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OFFERS TOTAL CAPABILITY IN
EQUIPMENT SYSTEMS & PROCESSORS FOR
Particle Size Reduction, Milling, Crushing, Sifting
Classifying, Pelleting, Agglomeration, Extruding,
Bulk Material Handling, Drying, Cooling,
Conveying & Packaging

INFO-TECH

BIOMASS PROCESSING SYSTEMS



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Biomass is one of the most attractive resources for generating sustainable energy this is a very large, renewable reservoir of energy and an assured market of the future.

Grain Tech Ltd is specialised in and fully dedicated to supplying biomass energy equipment and facilities for pelletising various renewable loose biomass materials including crop waste, straw, sawdust, wood chips, bark, wood shavings and other industrial and household wastes etc., which can be used for household and industrial applications instead of fossil fuels with significant advantages of increased bulk density and energy efficiency, lower transport costs, reduced storage volumes, easier handling and greater environmental protection features.

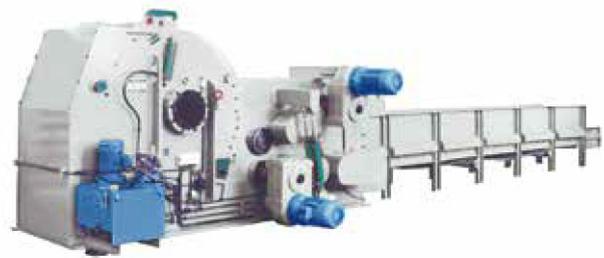
Grain Tech's experience and engineering capability provides advanced equipment, technological solutions and turnkey installations for the Biomass sector that are both technologically advances and future proof in providing the improvement of peoples living environment and the best service to agricultural production through incorporation of advanced equipment and technology.

The Grain Tech program for equipment supply for the Biomass Industry includes the following:

WOOD CHIPPER



- Excellent quality and efficient cost performance
- Suitable for wood log, bamboo, brushwood, board etc.
- Customisable product size to suit application



Data \ Model	LYGX213/5	LYGX216	LYGX218	LYGX218D	LYGX2110
Rotor Dia.	300	650	800	800	1000
Number of Knives	2	2	2	2	2x2
Feed Opening Size	120x300	180x500	225x680	240x780	330x1050
Knife Rotor Speed	730	590	650	650	550
Feed Speed	38	37.2	37	38	33
Max Dia. of Raw Material	Cutting bark	120	160	160	190
Wood Chips Length	26	30	30	30	30
Capacity	8-16	10-18	15-20	38	75
Main Motor Power	45	55	110	132	220
Feed Roller Motor Power	2 x 1.1kW	2 x 3kW	2 x 4kW	2 x 5.5kW	2 x 7.5kW
Oil Pump Motor Power	/	/	/	/	/
Weight	1200	4070	7000	8000	12500
Overall Dimension (LxWxH)	3681x870x900	4348x2056x1258	4670x2150x1500	4670x2250x1515	2850x2799x1497

HAMMERMILL



HIGH PRECISION DYNAMIC BALANCING
Every rotor is dynamically balanced which ensures stable running of the equipment, reduced wearing of bearings as well as hammer holders and other relative parts. This results in higher reliability with longer service life and lower maintenance costs.

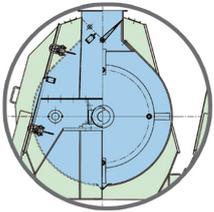
- Suitable for sawdust, chip products and shavings
- Extra-large inlet for sawdust, chip and shavings grinding with high capacity and low power consumption
- Matched with multiform type feeder
- Fitted with an interlock system to protect operators



INTERLOCKED SCREEN PRESSING MECHANISM (PATENTED)
Unique two-step or multi-step screen changed into a one-step process eliminates the uneven screen edges due to multi-step operation, ensuring the absolute tightness of the chamber



OPERATION FRIENDLY ACCESS DOOR
Equipped with rollers the door can be pushed aside to fully open. Featuring easier operation, maintenance and the reduction of labour for the operator.

