

HOW TO MAKE LIQUID WORM CASTINGS THE RIGHT WAY



WILLVERCITY
CIRCULAR FARMING WITH NATURE

INTRODUCTION

WELCOME TO YOUR GUIDE ON HOW TO MAKE LIQUID WORM CASTINGS THE RIGHT WAY!

IF YOU'RE ALREADY FAMILIAR WITH WORM FARMING, YOU'VE PROBABLY NOTICED THAT LIQUID TENDS TO COLLECT AT THE BOTTOM OF YOUR WORM BIN. SOME PEOPLE THINK OF IT AS **WORM TEA** AND USE IT DIRECTLY ON THEIR PLANTS,

BUT DID YOU KNOW THAT THIS LIQUID CAN ACTUALLY DO MORE HARM THAN GOOD?

IN THIS GUIDE, WE'RE GOING TO EXPLAIN WHY YOU SHOULD AVOID USING THAT LIQUID AND WALK YOU THROUGH THE PROPER WAY TO MAKE FRESH, MICROBIOLOGY-RICH LIQUID WORM CASTINGS THAT YOUR PLANTS WILL ABSOLUTELY LOVE.

WHY YOU SHOULD STOP USING THE LIQUID AT THE BOTTOM OF YOUR WORM BIN

YOU MAY HAVE HEARD PEOPLE REFER TO THE LIQUID AT THE BOTTOM OF YOUR WORM BIN AS WORM JUICE / WORM TEA,

BUT HERE'S WHY YOU SHOULD THINK TWICE BEFORE USING IT:.

- **HARVEST DATE:** YOU HAVE NO IDEA HOW LONG IT'S BEEN SITTING THERE, WHICH MEANS IT COULD HAVE STARTED TO LOSE ITS GOODNESS OR EVEN BECOME CONTAMINATED WITH HARMFUL MICROBES.
- **STAGNATION:** BECAUSE IT HAS BEEN SITTING AT THE BOTTOM OF THE BIN WITHOUT MOVEMENT, THE LIQUID BECOMES STAGNANT. THIS STAGNATION CAN RESULT IN THE GROWTH OF BAD BACTERIA OR PATHOGENS, WHICH IS THE LAST THING YOU WANT IN YOUR GARDEN.
- **DILUTION VARIABILITY:** THE STRENGTH OF THIS LIQUID IS INCONSISTENT. DEPENDING ON HOW MUCH WATER YOU'VE ADDED TO YOUR BIN, THE CONCENTRATION OF MICROBIOLOGY WILL VARY. THIS MEANS IT CAN BE TOO WEAK TO BE EFFECTIVE.

NOW THAT WE KNOW WHAT'S WRONG WITH THE LIQUID AT THE BOTTOM OF YOUR BIN, LET'S TALK ABOUT HOW TO MAKE IT CORRECTLY.

WHY LIQUID WORM CASTINGS ARE SO EFFECTIVE

HOW WORM CASTINGS WORK IN THE SOIL

WORM CASTINGS CONTAIN BENEFICIAL MICROBES, ENZYMES, AND ORGANIC MATTER THAT IMPROVE SOIL STRUCTURE

THEY ENHANCE WATER RETENTION, AERATION, AND DRAINAGE, MAKING SOIL HEALTHIER FOR PLANT ROOTS.

WHY WORM CASTINGS DON'T CONTAIN HIGH NUTRIENT LEVELS LIKE FERTILISERS
UNLIKE SYNTHETIC FERTILISERS,
WORM CASTINGS DON'T HAVE HIGH NPK (NITROGEN-PHOSPHORUS-POTASSIUM) NUMBERS.
**INSTEAD, THEY CONTAIN MICROBES THAT HELP UNLOCK AND RELEASE NUTRIENTS
ALREADY IN THE SOIL, MAKING THEM AVAILABLE FOR PLANTS.**
THIS NATURAL PROCESS PREVENTS NUTRIENT LOSS FROM LEACHING AND ENSURES STEADY,
SLOW-RELEASE FEEDING.

