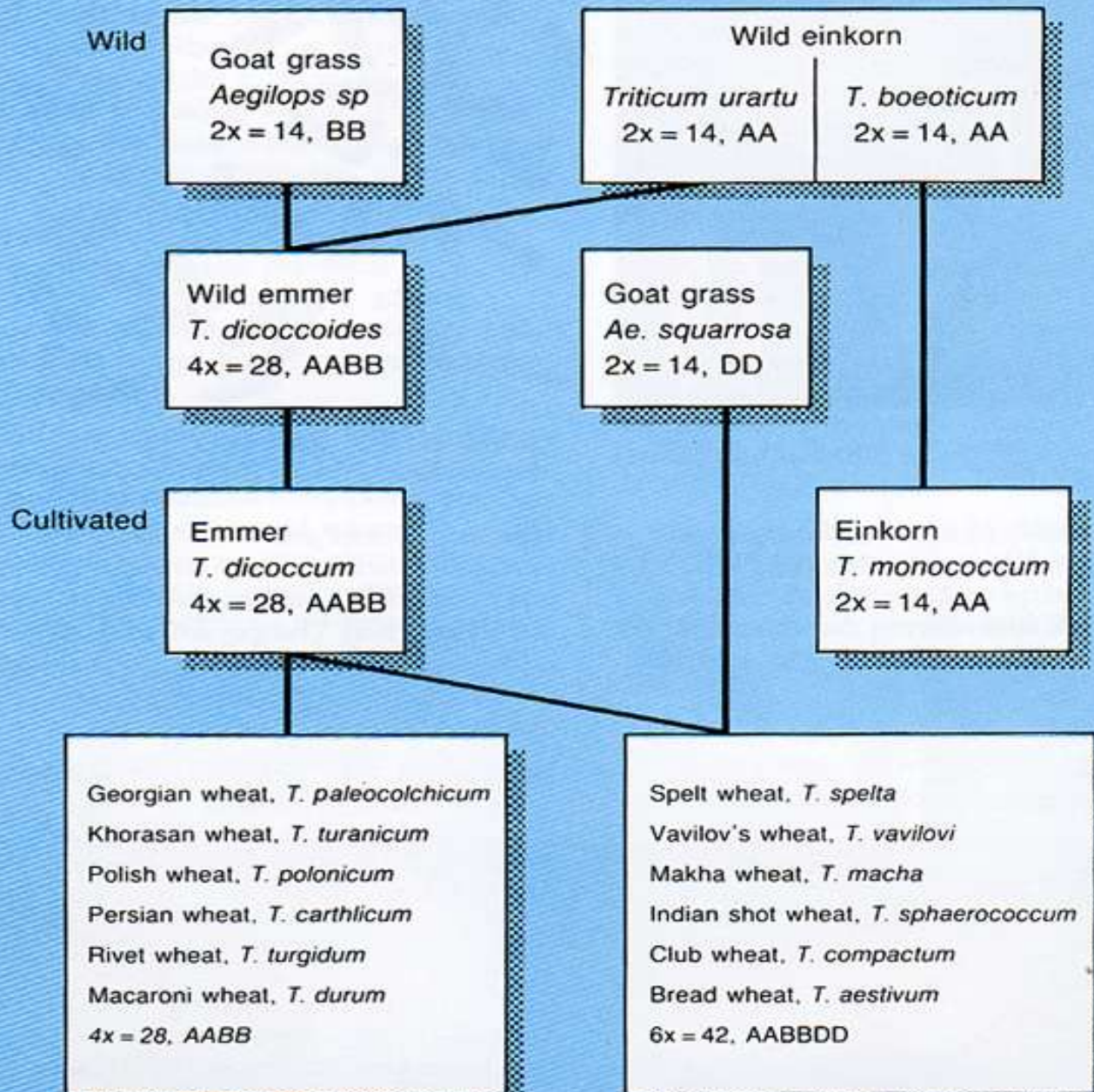




ALTERNATIVE CEREAL CROPS





- **Einkorn** (*T. monococcum*) – A **diploid** species with wild and cultivated variants. Domesticated at the same time as emmer wheat, but never reached the same importance.
- **Emmer** (*T. dicoccum*) – A **tetraploid** species, cultivated in **ancient times** but no longer in widespread use.
- **Spelt** (*T. spelta*) – Another hexaploid species cultivated in limited quantities.
- **Durum** (*T. durum*) – The only tetraploid form of wheat widely used today, and the second most widely cultivated wheat.
- **Common wheat** or **Bread wheat** (*T. aestivum*) – A **hexaploid** species that is the most widely cultivated in the world.



Spelt

Origin

An ancient type of wheat originally grown during Medieval & Roman times. Now grown mainly in Germany and other surrounding European countries. Very limited production.

Special Attributes

Good flavour, good breadmaker. Suitable for many consumers who would like to avoid eating wheat. Gluten more soluble & possibly easier to digest. Roman origins, good for marketing. Grain enclosed in chaff so needs dehulling adding cost. Quite expensive

Types of Flour

Wholemeal & White.

Usage

Bread, biscuits, pastry, pizza.



Einkorn

Origin

Very old – 10,000 years. The original wheat produced by crossing 2 grasses in the Fertile Crescent area. Now grown in small quantities in various European Countries

Special Attributes

Ancient type, good flavour. Harvested in chaff, has to be dehulled. Rare & expensive.

