

To Find the Litres in a Tank and therefore the Cubic Capacity of Round Rolls

THE EQUATION

- 1/ Multiply diameter by diameter.
- 2/ Divide answer by 14.
- 3/ Multiply answer by 11 equals the area of circle.
- 4/ Multiply the area of circle by the height of the cylinder.
- 5/ Multiply answer by 25.
- 6/ Divide the answer by 4 this equals gallons in cylinder.
- 7/ To convert gallons to litres multiply by 4.456
- 8/ To convert litres to cubic meters divide by 1000

Round Rolls for eg; take a 5'x 5' roll

- 1/ Multiply dia x dia $5' \times 5' = 25$
- 2/ Divide $25 \times 14 = 1.7857$
- 3/ Multiply $1.7857 \times 11 = 19.6428$ = area of circle.
- 4/ Multiply area of circle by the height, $19.6428 \times 5' = 98.2142$,
- 5/ Multiply $98.2142 \times 25 = 2455.357$,
- 6/ Divide $2455.357 \times 4 = 613.839$ Gallons.
- 7/ Multiply $613.839 \times 4.456 = 2735.267$ litres
- 8/ Divide $2735.267 \times 1000 = 2.73$ cub mt

Based on the above calculations

Width	X	Height			
4'	x	4'.0	=	314.00gls	= 1400lts or 1.400 cub m
4'	x	5'.0	=	491.10gls	= 2188lts or 2.188 cub m
4'	x	5'.6"	=	594.20gls	= 2647lts or 2.647 cub m
4'	x	6'.0"	=	830.00gls	= 3698lts or 3.698 cub m
5'	x	5'.0"	=	613.00gls	= 2735lts or 2.735 cub m
5'	x	5'.6"	=	742.75gls	= 3309lts or 3.309 cub m

To compare ROUND bale sizes based on the above calculations

- 4' x 5'0' bale has a 56% greater capacity than a 4' x 4' bale
 4' x 5'6" bale has a 89% greater capacity than a 4' x 4' bale.
 4' x 6'0" bale has a 164% greater capacity than a 4' x 4' bale

Capacity of Square Bales

Small Squares

- 14" x 18" or 0.355mt x 0.457mt x 0.762mt = 0.123 cub m
 16" x 18" or 0.406mt x 0.457mt x 0.762mt = 0.141 cub m

Big Squares

- 3' x 2' x 6' = 36cub ft = 1.0194 cub m = 27% less than a 4' x 4' round roll
 3' x 3' x 8' = 72cub ft = 2.0388 cub m = 7% less than a 5' x 4' round roll
 3' x 4' x 8' = 96cub ft = 2.7184 cub m = 24% more than a 5' x 4' round roll
 3' x 4' x 8' = 96cub ft = 2.7184 cub m = 2% more than a 5'6"x 4' round roll
 4' x 4' x 8' = 128cub ft = 3.6245 cub m = 2% less than a 6' x 4' round roll

An 8' x 4' x 3' big square bale has approximately the same amount of hay as a 5'.6' x 4' round roll. We suggest you consider which type suits your farming enterprise best.