WHAT WORM CASTINGS ACTIVATE IN THE SOIL

BENEFICIAL BACTERIA AND FUNGI IN WORM CASTINGS BREAK DOWN ORGANIC MATTER AND MINERALS, MAKING NUTRIENTS BIOAVAILABLE.
PROTOZOA AND NEMATODES IN CASTINGS HELP CYCLE NUTRIENTS BY CONSUMING BACTERIA AND RELEASING PLANT-READY NUTRIENTS.
HUMIC ACIDS IN WORM CASTINGS IMPROVE SOIL CHEMISTRY, ALLOWING ROOTS TO ABSORB NUTRIENTS MORE EFFICIENTLY.

SOIL PH BALANCING AND ORGANIC MATTER

HUMIC ACIDS IN WORM CASTINGS HELP BALANCE SOIL PH AND IMPROVE NUTRIENT UPTAKE, ENSURING THAT PLANTS CAN ABSORB BOTH MACRO AND MICRONUTRIENTS.
ORGANIC MATTER IN THE CASTINGS ALSO IMPROVES SOIL STRUCTURE, ENHANCING AERATION, WATER RETENTION, AND MICROBIAL DIVERSITY IN THE SOIL.

HOW THIS HELPS YOUR PLANTS

BETTER GROWTH: WORM CASTINGS ENCOURAGE FASTER, HEALTHIER PLANT GROWTH BY IMPROVING SOIL CONDITIONS AND NUTRIENT CYCLING.

STRONGER ROOTS: BY RELEASING NUTRIENTS AND IMPROVING SOIL STRUCTURE, WORM CASTINGS HELP PLANTS DEVELOP STRONG, DEEP ROOT SYSTEMS.

DISEASE RESISTANCE: BENEFICIAL MICROBES FOUND IN WORM CASTINGS HELP STRENGTHEN PLANTS NATURAL DEFENSES, MAKING THEM MORE RESILIENT AGAINST DISEASES AND PESTS.
THESE MICROBES PROMOTE A HEALTHIER ROOT SYSTEM AND CREATE A PROTECTIVE BARRIER, REDUCING THE NEED FOR CHEMICAL PESTICIDES.

HOW TO MAKE LIQUID WORM CASTINGS THE RIGHT WAY

MAKING LIQUID WORM CASTINGS IS SIMPLE AND STRAIGHTFORWARD. BY FOLLOWING THESE STEPS, YOU CAN ENSURE THAT YOUR PLANTS GET THE BEST POSSIBLE NUTRITION FROM YOUR WORM FARM.

WHAT YOU NEED

- **FRESH WORM CASTINGS:** THESE ARE THE NUTRIENT-RICH, DARK, CRUMBLY MATERIAL THAT YOUR WORMS PRODUCE.

YOU CAN PURCHASE OUR PRODUCTS AT WWW.WILLVERCITY.COM

YOU WANT FRESH CASTINGS—NOT THE LIQUID IN THE BOTTOM OF YOUR BIN.

- **WATER:** NON-CHLORINATED WATER, LIKE RAINWATER OR TAP WATER THAT HAS BEEN SITTING OUT FOR 24 HOURS, ALLOW CHLORINE TO DISSIPATE.
- **MESH BAG OR FINE CLOTH BIGGER THEN 400UM:** THIS WILL ACT AS A FILTER TO CONTAIN THE WORM CASTINGS WHILE ALLOWIN THE MICROBIOLOGY TO SEEP INTO THE WATER (SUCH AS BUTTER MUSLIN/CLOTH).
- **A BUCKET OR CONTAINER:**

