IH	8575	Impax 4850-400	Impax 4730-450	Impax 4730-450	Impax 4350-500
	8585				
	8580				
	LB 332				
	LB 333				
	LB 431	Impax 4850-400	Impax 4730-450	Impax 4350-500	
	LB 432				
	LB 334				
	LB 434				
	LB 434 XL	Impax 4730-450	Impax 4350-500	Impax 4350-500	Impax 4700-600 HD
	LB 436 HD	Impax 4700-600 HD	Impax 4800-700 HD	Impax 4800-700 HD	
NH	590	Impax 4850-400	Impax 4730-450	Impax 4730-450	Impax 4350-500
	BB 230				
	BB 330				
	BB 330 PLUS				
	BB 940				
	BB 960				
	BB 980				
	BB 9060				
	BB 9080	Impax 4850-400	Impax 4730-450	Impax 4350-500	
	BB 340				
	BB 340 PLUS	Impax 4730-450	Impax 4350-500	Impax 4350-500	Impax 4700-600 HD
	BB 340 HD LOOPMASTER	Impax 4700-600 HD	Impax 4800-700 HD	Impax 4800-700 HD	

The recommendations provided in this table are based on the spool dimensions and the dimensions of the relevant twine box and suggest the highest performance twine for each application to provide the optimal level of efficiency in the field. Other Impax knot strengths may be used at the operator's discretion.
Please use this resource as a guide.



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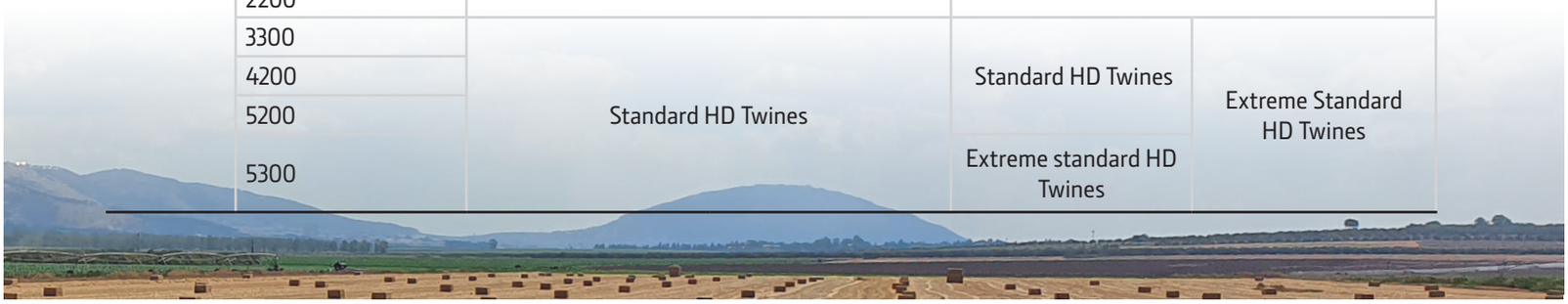
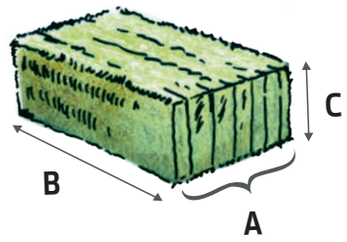
BRAND	BALER TYPE	FORAGE		STRAW	
		Standard	Extreme	Standard	Extreme
MF	4755	Impax 4850-400	Impax 4730-450	Impax 4730-450	Impax 4350-500
	4760				
	4790				
	4900				
	4910				
	7433				
	7434	Impax 4850-400	Impax 4730-450	Impax 5200-500	Impax 5200-500
	7444				
	2150	Impax 6000-400	Impax 5500-450	Impax 5200-500	Impax 5200-500
	2170	Impax 6000-400	Impax 5500-450	Impax 5200-500	Impax 5200-500
	2170 XD	Impax 5200-500	Impax 5000-600 HD	Impax 5000-600 HD	Impax 4800-700 HD
	2190	Impax 6000-400	Impax 5500-450	Impax 5200-500	Impax 5200-500
	2250	Impax 6000-400	Impax 5500-450	Impax 5200-500	Impax 5200-500
	2270	Impax 6000-400	Impax 5500-450	Impax 5200-500	Impax 5200-500
	2270 XD	Impax 5200-500	Impax 5000-600 HD	Impax 5000-600 HD	Impax 4800-700 HD
	2233	Impax 4850-400	Impax 4730-450	Impax 5200-500	Impax 5000-600 HD
	2234				
	2234 XD	Impax 5200-500	Impax 5000-600 HD	Impax 5000-600 HD	Impax 4800-700 HD
	2290	Impax 6000-400	Impax 5500-450	Impax 5200-500	Impax 5000-600 HD
	2244	Impax 6000-400	Impax 5500-450	Impax 5200-500	Impax 5000-600 HD
KRONE	870 HDP MULTIBALE	Impax 4350-500		Impax 4350-500	Impax 4700-600 HD
	890	Impax 4730-450		Impax 4350-500	
	1270				
	1290				
	1290 HDP I	Impax 4730-450	Impax 4350-500	Impax 4350-500	Impax 4700-600 HD
	1290 HDP I I	Impax 4850-400	Impax 4730-450	Impax 4350-500	Impax 4700-600 HD
	1290 HDP Gen 5	Impax 5200-500	Impax 5000-600 HD	Impax 5000-600 HD	Impax 4800-700 HD
KUHN	LSB 870	Impax 4350-500		Impax 4350-500	
	LSB 890				
	LSB 1270				
	SB 870				
	SB 890				
	SB 1270				
	SB 1270X			Impax 4350-500	Impax 4700-600 HD
	SB 1290				
	SB 1290 iD	Impax 4730-450	Impax 4350-500	Impax 4700-600 HD	
CLAAS	2100	Impax 4350-500		Impax 4350-500	
	2200				
	3300	Standard HD Twines		Standard HD Twines	Extreme Standard HD Twines
	4200				
	5200				
	5300			Extreme standard HD Twines	