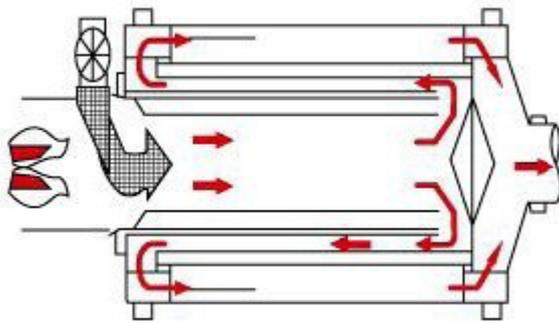


GENUINE WATER-DRIP TYPE GRINDING MACHINE
The design of the grinding chamber makes sense not only in its shape as a water-droplet but also in its real performance function.



Model	Capacity (T/h)	Power (kW)
SFSP132x36C/A	12-20	75/90/110
SFSP132x50C/A	22-30	110/132/160
SFSP132x75C/A	36-45	200/220/250
SFSP132x102C/A	46-65	250/315/355

DRYERS



Based on years of application experience and project cases, Grain Tech Biomass can provide multiple special industrial dryers in accordance with material characteristics to meet and most often exceed customers' expectations. This includes triple-pass rotary dryer, single-pass rotary dryer, rotary tube bundle dryer, vibratory fluidized bed dryer (cooler), flash dryer and so on. They are proven to be effective and successful in a wide range of industries for the dehydration of alfalfa, sludge, palm fiber, coconut shell fiber, wood chip and saw dust, wood shavings, distillers, grain paper pulp and citrus and potato by products.

Model	HTG-900			HTG-1800			HTG-3600			HTG-4800			HTG-5400			HTG-8000		
Moisture Reduction	900			1800			3600			4800			5400			8000		
Raw Material Moisture	70	60	50	70	60	50	70	60	50	70	60	50	70	60	50	70	60	50
Final Moisture	10%			10%			10%			10%			10%			10%		
Capacity (dry)	300-800			600-1500			1200-3000			2400-6000			2700-6000			4000-10000		
Power Consumption	25			38			53			60			75			105		
Coal Consumption	400	250	200	400	250	200	400	250	200	400	250	200	400	250	200	400	250	200
Installed Capacity	37			54			75			110			128			150		
Dimensions	24 x 6 x 5			26 x 8 x 7			30 x 9 x 8			32 x 10 x 9			36 x 12 x 10			40 x 12 x 12		



PELLET MILLS

MUZLM SERIES WOOD PELLET MILL

Highly Efficient

- Single-motor V-belt driving transmission systems features ideal driving torque and running efficiency
- Dies in many thicknesses and die hole diameters. Specifications are available ranging from ϕ 6mm to ϕ 12mm according to customers' requirements.

Intelligent

- Feeding by an advanced frequency-conversion motor, equipped with an overload protection device and a magnetic separator
- High capacity, low noise, convenient operation and low maintenance

Model	Capacity (T/h)	Power (kW)	Pellet Size (mm)
MUZL420M	0.5-1.2	110	6-12
MUZL610M	1-2	160	6-12
MUZL1610M	3-5	280	6-12

STABILISING & COOLING EQUIPMENT



SLNF SERIES TIPPING TYPE COUNTERFLOW COOLER (TYPE A)

- On the principle for advanced counterflow cooling the cooler is equipped with a tipping type discharging device driven by a hydraulic system. This is characterised by its smooth material flow, adjustable discharge rate and discharge speed as well as uniform discharging
- The octagonal cooling bin eliminates dead cooling corners which is beneficial in the cooling of materials.
- The new rotary spreader ensures the material is uniform and is completely cooled with minimum breakage. It also features an adjustable range of material distribution and lower power consumption.
- The temperature of material after cooling is not 5°C higher than ambient temperature while the moisture removal rate is not lower than 3.8%, extending the storage life of high-grade pellets.

Model	SNLF14x14A	SNLF16x16A	SNLF19x19A	SNLF22x22A	SNLF24x24A	SNLF28x28A
Power (kW)	1.5	1.5	1.5+0.75	3+0.75	3+0.75	3+0.75
Capacity (T/h)	5	7.5	10	15	20	20

SKLN SERIES COUNTERFLOW COOLER (TYPE A)

- On the principle for advanced counterflow cooling the cooler is equipped with a reciprocating type discharging device. This is characterised by its smooth material flow and uniform discharge performance.
- There are pressure relief plates provided above the discharge device which greatly improves the load of discharging, reduces the torque while extending the service life of the components parts.
- Power transmission is via a camshaft driven by a geared motor featuring smooth driving motion reliability, lower noise as well as easy installation and maintenance.
- The temperature of cooled materials is not 5°C higher than ambient temperature which extends the storage time of high-grade pellets.