STEPS

- **STEP 1: GATHER FRESH WORM CASTINGS-**
RATIO 2-3% CASTING TO WATER: E.G. 20 TO 30G PER LITRE OF WATER. START BY HARVESTING FRESH WORM CASTINGS FROM YOUR WORM BIN. YOU WANT THE DARKEST, RICHEST CASTINGS YOU CAN FIND. THESE ARE FULL OF THE BENEFICIAL MICROBES, NUTRIENTS, AND MINERALS YOUR PLANTS NEED TO GROW STRONG AND HEALTHY.
- **STEP 2: PREPARE THE WATER**
ADDING THE CORRECT ABOUT OF WATER TO YOUR BUCKET;
REMEBER **NON-CHLORINATED** WATER.
CHLORINE CAN HARM THE BENEFICIAL MICROORGANISMS IN YOUR WORM CASTINGS,
IF YOU'RE USING RAINWATER, THAT'S PERFECT!
- **STEP 3: ADD FRESH WORM CASTINGS TO A MESH BAG OR CLOTH 400UM OR BIGGER**
PLACE THE FRESH WORM CASTINGS INTO A MESH BAG OR FINE CLOTH. THIS WILL ACT AS A TEA BAG FOR YOUR LIQUID WORM CASTINGS. YOU'LL WANT TO MAKE SURE THE BAG IS SECURELY CLOSED SO THAT THE CASTINGS DON'T SPILL OUT INTO THE WATER.
- **STEP 4: MASSAGE THE WORM CASTINGS**
PLACE THE MESH BAG INTO YOUR BUCKET OF WATER, ALLOWING THE CASTINGS TO GET WET THEM MASSAGE THE BAG FOR 30 SECONDS OR MORE. THIS ALLOWS THE MICTOBIOLOGY TO BE RELEASE INTO THE WATER.

**YOUR WORM CASTING EXTRACT IS READY TO GO
CONGRATULATIONS**

HOW TO USE LIQUID WORM CASTINGS IN YOUR GARDEN

NOW THAT YOU'VE CREATED YOUR LIQUID WORM CASTINGS, IT'S TIME TO USE THEM TO BOOST THE HEALTH OF YOUR PLANTS.

HERE'S HOW TO USE THE LIQUID EFFECTIVELY:

1. DILUTE THE LIQUID

LIQUID WORM CASTINGS ARE POTENT, SO IT'S IMPORTANT TO DILUTE THEM BEFORE APPLYING TO YOUR PLANTS.

A COMMON RATIO IS 1 PART LIQUID WORM CASTINGS TO 10 PARTS WATER.

2. WATER YOUR PLANTS

USE THE LIQUID TO WATER YOUR PLANTS

AT THE BASE, DIRECTLY INTO THE SOIL. THIS WILL PROVIDE THEM WITH AN IMMEDIATE BOOST OF BENEFICIAL MICROORGANISMS THAT WILL IMPROVE SOIL HEALTH AND PLANT VITALITY.

3. FOLIAR SPRAY (OPTIONAL)

FOR AN ADDED BENEFIT, YOU CAN ALSO USE THE LIQUID WORM CASTINGS AS A FOLIAR SPRAY.

SPRAY IT DIRECTLY ONTO THE LEAVES OF YOUR PLANTS. IT WILL BE ABSORBED QUICKLY THROUGH THE LEAVES AND HELP IMPROVE OVERALL PLANT HEALTH.