Types of Flour

Wholemeal

Usage

Bread and eaten as a grain



Einkorn: As harvested and after dehulling



HERITAGE WHEAT

- A blend of old Varieties (Bearded April, Bartholomew etc) and landraces put together and multiplied up to commercial scale.
- Spring grown
- Lots of straw, good weed smothering.
- High protein
- Good flavour.
- Growing Contracts available



GLUTEN FREE OATS

There is a demand for oats which have been grown to be free of wheat, rye and barley. <20ppm.

Specially checked seed.

No volunteer contamination from previous cropping.

Special clean storage and transport



Preparing Grain For Sale





Clean Grain





Dirty Grain





INTAKE ANALYSIS



- VISUAL
- SMELL
- MOISTURE
- PROTEIN
- SPECIFIC WEIGHT
- HAGBERG
- GLUTEN



Grain Qualities & Their Effects

- **Moisture**

- » Max 15%, Dry quickly after harvest.
- » If moisture too high Hagberg No. will drop
- » Spoilage & taint of grain due to mould
- » New laws put limits on moulds etc.
- » Ochratoxin set at 5ppb

- **Protein & Gluten**

- » For Bread varieties the higher the better
- » Grow as a first wheat after Break crop or Grass/Clover
- » Soft/Biscuit varieties can grow on less fertile fields or later in rotation
- » Do not overheat during drying



Grain Qualities & Their Effects

- **Hagberg Falling No. > 250. Vital for flour.**
 - » Harvest breadmaking wheats promptly if threat of rain
 - » Store wheat dry, < 15%

- **Specific Weight, Grain Size**
 - » Clean Grain thoroughly using Correct Sieves & air on cleaner
 - » Better cleanings can be fed to farm animals or put into feed wheat



MYCOTOXINS

Recent EU legislation

DON <750ppb. ZON <100ppb

Infection is weather dependant.

Testing requirements decided annually.

Last year one test on each lot.

This year risk assessment score on Passport.



Combinable Crops Passport

(version 01/10) Issued Mar 2010

Section 1: Grain Movement Declaration (to be completed by grower/storekeeper)

Crop Type	Variety (if applicable)	Store/Bin No./Name (if applicable)
Loading Date	Harvest Year (if applicable)	Haulier Company Name
Vehicle Reg. No.	Trailer ID No.	Haulier Collection Ticket No.

Crop Assurance
Identification Sticker

Section 2: Vehicle Hygiene (to be completed by haulier)

	Date	Product	Tick Cleaning Method				
			Brush/Vac	Wash	Steam Clean	Disinfect	None
1 st Load (most recent)							
2 nd Load							
3 rd Load							

Section 3: Inspection of Vehicle Statement

"We have visually inspected this vehicle prior to loading and believe it to be in a fit condition to carry grain or other combinable crops to enter into the food or feed chain. No tests have been carried out to establish this and no warranty is given by this declaration".

Section 4: Post-Harvest Treatment – where applicable (to be completed by grower/storekeeper)

Please circle sections A, B or C as appropriate and insert date and product details in the space provided

- A. No post-harvest treatment has been applied to the crop carried in the vehicle referred to above
- B. Post-harvest applications of pesticide and/or other treatments, at or below the recommended level as stated by the manufacturer, have been made to the crop carried in the vehicle referred to above. For making barley, only treatments permitted on the British Beer and Pub Association Approved List have been used.
- C (For grain drawn from bulk stores) The crop carried in the vehicle referred to above has been drawn from a bulk, delivered by suppliers who declared it had been partly/entirely treated with post-harvest treatments at or below the recommended levels stated by the manufacturer.

Date: _____ Product: _____

Section 5: Fusarium Mycotoxins – All Cereals (to be completed by grower/storekeeper)

A risk assessment for DON (wheat only) was carried out and produced the following result (insert value)

Mycotoxin test(s), where applicable, have been carried out producing the following result:

	Date of Test	Result (ppb)
Deoxynivalenol (DON) if applicable	_____	_____
Zearalenone (ZON) if applicable	_____	_____

If more than one test has been carried out, please record all results.

Risk assessment details can be found at: www.hqs.com or www.searocrops.co.uk

Section 6: Confirmation (to be completed by grower/storekeeper confirming sections 1, 3, 4 & 5 and by the haulier confirming sections 2 & 3)

Note: A signature on behalf of the grower/storekeeper and haulier is required to complete the form

Grower/Storekeeper

Signed _____

Print Name _____

Position _____

Haulier

Signed (Driver) _____

Print Name _____

Section 7: GM Statement (oil seed crops only)

In compliance with regulations EC 1831/2003 and EC 1831/2006, the crop covered by this declaration is NOT subject to the labelling requirements specified in the above mentioned regulations and necessary steps have been taken to preserve the conventional (i.e. non-GM) status of the crop.

Section 8: Receipt Details (to be completed by receiver)

Receiver's ref:	Weighbridge Ticket No.:
Received by:	Date of Delivery:



To Market

- Send out **Samples** Sept-Feb, min 500gms, Farmers name and tel no.
- **Sell** your grain by March even if it is being moved later.
 - The bigger the **tonnage**, the better, don't grow parcels of less than 25T.
 - Be **flexible** with the customer.
Blending or recleaning can pay dividends

Haulage costs increasing.
Work with local customers