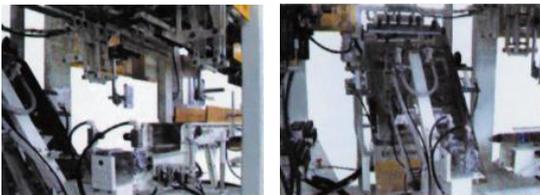


Model	SKLN14x14A	SKLN16x16A	SKLN19x19A	SKLN22x22A	SKLN24x24A	SKLN28x28A
Power (kW)	0.75	0.75	1.5	1.5	1.5+0.75	1.5+0.75
Capacity (T/h)	5	7.5	10	15	15-20	20-25

FULLY AUTOMATIC PACKING SYSTEM



- The complete and integrated packaging lines are suitable for bags of any type (paper, plastic, woven, pp, etc.) and various applications such as chemical feed, food and grain and the like and for 10-50kg bag sizes with the maximum rate of 1200 bags/h.
- The system features the control system and safety device for each operating unit to enable fully automatic running. The servo motor drive arrangement results in higher performance efficiencies.



SEMI-AUTOMATIC PACKING SYSTEM



HY CAPACITY PACKING MACHINE

- Unique anti-vibration design ensures excellent weighing accuracy.
- Real-time weigh-track with internal digital adjustment and checking as well as automatic zero setting.
- Suitable for packing granular and powder materials.

Weighing Range (kg)	Static Precision	Dynamic Precision	Bagging Speed (bags/hr)
10, 25, 50	0.1% FS	0.2% FS	300 - 400

AUXILIARY EQUIPMENT



TDTG SERIES BUCKET ELEVATOR

- Fire-proof and anti-abrasive rubber head pulley to prevent belt slip
- Equipped with an anti-explosion vent which can effectively avoid dust explosion while ensuring safe and reliable operation
- Backstop fitted to efficiently prevent material from chocking due to machine stoppage
- Special cramp folding technique is applied in trunking manufacturing hence high strength and good sealing performance are ensured
- Belt take up used is either gravity type or thread rod type
- Alignment alarm and speed monitoring device are optional

Model	TDTG36/18	TDTG36/23	TDTG36/28	TDTG50/23	TDTG50/28
Capacity (T/h)	5-8	10-15	15-20	25-35	25-45

Model	TDTG60/30	TDTG60/33
Capacity (T/h)	35-65	50-100

TGSU SERIES U-TROUGH DRAG CONVEYOR

- Self-cleaning type mainly used for horizontally conveying powder and granular materials
- 'U' shape trough scrapers made of industrial plastic with excellent wear resistant performance
- Low noise, little material residue and long service life
- Simple structure, good sealing performance, flexible process layout and lower power consumption
- Widely applied in grain, feed and pre-mix processing as well as light industrial and chemical industries



Model	TGSU16	TGSU20	TGSU25	TGSU32	TGSU40	TGSU50
Capacity (T/h)	4-8	8-15	15-30	30-50	50-80	80-120



TGSS SERIES EN MASS DRAG CONVEYOR

- Equipped with an alarm device for material blockage
- Devices for speed monitoring and chain breakage protection are optional
- Stable running, low noise and long service life Flexible for multi-point feeding and discharging
- Thread rod type take-up (tensioner) is fitted to the tail assembly

Model	TGSS16	TGSS20	TGSS25	TGSS32	TGSS42	TGSS50	TGSS63	TGSS80
Capacity (T/h)	5-20	10-30	20-50	30-100	80-250	100-300	200-500	300-800

Model	TGSS100	TGSS120	TGSS160
Capacity (T/h)	500-1000	8000-1350	1000-2000



TLSS SERIES SCREW CONVEYORS

- Variable adaptability, flexible inlet and outlet arrangement, low noise, convenient operation, installation and maintenance
- Widely used for the horizontal transfer applications include ($\leq 15^{\circ}\text{C}$) or vertical conveying for all kinds of powders/granules