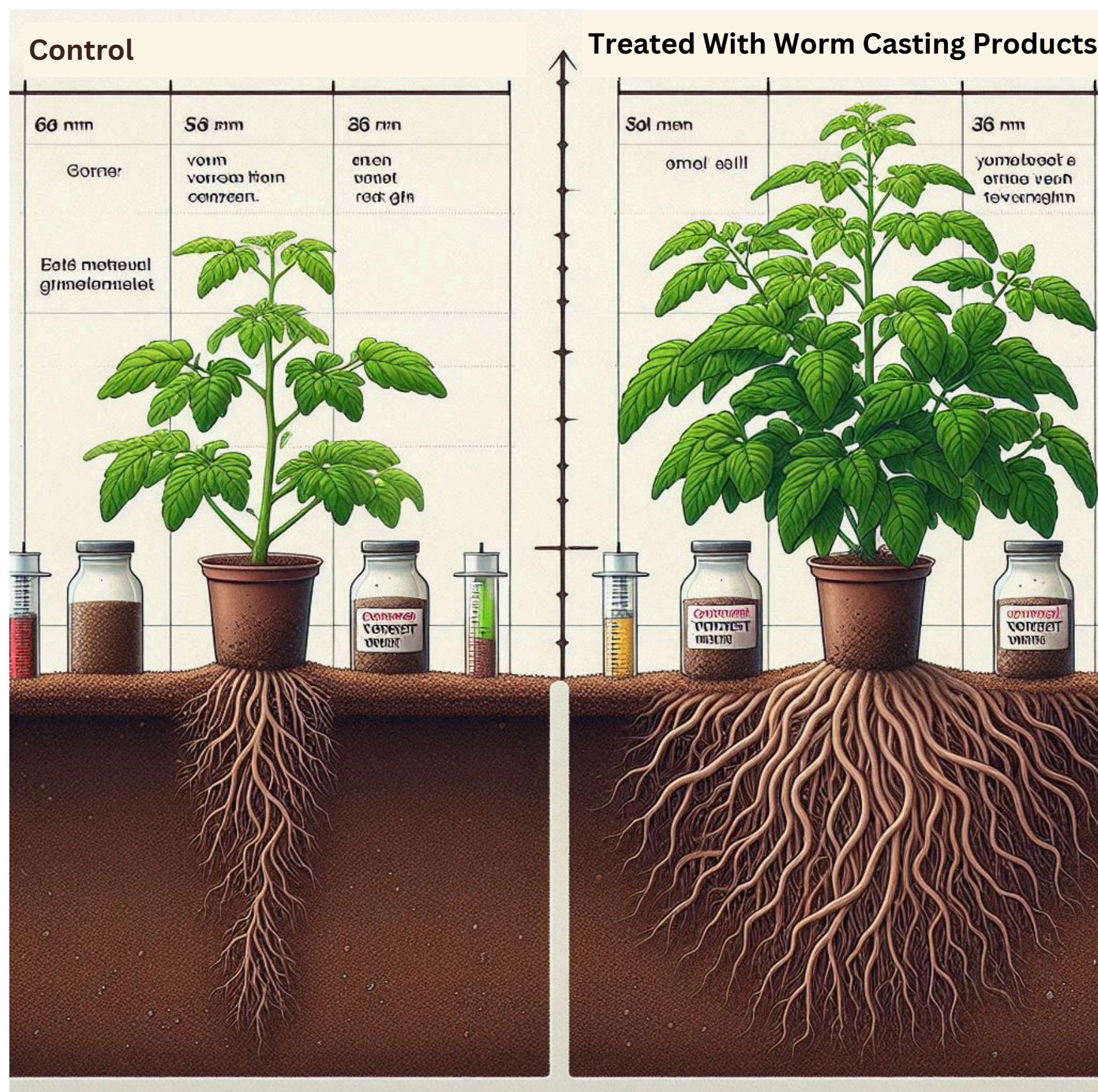
4. FREQUENCY OF USE

YOU CAN USE LIQUID WORM CASTINGS EVERY TWO TO FOUR WEEKS DURING THE GROWING SEASON.

IF YOU'RE GROWING IN CONTAINERS, YOU MAY NEED TO APPLY IT MORE FREQUENTLY.

THIS IS FOR A HAND HELD SPRAY BOTTLE,
FOR LARGER AREA PLEASE REFER TO

WWW.WILLVERCITY.COM UNDER THE EDUCATION TAB.



KEY NUTRIENTS RELEASED BY WORM CASTINGS

WORM CASTINGS DON'T DIRECTLY PROVIDE NUTRIENTS IN LARGE QUANTITIES BUT HELP TO UNLOCK AND MAKE THE FOLLOWING NUTRIENTS MORE AVAILABLE FOR PLANTS THROUGH MICROBIAL ACTION:

NITROGEN (N)

ESSENTIAL FOR PLANT GROWTH, ESPECIALLY FOR LEAFY VEGETABLES. WORM CASTINGS HELP RELEASE NITROGEN THAT'S LOCKED IN THE SOIL, PROMOTING HEALTHY PLANT DEVELOPMENT AND GREEN FOLIAGE.

PHOSPHORUS (P)

IMPORTANT FOR ROOT DEVELOPMENT, FLOWER AND FRUIT PRODUCTION. WORM CASTINGS ACTIVATE MICROBIAL PROCESSES THAT RELEASE PHOSPHORUS, HELPING PLANTS GROW STRONGER ROOTS AND MORE ROBUST BLOOMS.

