


Farm Energy IQ


Farms Today Securing Our Energy Future

Making Pellets on the Farm


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Farm Energy IQ





Making Pellets on the Farm



What you need
How it's done

The Local Pellet Concept

What You Need

- Feedstock
- Equipment
- Patience




How to Do It

- Prepare feedstock
- Run the equipment


What You Need - Feedstock

- Woody material
 - Sawmill sawdust
 - Shrub Willow
 - Woodlot Thinnings
 - Not as available on most farms
 - Lower ash content, if bark excluded



What You Need - Feedstock

- Herbaceous (grassy) material
 - Perennial grasses (switchgrass, Miscanthus)
 - Crop Residues (corn stover, wheat straw)
 - Available at relatively low cost
 - High ash content (about 3 to 6%)



What You Need – Equipment



Grinder to reduce particle size

1. Tub grinder
2. Hammer mill
3. Collection System

What You Need – Equipment

Moisture control to add or remove moisture



What You Need – Equipment

Pelletizer to create pellets



What You Need – Equipment

Cooling Equipment
– Pellets dry and harden as they cool



What You Need – Patience



How to Do It – Prepping the Feedstock

- Grind material to a uniform size – use screen no larger than pellet diameter
- Adjust moisture content – 12 to 18% is best for most setups



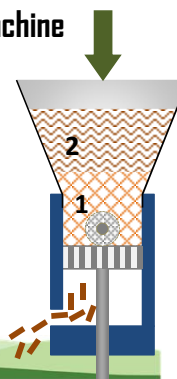
How to Do It - Running the Machine

Keep rollers snug



How to Do It - Running the Machine

Consider using a pre-mix at startup



How to Do It - Running the Machine

- Adding feedstock: dump all at once or add gradually?
- In open-hopper machines, dumping material all at once works better than does gradual feed
- For sealed hopper machines, gradual feed may work

How to Do It - Running the Machine

- Reduce machine speed



How to Do It - Running the Machine

- Extra binders or additives?



Will it pay off?

Typical costs for producing pellets

Activity	Cost per ton of final product
Growing feedstock	\$ 60-\$80
Grinding	\$10-20
Drying/Moisture Control	\$0-10
Pelletizing	\$10-30
Bagging	\$5-10
Total	\$85-\$150

Conclusions

- The right feedstock
- The right equipment
- The right technique

- The right stuff!



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Questions?