Model	TLSS16	TLSS20	TLSS25	TLSS32	TLSS40	TLSS50	TLSS63	TLSS80
Capacity (T/h)	3-5	5-8	8-15	15-30	30-50	50-80	80-100	100-150

TCXT SERIES PERMANENT MAGNETS
(Rare Earth Type)
Powerful iron removal performance without power consumption

- Magnetic field intensity $\geq 3000\text{GS}$
- Iron removing efficiency $\leq 99\%$



Model	TCXT15	TCXT20	TCXT25	TCXT30	TCXT40B
Capacity (T/h)	10-15	20-30	30-50	50-70	80-100



TBLMD SERIES HIGH PRESSURE JET FILTER DUST COLLECTORS

- Mainly used at intake pit and large volume dust collection applications
- Dismountable socks with cages and unique reverse jet device for easy maintenance
- Up to 1m^2 filtering area for each sock greatly reduces the space needed
- The series includes the models TBLMD4, 10, 18, 26, 39, 52, 78, 104



SFZ SERIES VIBRATING SIFTER

- Minimum vibration and low noise
- Simple and convenient screen hold-down mechanism enables fast screen changing
- Suited for separation of fines and coarse over tails

Model	SFJZ80x2	SFJZ100x2	SFJZ125x2
Capacity (T/h)	3-5	6-10	10-15
Power (kW)	0.2x2	0.2x2	0.2x2

TBLMY SERIES HIGH PRESSURE JET DUST COLLECTORS

- Equipped with a high-pressure solenoid valves dust laden air enters the collector tangentially where the dust is separated by cyclonic action and settles out in the discharge hopper
- There are flat bottom and conical dust discharging options
- The series includes the models TBLMY10, 12, 18, 26, 39, 52, 58.5, 78 AND 104



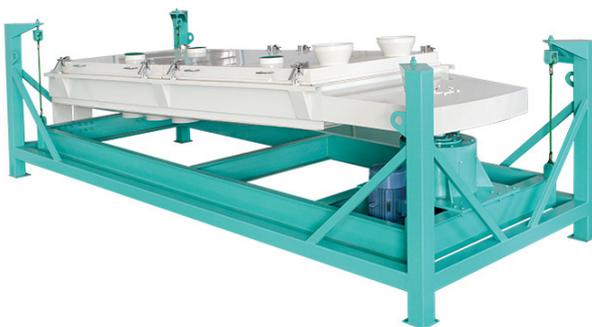
LNGM SERIES HIGH PRESSURE JET FILTER DUST COLLECTOR

- Equipped with high pressure solenoid valves the air inlet is located in the dust hopper, preventing dust-laden air from directly impacting the filter bags which results in increased service life of the bags
- The series includes the models LNGM18A, 24, 30, 36, 45, 54, 63, 72, 81, 90, 117, 228



MFJH SERIES ROTA-SHAKE SIFTER

- Balance weight drive system ensures minimum vibration and low noise
- Belt transmission arrangements eliminates oil lubrication and oil leakage
- The support system for the sliding tail arrangement results in greatly reduced noise and improved sifting performance
- Quick sieve changing due to simple and convenient sieve clamping mechanism
- Double-deck, triple-deck or double-deck with dual inlets available as options (tailored supply)
- Suitable for grading pellets and powder materials