POTASSIUM (K)

SUPPORTS OVERALL PLANT HEALTH, DISEASE RESISTANCE, AND WATER RETENTION. WORM CASTINGS ENCOURAGE MICROBIAL ACTIVITY THAT MAKES POTASSIUM MORE AVAILABLE, ENHANCING THE PLANT'S ABILITY TO RESIST STRESS AND DISEASES.

CALCIUM (CA)

VITAL FOR CELL WALL STRUCTURE AND STRENGTH. WORM CASTINGS HELP RELEASE CALCIUM, IMPROVING PLANT STRUCTURE AND HELPING PREVENT ISSUES LIKE BLOSSOM END ROT IN TOMATOES AND PEPPERS.

MAGNESIUM (MG)

IMPORTANT FOR PHOTOSYNTHESIS AND PLANT ENERGY. MAGNESIUM RELEASE FROM WORM CASTINGS HELPS PLANTS CONVERT SUNLIGHT INTO ENERGY EFFICIENTLY.

MICRONUTRIENTS

IRON (FE), MANGANESE (MN), ZINC (ZN), COPPER (CU), BORON (B),
MOLYBDENUM (MO), AND SULFUR (S)

THESE ESSENTIAL TRACE ELEMENTS ARE SLOWLY RELEASED BY THE MICROBIAL ACTION IN WORM CASTINGS, HELPING PLANTS ACCESS THE MICRONUTRIENTS THEY NEED FOR BALANCED GROWTH.

CONCLUSION

BY MAKING YOUR OWN LIQUID WORM CASTINGS THE RIGHT WAY, YOU ENSURE THAT YOUR PLANTS RECEIVE THE MOST BENEFICIAL MICROBIOLOGY POSSIBLE.

NOT ONLY IS THIS METHOD MORE EFFECTIVE THAN USING THE LIQUID IN THE BOTTOM OF YOUR WORM BIN,
BUT IT'S ALSO A CLEANER, SAFER, AND MORE CONSISTENT WAY TO FERTILISE YOUR GARDEN.

SO, SAY GOODBYE TO STAGNANT WORM JUICE
AND
START BREWING YOUR OWN WORM CASTINGS EXTRACT TODAY!

WE HOPE THIS GUIDE HAS HELPED YOU UNDERSTAND THE PROCESS OF
MAKING AND USING LIQUID WORM CASTINGS.

HAPPY GARDENING,

WE CAN'T WAIT TO HEAR HOW YOUR PLANTS THRIVE WITH THE POWER OF WORM
CASTINGS!

MORE INFORMATION YOU MAY NEED

THE MICROBIOLOGICAL CONTENT OF WORM CASTINGS, OR VERMICAST, VARIES BASED ON
THE WORMS DIET AND THE COMPOST MATERIALS USED.

WORMS CONSUME ORGANIC MATTER, AND THE DIVERSITY AND QUALITY OF THIS MATTER
INFLUENCE THE MICROBIAL COMMUNITIES PRESENT IN THEIR CASTINGS.

A VARIED DIET RICH IN DIFFERENT ORGANIC MATERIALS CAN LEAD TO A MORE DIVERSE
AND BENEFICIAL MICROBIAL POPULATION IN THE VERMICAST, ENHANCING ITS
EFFECTIVENESS AS A SOIL AMENDMENT.

FOR MORE TIPS ON WORM FARMING, PRODUCT AND EVEN WORMS,
MAKE SURE TO CHECK US OUT AT

WWW.WILLVERCITY.COM,
FACEBOOK- WILLVERCITY, INSTAGRAM- WILLVERCITY FARM

HAVE QUESTIONS OR WANT TO SHARE YOUR EXPERIENCE?
SEND US A EMAIL TO WILLVERCITYFARM@GMAIL.COM

THIS EBOOK,
AUTHORED BY WILLVERCITY,

AIMS TO PROVIDE GUIDANCE ON WORM CASTING EXTRACT/LIQUID
BASED ON OUR RESEARCH AND FARMING EXPERIENCE.

WE ENCOURAGE YOU TO CONDUCT YOUR OWN RESEARCH TO
TAILOR PRACTICES TO YOUR SPECIFIC NEEDS.