HOW MANY BALES CAN BE PRODUCED FROM ONE SPOOL OF TWINE?



A = Number of Knotters (4/6/8)
B = Bale length (Example: 8ft)
C = Bale height (Example: 3ft)

1. Calculate how much twine is needed to produce one bale:

- Determine the size of the bale (in the example the bale is 3 X 4 X 8 OR 3 ft high by 4 ft wide by 8 ft long)
- Determine the number of knotters (in the example there are 6)

LENGTH	+	HEIGHT	X	2	X	NUMBER OF KNOTTERS	=	FEET OF TWINE/ BALE
8	+	3	x	2	x	6	=	132 Feet of Twine/Bale

2. Calculate how many bales you can make from 1 spool:

- Divide the length of the spool by how much twine you need to produce 1 bale.

SPOOL	÷	TWINE TO MAKE 1 BALE	=	# OF BALES PER SPOOL
3,500	÷	132 ft	=	26 bales
4,800	÷	132 ft	=	36 bales

3. Calculate how many spools of twine are needed for the season:

- Divide the approximate number of bales per year by the number of bales that can be made from 1 spool
- In this example an operator makes 6,000 bales per year and is currently using 3,500/700 twine

# OF BALES PER SEASON	÷	#OF BALES PER SPOOL	=	SPOOLS NEEDED FOR THE SEASON
6,000	÷	26	=	230
6,000	÷	36		166

→ IMPAX™ → Major saving with XtraTwine Impax technology twines!

* Round the number to the nearest pallet quantity. For example, the nearest 48 spool pallet quantity for 200 spools is slightly more than 4 pallets, but we recommend to round up to 5 pallets to have a buffer for changes through the season.

Please contact your Tama USA territory manager for orders or questions regarding these products, or contact Tama USA at
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