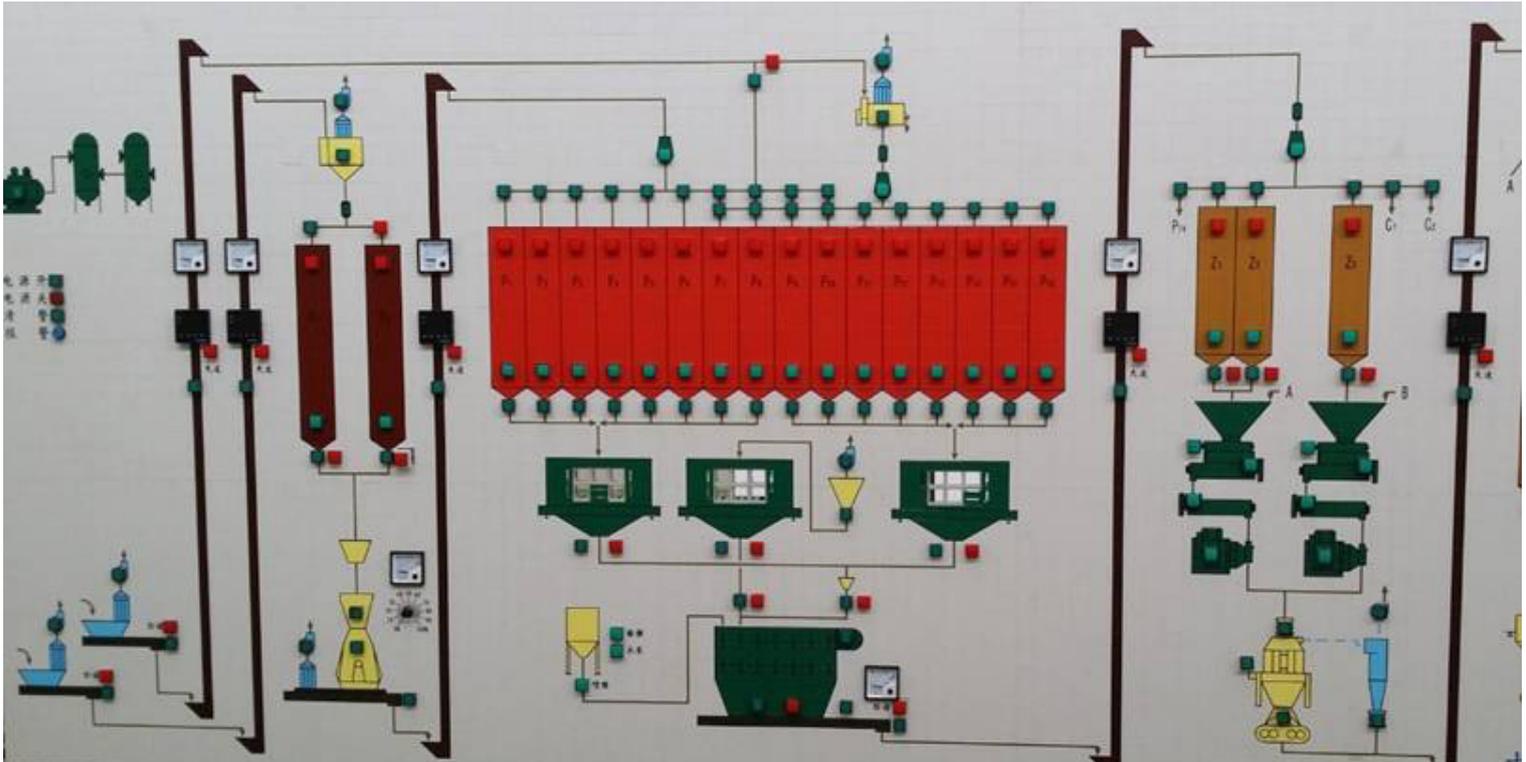
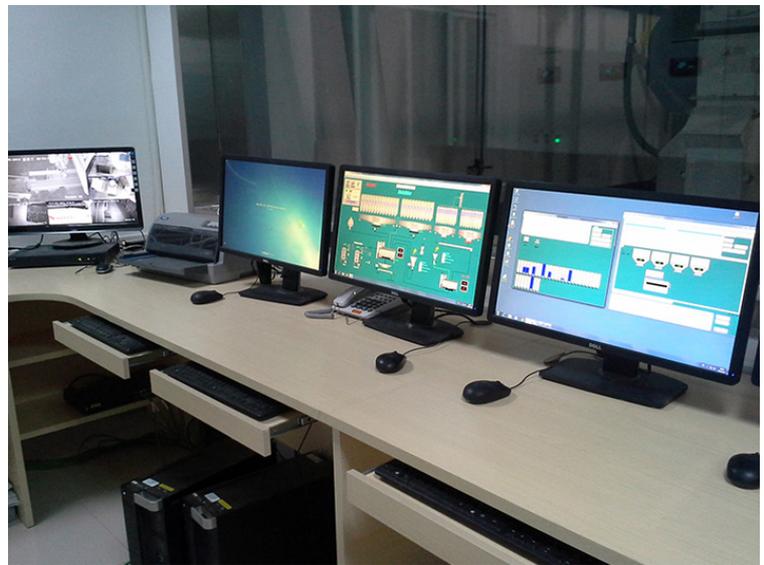
Model		MFJH80x1C	MFJH110x1C	MFJH130x1C	MFJH140x1C	MFJH150x1C
Capacity (T/h)	Mash Feed	4-6	6-8	8-13	12-16	16-18
	Pellet Feed	5-8	8-10	10-15	14-18	15-20
Power (kW)		1.5	2.2	4	5.5	5.5

AUTOMATIC CONTROL ENGINEERING

Optional arrangements maybe provided to suit the equipment installation and process application

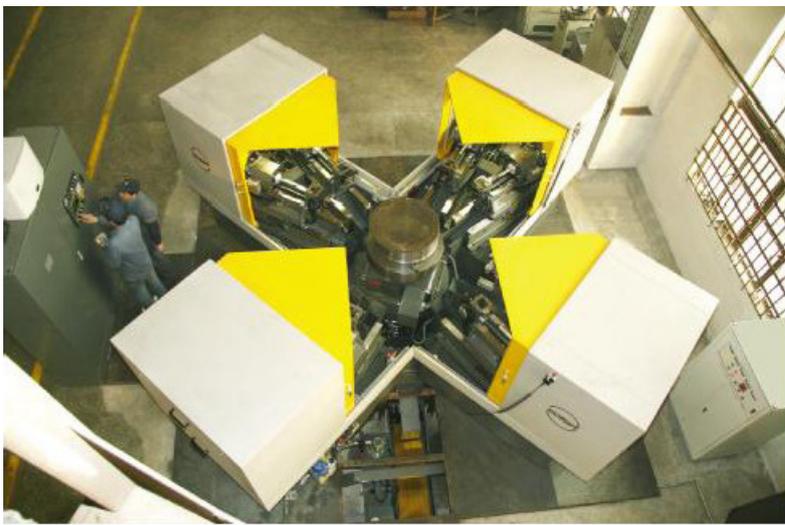
Alternatives Include:

- Control System with Conventional Switching interface cabinet incorporating etched panel process arrangement and push button operation
- Control system with PLC Memory Programmed Control where the control functions and interlocking of the individual machines in achieved not with relays but by means of a PLC
- Process Computer Operational Control where complete integrated system control is provided incorporating a PC based software enabling a high degree of reliability, high accuracy and practically operator free working



RING DIE & PRESS ROLLER

ADVANCED MANUFACTURING TOOLS SUPPLY ALL BRANDS OF DIES



HIGH FIBRE HAMMER MILL

SFSPM SERIES HIGH FIBRE GRINDING HAMMER MILL

- Super wide grinding chamber
- Laterally installed inlet makes it easier for high capacity fed into the grinding chamber
- Offset screen design improves screen utilisation ratio and grinding efficiency
- Highly developed configuration contributes to a steady running and low maintenance costs



Model	Capacity (T/h)	Power (kW)
SFSP66x100M	2-5	55
SFSP66x200M	6-12	110

HAMMER MILL

SFSPM SERIES HIGH FIBRE FINE-GRINDING HAMMERMILL

- Classical type of grinder for processing fibre materials and proven by decades of experience
- Perfect safety design
- Easy operation, convenient maintenance

Model	Capacity (T/h)	Power (kW)
SFSP132X75M	4-10	110/132



Model	Capacity (T/h)	Power (kW)
MYKC800	4-8	55x2

BRIQUETTING | CUBING MACHINE

MYKC SERIES HIGH FIBRE BRIQUETTING | CUBING MACHINE

- Classical double-motor drive contributes to stable running
- Frequency conversion speed control feeder with anti-bridge design
- Furnished with a speed monitor warning device that ensures operational running that is safe and reliable
- Liquid addition is available for this machine
- Suitable for briquetting/cubing bulk materials like Lucerne and straw/hay etc.

TURNKEY PROJECTS



EFB BRICKS



PINE PELLETS



WHEAT STRAW BRICKS



NUT PELLETS



ACACIA PELLETS



SUNFLOWER SHELL PELLETS



BLACK SUNFLOWER SHELL PELLETS



PEANUT SHELL PELLETS



MISC. WASTE WOOD PELLETS



RUBBER WOOD PELLETS



80% WHEAT STRAW + 20% SAWDUST PELLETS



70% SLUDGE + 30% PALM SILK PELLETS



